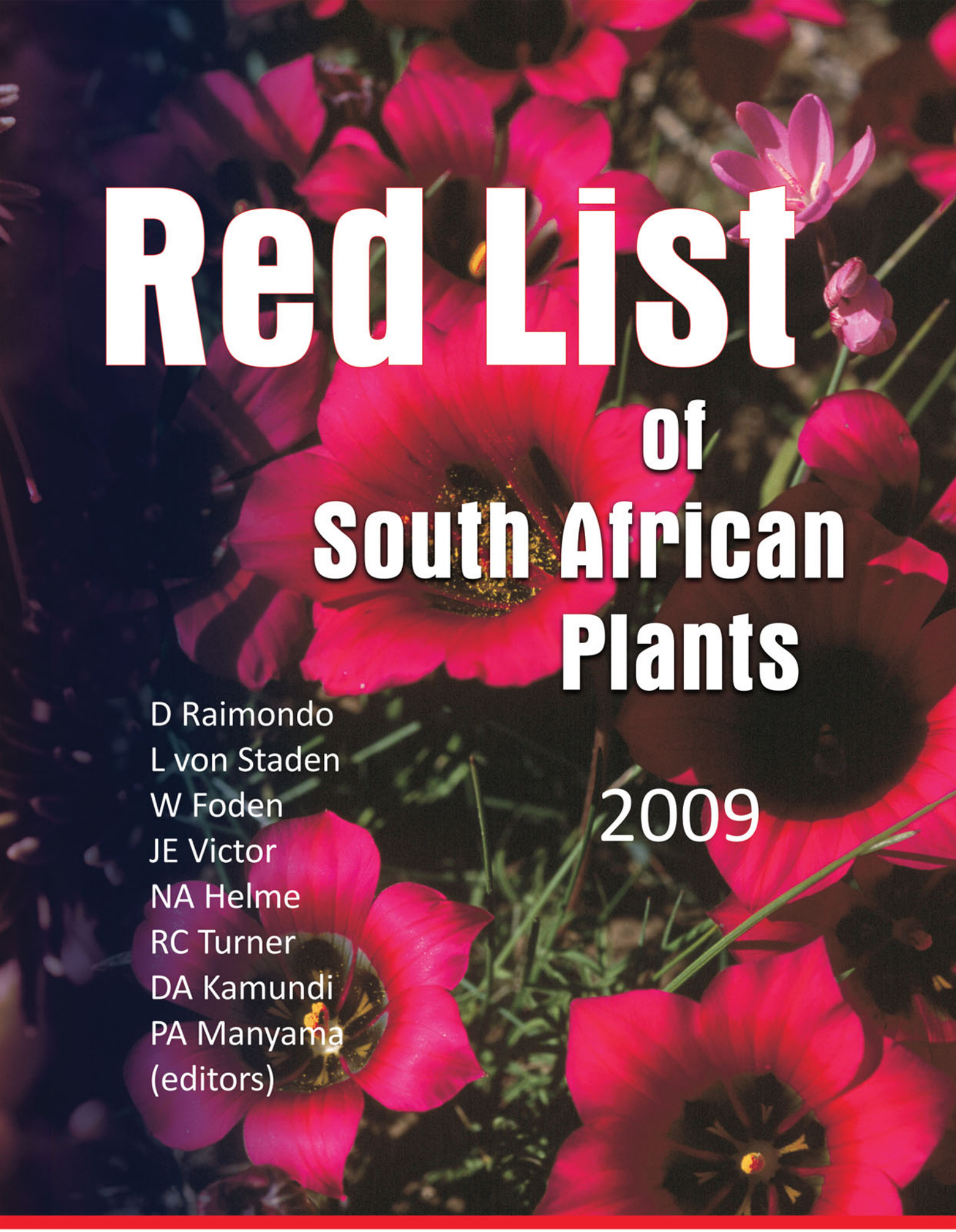


Red List of South African Plants

2009

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Strelitzia 25

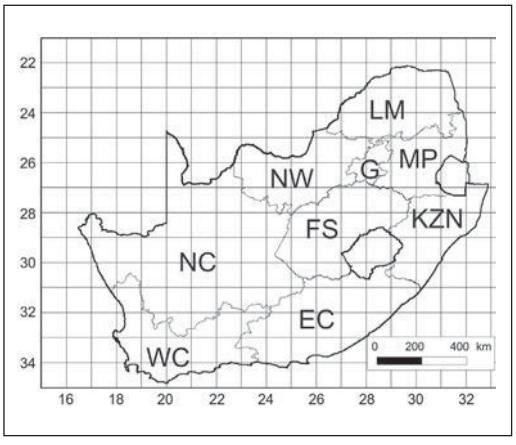
Quick guide to species assessments

Status

The IUCN Categories and Criteria Version 3.1 (2001), with additional categories developed specifically for the South African context, were applied in this Red List. The status given to taxa in this Red List applies only to the section of the global population occurring within South Africa in the case of taxa that are not endemic to South Africa. Status followed by an asterisk indicates nonendemic taxa where the South African national status has been down- or upgraded by one category according to IUCN regional assessment procedures (see *National application of the IUCN categories and criteria* under section 2.4 for more detailed information).

South African Red List Categories		
EX	Extinct	A taxon is Extinct when there is no reasonable doubt that the last individual has died. Taxa should be listed as extinct only once exhaustive surveys throughout the historic range have failed to record an individual.
EW	Extinct in the Wild	A taxon is Extinct in the Wild when it is known to survive only in cultivation or as a naturalised population (or populations) well outside the past range.
CR PE	Critically Endangered (Possibly Extinct)	Critically Endangered (Possibly Extinct) taxa are those that are, on the balance of evidence, likely to be extinct, but for which there is a small chance that they may be extant. Hence they should not be listed as Extinct until adequate surveys have failed to record the taxon.
CR	Critically Endangered	A taxon is Critically Endangered when the best available evidence indicates that it meets any of the five IUCN criteria for Critically Endangered, and is therefore facing an extremely high risk of extinction in the wild.
EN	Endangered	A taxon is Endangered when the best available evidence indicates that it meets any of the five IUCN criteria for Endangered, and is therefore facing a very high risk of extinction in the wild.
VU	Vulnerable	A taxon is Vulnerable when the best available evidence indicates that it meets any of the five IUCN criteria for Vulnerable, and is therefore facing a high risk of extinction in the wild.
NT	Near Threatened	A taxon is Near Threatened when available evidence indicates that it nearly meets any of the five IUCN criteria for Vulnerable, and is therefore likely to qualify for a threatened category in the near future.
Critically Rare		A taxon is Critically Rare when it is known to occur only at a single site, but is not exposed to any direct or plausible potential threat and does not qualify for a category of threat according to the five IUCN criteria.
Rare		A taxon is Rare when it meets any of the four South African criteria for rarity, but is not exposed to any direct or plausible potential threat and does not qualify for a category of threat according to the five IUCN criteria.
Declining		A taxon is Declining when it does not meet any of the five IUCN criteria and does not qualify for the categories Critically Endangered, Endangered, Vulnerable or Near Threatened, but there are threatening processes causing a continuing decline in the population.
DDD	Data Deficient—Insufficiently Known	A taxon is DDD when there is inadequate information to make an assessment of its risk of extinction, but the taxon is well defined. Data Deficient is not a category of threat. However, listing of taxa in this category indicates that more information is required and that future research could show that a threatened classification is appropriate.
DDT	Data Deficient—Taxonomically Problematic	A taxon is DDT when taxonomic problems hinder its distribution range and habitat from being well defined, so that an assessment of risk of extinction is not possible.
LC	Least Concern	A taxon is Least Concern when it has been evaluated against the five IUCN criteria and does not qualify for the categories Critically Endangered, Endangered, Vulnerable or Near Threatened.
Thr*		Taxa that are likely to be threatened, but have been brought to the attention of the Threatened Species Programme too late for full assessments to be included in this publication. Please see the SANBI website for the final status of these taxa.

Distribution: Indicates endemism, distribution within South African provinces and a brief description of the range.
Habitat: A brief description of the habitat of the taxon, including altitudinal range where known.
Rationale: The assessment rationale provides a justification for the inclusion of the taxon in the category in which it is listed and an explanation of how available data on a taxon meet the criteria for the categories of threat (Critically Endangered, Endangered and Vulnerable).



Provincial abbreviations

EC Eastern Cape
FS Free State
G Gauteng
KZN KwaZulu-Natal
LM Limpopo
MP Mpumalanga
NC Northern Cape
NW North West Province
WC Western Cape

Key to symbols

F Taxa included on the South African Red List for the first time.

S Subspecific taxa not listed. In some instances taxa are listed at the species level when they have valid subspecific taxa (subspecies and varieties). Reasons for these listings are discussed under section 2.1.

e South African endemics

STRELITZIA 25

Red List of South African plants 2009

Editors:
D. Raimondo, L. von Staden, W. Foden, J.E. Victor, N.A. Helme, R.C. Turner,
D.A. Kamundi† & P.A. Manyama



Pretoria
2009

STRELITZIA

This series has replaced *Memoirs of the Botanical Survey of South Africa* and *Annals of the Kirstenbosch Botanic Gardens* which SANBI inherited from its predecessor organisations.

The plant genus *Strelitzia* occurs naturally in the eastern parts of southern Africa. It comprises three arborescent species, known as wild bananas, and two acaulescent species, known as crane flowers or bird-of-paradise flowers. The logo of the South African National Biodiversity Institute is based on the striking inflorescence of *Strelitzia reginae*, a native of the Eastern Cape and KwaZulu-Natal that has become a garden favourite worldwide. It symbolises the commitment of the Institute to champion the exploration, conservation, sustainable use, appreciation and enjoyment of South Africa's exceptionally rich biodiversity for all people.

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Back: C. Paterson-Jones. The Critically Endangered *Erica recurvata* from the mountains above Napier, Western Cape.
Spine: D. Styles. The Near Threatened *Brachystelma modestum* from the grasslands near Ozwatini, KwaZulu-Natal.

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Dedication

The assessment of the Red List status of plant species is fundamentally dependent on documentation of plant populations, often via herbarium specimens by botanical collectors, and on classification and description of species via taxonomic monographs. This book is therefore dedicated to two individuals whose life work on documenting and monitoring South Africa's plants has provided us with invaluable data for producing accurate Red List assessments.

Elsie Elizabeth Esterhuysen (1912–2006)

This book is dedicated to Elsie Esterhuysen for her extraordinary documentation of rare endemic taxa of the Fynbos Biome and the Drakensberg Mountain Range. Her inventories of flora of alpine habitats are unsurpassed. During her 60-year career as a botanist and collector she amassed more than 37 000 herbarium specimens. Her dedicated and strategic collecting efforts focused on detecting range extensions, local variants and new species. Her collections have been the backbone of many descriptions of new genera and species. Two genera and 56 species are named after her. The assessments of many rare plant taxa in this Red List are based solely on specimens collected by Elsie Esterhuysen, as she has often been the only collector to visit their habitats and document their occurrence. Assessments of genera with large numbers of rare, high-altitude endemic taxa such as *Agathosma*, *Amphithalea* and *Erica* benefited particularly from her collections. In her later years Esterhuysen also collected extensively in the Cape Lowlands, the area with the highest concentration of threatened plants in South Africa. Her incredible knowledge of the Cape flora meant that she was able to find and survey large numbers of species overlooked by other collectors. Her collections were extremely useful in determining the threat status of many lowland taxa.

Christian Johannes Burgers (1952–2002)

Chris Burgers's entire career was dedicated to the conservation of the Cape flora. As a botanist at Cape Nature Conservation (now CapeNature), it was his responsibility to ensure the conservation of fynbos plant diversity within and outside nature reserves. Burgers's greatest legacy is a database containing thousands of observation and monitoring records of populations of rare and threatened fynbos plants which he largely collected himself. This database, called Information System for Endangered Plants (ISEP), was invaluable during the compilation of this Red List, especially since it provided otherwise scarcely documented data on numbers of individuals as well as population trends over time. Burgers's monitoring data, spanning 20 years, are one of the few reliable sources accurately documenting population trends of South African plant species over time. Burgers was particularly dedicated to Cape lowland endemics, and brought many of the last remaining populations of highly threatened lowland species to the attention of the conservation community. Monitoring data were meticulously captured: electronically as entries into the ISEP database, as carefully catalogued slides and in hundreds of hard-copy accounts that were archived for access by future generations. This book is dedicated to Chris for his foresight and absolute commitment to conservation of Cape lowland species. His data were extensively used in this Red List assessment and will continue to serve as an extremely valuable baseline against which we can measure future changes to South African plant populations.

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Eighteen individuals stand out in terms of the amount of time and number of assessments they contributed, either to a range of plant taxa from a certain region of the country or to particular plant families or life-history group.



Tony led the assessment of 377 taxa in the Proteaceae family based on the 250 000 records collected by 478 Protea Atlas volunteers between 1992 and 2003 and a series of workshops conducted with 25 experts in 2005.

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379 assessments authored



Rob contributed to assessments of plants from KwaZulu-Natal and medicinal plants.

C.R. Scott-Shaw
273 assessments authored



Cornelia contributed to many assessments for plant taxa in the family Mesembryanthemaceae, especially for the genus *Lampranthus*. She also supplied data from the Bolus Herbarium for the assessment of a range of other taxonomically poorly known genera in the Mesembryanthemaceae.

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Peter and John provided extensive assistance on assessments of many taxa in one of the most threatened plant families, the Iridaceae. John also contributed to assessments in the family Hyacinthaceae.

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J.C. Manning
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Dee provided valuable data for assessment of the families Amaryllidaceae and Hypoxidaceae.

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Jan and Anne Lise contributed their extensive knowledge of plants of the Little Karoo region. Jan provided data on subpopulation trends as well as information on threats to taxa in the genera *Gibbaeum, Glottiphyllum*, *Euryops* and *Haworthia*. Anne Lise helped to assess taxa in the genera *Aspalathus, Amphithalea, Cyclopia, Podalyria, Stirtonanthus* and *Xiphotheca*.

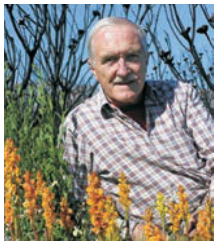
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Mervyn contributed to assessments of plants from Mpumalanga. His in-depth field knowledge, knowledge of threats in the province and accurate GIS data were extremely valuable. He also contributed to many of the medicinal plant assessments.

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217 assessments authored



Ted provided data on many of the *Erica* assessments and also contributed to assessments of the Cape Orchidaceae.

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Tony contributed to assessments of plants of the Albany hotspot in the Eastern Cape through both his excellent field knowledge and by providing specimen information from the Schonland Herbarium. He also contributed to many of the medicinal plant assessments.



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Leanne contributed to assessment of *Oxalis*, a large, poorly known genus with high numbers of range-restricted taxa.



K.C. Oberlander
126 assessments authored

Kenneth, another expert on the genus *Oxalis*, also contributed to many assessments for this genus. His extensive field knowledge of *Oxalis* was of great assistance.



J.E. Burrows
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John contributed to assessments of plants of Mpumalanga and also shared his knowledge of ferns and many taxa in the genus *Helichrysum*.



E.J. van Jaarsveld
113 assessments authored

Ernst shared his extensive knowledge of a range of succulent and cremnophytic taxa. He also contributed to assessments of taxa in the genera *Freylinia*, *Gasteria*, *Plectranthus*, *Tylecodon*, *Crassula*, *Cotyledon* and *Antimima*.



T. Trinder-Smith
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V.L. Williams
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Vivienne led the assessment of South Africa's medicinal plants. She conducted in-depth research on medicinal species and facilitated a workshop to obtain observation data from 10 other ecologists and ethnobotanists.



P.M. Burgoyne
97 assessments authored

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Twelve staff members of SANBI's Threatened Species Programme who contributed to this publication over the past six years are:

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Foreword

Species provide us with essential services: not only food, fuel, clothes and medicine, but also purification of water and air, prevention of soil erosion, regulation of climate, pollination of crops, and many more. They also provide a vital resource for economic activities (such as tourism, fisheries and forestry), as well as having significant cultural, aesthetic and spiritual values. Consequently the loss of any species diminishes the quality of our lives and our basic economic security.

Despite a growing awareness that species diversity supports human livelihoods and underpins healthy ecosystem functioning, it is widely acknowledged that the world is facing an extinction crisis. Many species are declining to critically low levels and significant numbers are going extinct as a direct or indirect result of human activities. Governments and civil society have responded to this challenge by setting clear conservation targets. These include the Convention on Biological Diversity's 2010 targets of understanding and documenting species diversity, and reducing the current rate of biodiversity loss.

South Africa is recognised as one of the world's mega-diverse countries in terms of its species richness and high levels of endemism. The country not only contains one of the world's six floral kingdoms, but three of the world's biodiversity hotspots are located mainly within its borders. South Africa therefore has a significant global responsibility to manage its floral wealth in a sustainable manner and to ensure that all its plant species are conserved in a way that does not lead to further depletions.

The long tradition of botanical exploration and scientific plant study in South Africa means that there is an impressive amount of information dispersed around the country and elsewhere. Compiled and standardised, this information can be used for developing and implementing strategies to stop the current extinction crisis. The Threatened Species Programme of the South African National Biodiversity Institute (SANBI) is endeavouring very effectively to do just this; hence the production of this Red List of South African plants represents a quantum leap forward in South Africa's efforts to conserve its plant diversity.

Since the 1980s, South Africa has produced a number of national, provincial and local publications listing plants that are considered to be threatened. All these publications have provided key information used in the development and implementation of conservation strategies and actions. In many respects, South Africa has been the leading country in Africa in terms of plant conservation work. This new publication, however, places South Africa firmly on the global stage as a world leader:

- This is the first time that any of the world's mega-diverse countries has fully assessed the status of its entire flora—a staggering 20 456 taxa.
- The assessment is of global significance as it includes 13 265 endemics. Therefore, when these entries are submitted for incorporation in the *IUCN Red List of Threatened Species* they will double the number of plants on the IUCN Global Red List.
- South Africa is one of the few countries with a dedicated team of plant Red List staff.
- The whole process of compiling the list has been a collaborative one involving both professionals from a range of institutions and organisations and amateurs.
- Through the establishment of an extensive civil society network, the Custodians of Rare and Endangered Wildflowers (CREW) programme, SANBI has developed a novel model that recognises the value of civil society in gathering information on populations of threatened plants and implementing conservation actions.
- South Africa recognises that Red Lists are dynamic and has established a process to ensure that the list is regularly updated.
- This Red List includes an assessment of the threats to plant biodiversity for the first time, as well as a section on applications of the Red List for conservation practitioners.
- South Africa clearly recognises that producing this Red List is not an end in itself, but an important informant for guiding conservation action at a variety of scales across the country.

SANBI, in particular the staff of its Threatened Species Programme, together with the many professionals, amateurs and CREW volunteers who have contributed to this work, have done an outstanding job in bringing us this new plant Red List. I know it has not been an easy task, and the co-ordinating team is congratulated for persevering with this mammoth project. The *Red List of South African plants* represents the very best in process implementation, knowledge development and collaborative participation from right across the stakeholder spectrum.

This new *Red List of South African plants* should be treated as a clarion call to action in the drive to tackle the extinction crisis. South Africa's biodiversity is increasingly under pressure from a range of competing land and resource uses, challenging our obligations to conserve plant diversity. This publication contains much valuable information on the state of, and trends in, all wild South African plant species that can be used to effectively deal with these challenges.



Craig Hilton-Taylor
IUCN Red List Unit Manager
May 2009

1. Introduction

L. von Staden, D. Raimondo & W. Foden

1.1 South Africa's unique flora

South Africa has the world's richest temperate flora (Germishuizen *et al.* 2006), with 20 456 recorded indigenous vascular plant taxa. With the current estimate of the global flora at 370 000 taxa (Simiyu 2008), this means that 6% of the world's plant diversity is represented within South African borders. In addition, the extraordinary levels of vascular plant endemism—some 13 265 taxa representing 65% of our flora[1]— are internationally recognised. South Africa has become one of only two countries in the world with three of the world's 34 biodiversity hotspots allocated to areas within their boundaries, in our case the Cape Floristic Region (6 210 endemics), the Succulent Karoo (2 439 endemics) and the Maputaland-Pondoland-Albany Region (1 900 endemics) (Mittermeier *et al.* 2005). South Africa is indisputably a custodian of a significant store of the world's flora, both in terms of diversity and endemism. The effective conservation of our local flora is therefore a high priority and a great challenge at the same time.

1.2 South Africa's approach to plant conservation

As a ratified signatory to the Convention on Biological Diversity (CBD), South Africa is obliged to develop national strategies for the conservation and sustainable use of biological diversity. In 2002 the Parties to the Convention adopted a Global Strategy for Plant Conservation (GSPC), a framework guiding conservation action with the objective to halt the continuing loss of plant diversity. The GSPC contains 16 specific outcome-oriented targets—this Red List represents South Africa's contribution to meeting Target 2, 'a preliminary assessment of the conservation status of all known plant species, at national, regional and international levels'.

Determining conservation status is a means of highlighting those species that are most in need of conservation action. These are typically those at greatest risk of extinction and in order to identify them, South Africa has adopted the IUCN Species Survival Commission's internationally endorsed Red List system, the IUCN Red List Categories and Criteria. Initiated in 1963, this system has evolved from an expert-opinion-based method to an objective, rigorous, scientifically founded system of classification that can be consistently applied across all species (with the exception of micro-organisms) to identify taxa facing a high risk of extinction in the near future (Mace *et al.* 2008).

The IUCN Red List Categories and Criteria Version 3.1 (the latest version, adopted in 2001) has been used in the 2009 South African assessments (IUCN 2001). South Africa has used this system specifically because of its strong scientific base, objectivity and transparency. Species are categorised as facing a high risk of extinction when quantitative thresholds within clear, comprehensive and specific criteria, relating to biological factors and aspects of population dynamics indicating high levels of threat, are met. The quantitative nature of the system demands extensive supporting data to justify the categorisation of species, but is also flexible enough to allow categorisation even under uncertainty in the absence of high-quality data, a problem often encountered in megadiverse floras such as South Africa's, where many taxa are insufficiently known.

In addition, trends in changing extinction risk of species—either as a result of a continuing deterioration in status or populations recovering through effective conservation—are used as indicators in CBD targets towards reducing the rate of biodiversity loss (Mace & Baillie 2007). Species categorised according to the IUCN Red List system are preferred in indices tracking the state of biodiversity internationally (Butchart *et al.* 2006).

Within South Africa, Red Lists are applied in a variety of local conservation processes (see section 4). One of the obligations of the South African National Biodiversity Institute (SANBI) under the National Environmental Management Biodiversity Act (NEMBA), is to monitor and report on the state of South Africa's biodiversity. Red Lists are vital components used in the calculation of statistics to inform the Minister of Water and Environmental Affairs, the biodiversity sector and the general public on trends in the country's biodiversity. The conservation status of taxa is incorporated as biodiversity features in provincial and fine-scale municipal conservation plans. In land use decision-making processes, the detection of the presence of a threatened taxon at a site during an environmental impact assessment often results in a record of decision that is designed to mitigate loss of habitat of the taxon in question.

Owing to the wide-ranging applications of the conservation status of species in local conservation processes, using a list containing only species at risk of extinction is not sufficient to guide conservation action effectively (Possingham *et al.* 2002; Keller & Bollmann 2004). South Africa has, for example, high numbers of rare and localised endemic plant taxa that are not under threat, and therefore not at risk of extinction, but they are of local conservation concern and have to be included in conservation prioritisation processes such as conservation planning. To deal with this, SANBI's Threatened Species Programme (TSP) has developed additional categories for classifying taxa of conservation concern in consultation with local botanical experts (see Box 1.1, Figure 1.1 and section 2.6).

[1] This number is the current most accurate estimate of vascular plant endemism for South Africa. It was derived through data captured during the compilation of this Red List.

BOX 1.1 From 'Red-Listed' species to species of Conservation Concern

The first Red Lists covered only species that the botanical community considered in need of conservation action. As a result, in those early days, the terms 'Red Data' and 'Red-Listed' species became incorrectly understood to refer only to endangered and/or rare species by both conservationists and the public alike.

As the Red List system developed, it became more rigorous in its focus on risk of extinction as well as in its criteria for determining risk. Accompanied by an increase in data availability and, in some cases, effective conservation actions, many 'Red Data' or 'Red-Listed' species were found not to be in danger of extinction. The need became clear to allocate species to low extinction risk, least concern categories.

As a result, from 2003 all updates to the IUCN Red List of Threatened Species also include species assessed as Least Concern (LC)—the category indicating a very low risk of extinction—particularly to keep track of species that were assessed as threatened in earlier editions but have since been down-listed. More recently, the IUCN Species Survival Commission has also recommended a move away from selective assessments towards comprehensive assessments of all species, regardless of whether they are suspected to be in danger of extinction or not.

The 2009 Red List is a comprehensive assessment of all South Africa's indigenous plant taxa—this means that every plant taxon has been given a conservation status and that ***all* South African indigenous plants are now on the Red List or 'Red-Listed'.**

To avoid the confusion that has developed, we recommend using the terms '***threatened species***' and '***species of conservation concern***' rather than 'Red-Listed' and 'Red Data' to refer to rare, declining and/or threatened species.

Threatened species are those that are facing a high risk of extinction, indicated by placement in the categories **Critically Endangered (CR)**, **Endangered (EN)** and **Vulnerable (VU)**.

Species of Conservation Concern are those that are important for South Africa's conservation decision-making processes. Hence, in the 2009 Red List, we have considered 'species of conservation concern' to include all those that are **threatened (CR, EN, VU)**, **Extinct in the Wild (EW)**, **Data Deficient (DDD)**, **Near Threatened (NT)**, **Critically Rare (extremely rare)**, **Rare** and **Declining** (Figure 1.1).

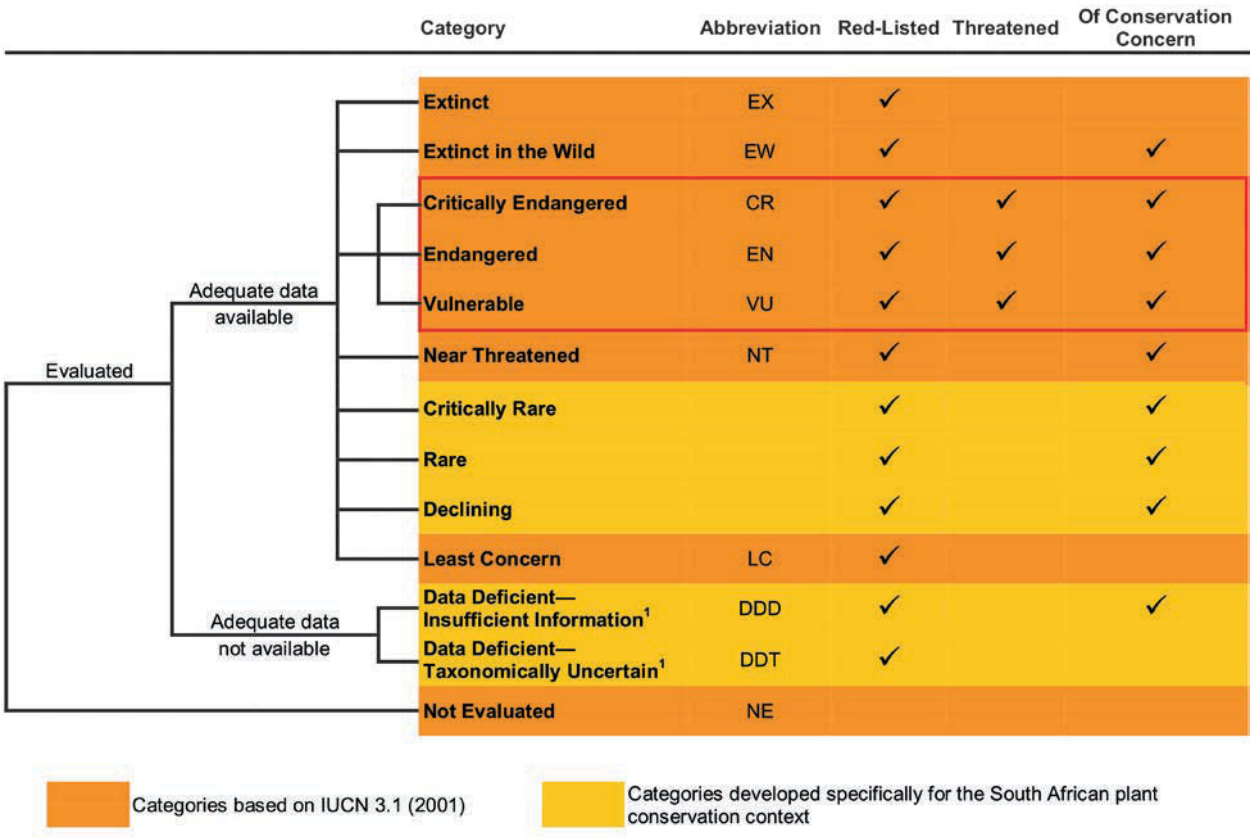


FIGURE 1.1. Structure of the South African Red List categories indicating which categories are included under the terms Red-Listed taxa/species, threatened taxa/species and species/taxa of conservation concern.

[1] Data Deficient follows the IUCN Categories and Criteria Version 3.1 (IUCN 2001) definition of Data Deficient, but on the South African list the tags 'D' or 'T' are added to distinguish between those taxa that are insufficiently known but may be threatened, and those that are taxonomically problematic. Figure adapted from IUCN Standards and Petitions Working Group (2008).

1.3 The 2009 Red List of South African plants: a major milestone

The 2009 plant Red List is a major milestone for South Africa in that it is the first data-driven, comprehensive assessment of the country's indigenous vascular flora. As the first megadiverse country to assess its entire flora comprehensively, this Red List is also a major contribution towards global plant conservation targets.

Three previous regional assessments, Hall *et al*. (1980), Hilton-Taylor (1996a,b, 1997) and Golding (2002) have laid the basis for the 2009 plant Red List. All these lists, however, have included only a limited number of South African plant taxa. This is the first Red List for which every one of the 20 456 plant taxa known to occur within South African borders has been assessed and assigned to one of 12 Red List categories (Figure 1.2).

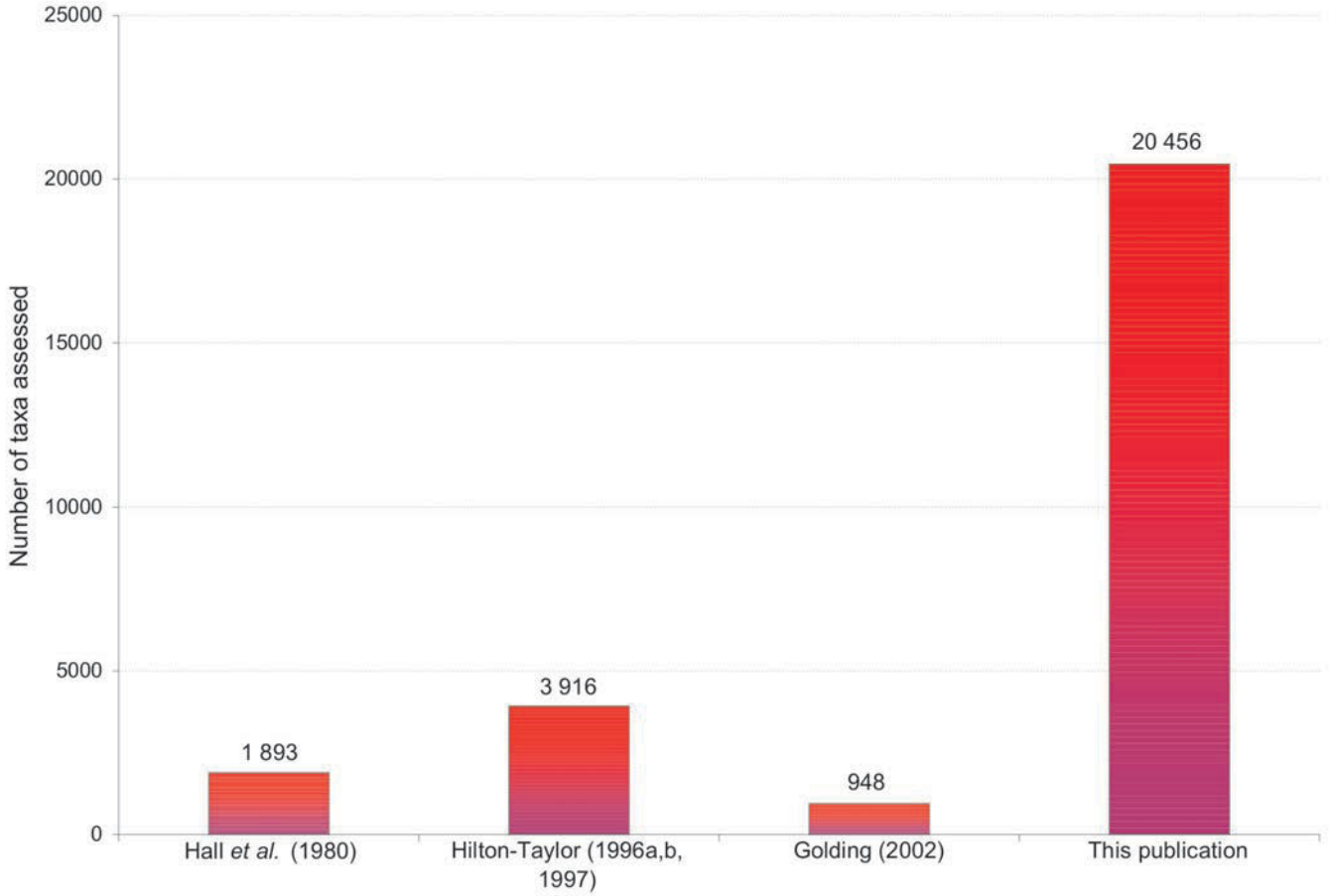


FIGURE 1.2. The number of assessments of South African plant taxa included in previous Southern African Red Lists. This publication is the first to include the Red List status of all plant taxa indigenous to South Africa.

Since the first Southern African plant Red List was published (Hall *et al.* 1980), the IUCN Red List system has been continually refined towards a more objective process of categorisation of species. Quantified criteria, first introduced in 1994 (IUCN 1994), have increased the need for data to support and justify assessments. This requisite information has been assimilated from a wide range of sources (see section 2.5) and the data justifying assessments for each taxon of conservation concern are presented in this publication in the Assessment Rationale. This Red List is therefore the first rigorously qualified list of threatened plant taxa for South Africa. Users of this publication are urged to scrutinise the Assessment Rationales and to alert the Threatened Species Programme (redlist@sanbi.org.za) of any omissions, errors and new information on listed taxa, so that assessments can be corrected and updated.

Most countries party to the CBD who have adopted the Global Plant Conservation Strategy have found Target 2 to be one of the more challenging targets to achieve, and only 3% of the world's plant taxa have thus far been assessed using IUCN 3.1 criteria (Simiyu 2008). South Africa is among 17 megadiverse countries that collectively hold 70% of the world's species diversity (Mittermeier *et al.* 1997) and is the first among these countries to comprehensively assess its flora. Owing to the country's great botanical diversity, South Africa's Red List contribution marks a great stride towards reaching Target 2 by increasing the proportion of the global flora assessed to 9%.

1.4 Ongoing updates to the Red List

A Red List is a dynamic tool, and it is critical that it is frequently updated in keeping with changes in land use pressures, the impact of conservation measures to improve the status of species as well as new information such as taxonomic

revisions. Previous Red-Listing initiatives, both in South Africa and globally, have tended to treat the publication of a Red Data Book as an end point. Red Data Book publications in 1980 and 1996 marked the culmination or near-culmination of Hall and Hilton-Taylor's respective undertakings. For several years prior to the updated publications, the accepted Red List and hence the planning, decision-making and legislation resulting from it, were based on an increasingly inaccurate reflection of the state of South Africa's flora. A static Red List can never remain accurate for any length of time and this book too will become progressively more out of date. Even between the completion of text and the launch of the book, new information has come to light in the form of new taxonomic revisions and new discoveries of subpopulations in the field.

South Africa is one of very few countries with a dedicated team of plant Red List staff. This core group is aided by a large network of committed botanical experts that form part of an extended professional team concerned with the conservation of South Africa's flora. SANBI is also able to harness significant capacity from its extensive civil society network, the Custodians of Rare and Endangered Wildflowers programme (CREW), which involves volunteers in monitoring wild populations of rare and threatened plants. In addition to new field data from CREW volunteers and field ecologists, ongoing digitisation of specimens from herbaria around the country is taking place. Given these sources of data and the strong support of botanical expertise that has been established through this Red List initiative, SANBI's Threatened Species Programme is in a good position to keep the Red List up to date.

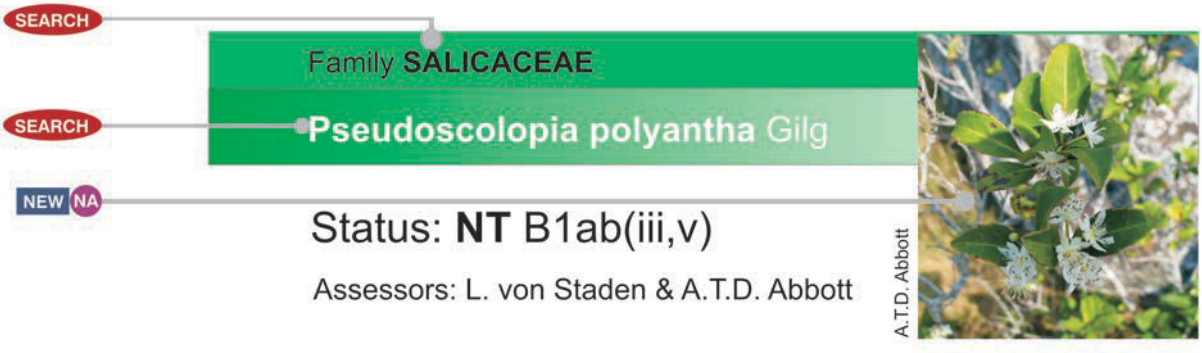
To make sure that you always have the most up-to-date Red List assessments and information, we recommend that you use the electronic Red List presented on SANBI's website (www.sanbi.org) in combination with this book. This web-based version, updated with the latest information and assessments every six months, also provides the option of accessing more detailed information than could be included in this book (see Box 1.2). Further benefits of the web version include the ability to create customised lists for particular provinces, taxonomic groups and biomes.

BOX 1.2 The South African Plant Red List on the SANBI website

Large volumes of information on South Africa's threatened plants have been collated during the compilation of the 2009 Red List. Much of this information could not be presented in this publication. Users of the Red List are invited to visit the South African Plant Red List on the SANBI website (www.sanbi.org), where more comprehensive information on threatened species is provided. Users are also urged to consult the web-based Red List as future updates to the status of species will be posted there. As new information becomes available, the Red List status of some species will change, and the status as presented in this publication will become outdated. The status of a species on the website will therefore always be the currently most accurate.

Example of information provided on the web-based Red List

Most information represented on the web will at first be only available for species of conservation concern, and the Threatened Species Programme will be systematically adding basic information on all Red-Listed species.



Rationale

Restricted to a highly threatened habitat in southern KwaZulu-Natal and Pondoland. EOO ± 13 500 km², a suspected 10–20 locations continue to decline as a result of frequent and intense grassland fires that affect forest margins. Although three isolated subpopulations occur in KwaZulu-Natal and the Western Cape, subpopulations in Pondoland are not severely fragmented.

Distribution

Endemism South African endemic.

Provincial distribution Eastern Cape, KwaZulu-Natal, Western Cape.

Distribution Mainly Pondoland between Oribi Gorge and Port St Johns. Isolated occurrences at Little Noodsberg and Ngoye (KwaZulu-Natal) and the Groot Winterhoek Mountains (Western Cape).



Habitat

Biomes Forest, Fynbos.

Habitat Sandstone, along forest margins, or in rock outcrops usually on cliffs (Pondoland and KwaZulu-Natal). In the Western Cape it occurs along a rocky stream bank in montane fynbos.

Threats

The main threat to Pondoland woody species restricted to forest margins is too frequent and intense grassland fires that are causing forest margins to recede (D. Styles, C.R. Scott-Shaw, pers. obs.). This threat is affecting forest margins mainly in the areas between Umtamvuna and Mkambati Nature Reserves, and around Lusikisiki. The threat probably also has an impact on the subpopulation at the Little Noodsberg, where surrounding grasslands are severely degraded by overgrazing and too frequent fire (Fairbanks *et al.* 2000).

From Port Edward to Oribi the largest remaining areas of forest are fairly well protected within the Umtamvuna and Oribi Gorge Nature Reserves, but some areas of forest above the edges of these deep gorges have undoubtedly been cleared for forestry and agriculture (mainly sugarcane) in the past. Smaller forest patches outside reserves are threatened by the effects of fragmentation and isolation within a transformed landscape as well as by encroachment by invasive alien plants.

The subpopulation in the Groot Winterhoek Mountains is protected within a Wilderness Area, but it is also potentially threatened by too frequent and intense fire (A.E. van Wyk, pers. comm.). Fynbos is a fire-prone vegetation, and the subpopulation occurs in a forested kloof along a streambank, a typical fynbos fire refugium.

Notes

The Groot Winterhoek subpopulation is not morphologically exactly the same as the Pondoland individuals (A.E. van Wyk, pers. obs.). It is not known whether this subpopulation represents the westernmost extreme of a former widespread population (as suggested in Abbott *et al.* 2000) or whether it is the result of a rare long-distance dispersal event. The Pondoland flora has many links with the winter-rainfall fynbos, including representatives of the fynbos families Proteaceae, Ericaceae and Bruniaceae (Abbott *et al.* 2000; Abbott 2006).

Previous assessment(s)

Status	Publication
R	HILTON-TAYLOR, C. 1996. Red Data List of southern African plants. *Strelitzia* 4. National Botanical Institute, Pretoria.
VU	SCOTT-SHAW, C.R. 1999. *Rare and threatened plants of KwaZulu-Natal and neighbouring regions*. KwaZulu-Natal Nature Conservation Service, Pietermaritzburg.

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ABBOTT, A., VAN WYK, A.E., JOHNSON, D.N. & SCOTT-SHAW, C.R. 2000. Checklist of the macrofungi, lichens, bryophytes and vascular plants of the Umtamvuna Nature Reserve, South Africa. *Lammergeyer* 46: 1–69.

ABBOTT, T. 2005. Pondoland Centre endemics and their distribution patterns. Internet. http://www.safcei.org.za/wildcoast/pondoland.htm.

ABBOTT, T. 2006. The story of the Pondoland Centre. *PlantLife* 33 & 34: 5–72.

FAIRBANKS, D.H.K., THOMPSON, M.W., VINK, D.E., NEWBY, T.S., VAN DEN BERG, H.M. & EVERARD, D.A. 2000. The South African land cover characteristics database: a synopsis of the landscape. *South African Journal of Science* 96: 69–82.

KILLICK, D.J.B. & LANGENEGGER, J.E. 1976. Flacourtiaceae. In J. H. Ross (ed.), *Flora of southern Africa* 22: 70–72. Botanical Research Institute, Pretoria.

SCOTT-SHAW, C.R. 1999. *Rare and threatened plants of KwaZulu-Natal and neighbouring regions.* KwaZulu-Natal Nature Conservation Service, Pietermaritzburg.

SEARCH
The on-line database can be searched by these fields.

NEW
Additional information provided on the website.

NA
Data not yet available for all species.

2. Approach to Red List assessments

L. von Staden, D. Raimondo & W. Foden

2.1 Plant taxa included in the Red List

The IUCN Species Survival Commission recommends that the status of all taxa be assessed, regardless of whether they are suspected to be in danger of extinction or not (Hilton-Taylor 2000). This Red List includes assessments for all 20 456 taxa in the vascular plant groups Pteridophytes (ferns), Gymnosperms and Angiosperms (Monocotyledons and Dicotyledons) known to occur naturally in South Africa. Bryophyta (mosses), Hepatophyta (liverworts) and Anthocerotophyta (hornworts) have not yet been assessed as these groups are currently too poorly known, but they are likely to be facing similar threats as those taxa that have been assessed and should be included in future updates to the South African plant Red List.

Only species, subspecies and varieties were assessed and no taxonomic ranks below variety were included. In a few instances, species that have valid subspecies or varieties were assessed at the species level only. For example, assessments for some taxa harvested for traditional medicine such as *Dianthus mooiensis* and *Haworthia limifolia* rely on information about volumes of plants traded in informal markets as well as interviews with traders. Traders often do not distinguish between subspecies and varieties and it is also extremely difficult to identify these species to the correct taxonomic level from the material sold at markets, making it challenging to do individual assessments for taxonomic ranks below species. Such deviations from valid names have been indicated with a superscript ^{S} before the taxon name in the species assessments.

Natural hybrids and introduced taxa were not assessed. Some taxa that were listed by Hilton-Taylor (1996a,b, 1997) were not reassessed in this Red List because they fall within one of the above categories of excluded taxa. See Appendix II for the list of previously listed taxa excluded from this Red List.

2.2 Structure and organisation of the Red List

Section 9 contains all evaluated taxa and their status, and is sorted alphabetically by genus. Where there have been changes at the generic level since the publication of the South African plant checklist (Germishuizen *et al*. 2006), directions to the correct genus have been included for easy reference. Taxonomic changes to taxa listed by Hilton-Taylor (1996a,b, 1997) are indicated in Appendix II. Indications regarding other taxonomic changes at species level and below published since Germishuizen *et al*. (2006), however, cannot be included in this publication. Users are requested to consult the POSA (Plants of Southern Africa) link on the SANBI website (www.sanbi.org) for the latest taxonomy. All taxa of conservation concern (see Box 1.1) have been marked in bold in section 9. The taxa of conservation concern are covered in section 5, which provides information on the distribution and habitat of each taxon, as well as an explanation of how a taxon meets the criteria for inclusion in the category under which it is listed. Section 5 is arranged according to the higher classification of the taxa—Pteridophytes, Gymnosperms, Angiosperms (Monocotyledons and Dicotyledons), and within these groups they are sorted alphabetically by family, genus and species.

2.3 Taxonomic treatment

As far as possible, only taxa validly published in terms of the *International Code of Botanical Nomenclature* (McNeil *et al*. 2006) have been included in this Red List. In some instances, however, taxa not yet formally described have been included. The IUCN Species Survival Commission discourages the listing of undescribed taxa, and these are only allowed in exceptional cases on condition that (1) there is a clear conservation benefit to listing the taxon; (2) there is general consensus that it is a clearly distinct entity; (3) the distribution is well defined; and (4) a voucher specimen is available as a reference (IUCN Standards and Petitions Working Group 2008). Some 65 taxa that meet these criteria have been included in the list. The IUCN also requires that descriptions of new taxa be published within four years of their inclusion in the Red List, after which they will be removed from the list.

Some undescribed taxa have been included in other publications (e.g. Goldblatt & Manning 2000; Germishuizen *et al*. 2006) under provisional names. In this publication, provisional names have not been included for the following reasons: (1) it may create confusion when the provisional epithet is not available at the time of publication; (2) the author might eventually decide to apply a different epithet; (3) another taxonomist may revise the group and give the taxon a different taxonomic status altogether; or (4) the inclusion of taxa under provisional names not formally published may result in the names being used elsewhere in the literature without an indication of their unpublished status, thereby promoting unscientific practices if such taxon names were to become established in the literature. Unpublished taxa are indicated in this publication simply as *sp. nov*. for new species, *subsp. nov*. for new subspecies and *var. nov*. for new varieties. The voucher specimen and herbarium holding the collection are included with the assessment of each undescribed taxon, so that these taxa can be tracked and identified by means of the voucher specimens.

Nomenclature used in this list generally follows Germishuizen *et al*. (2006). New taxa published subsequent to 2006 have been included in the Red List if they have been captured in the taxon database of the National Herbarium in Pretoria (PRE) Computerised Information System (PRECIS), or if the Threatened Species Programme has been made aware of their publication. Some newly described taxa may not yet have come to the attention of the Threatened Species Programme and users of this Red List are requested to report any omissions they may note.

Conflicting opinions and taxonomic treatments are a major problem when compiling a Red List. With this Red List we have tried to avoid bias in the selection of taxonomic treatments by following only the most recently published treatments. It is possible that some recent revisions may have been missed, and users of this Red List are again requested to inform the Threatened Species Programme, should they note any errors in this regard.

2.4 South African Red List categories and criteria

Categories based on IUCN 3.1 categories and criteria[1]

The IUCN Red List categories and criteria are intended to be a clear and easily understood system of classifying taxa at risk of global extinction. The system provides an explicit, objective framework for the classification of taxa from all levels of biodiversity except micro-organisms. Categorisation should ideally be applied only to wild populations inside their natural range and populations established through benign introductions. Benign introductions are defined as an attempt to establish a taxon, for the purpose of conservation, outside its natural distribution, but only when there is no remaining habitat left within the historic range (IUCN 1998). The criteria should also be applied to translocated or reintroduced subpopulations within the natural range, but only once these subpopulations have become self-sustaining. Most subpopulations of translocated or introduced individuals of threatened plants in South Africa are the result of very recent conservation initiatives and have not yet proved to be self-sustaining and are therefore mostly excluded from assessments for this Red List.

Naturalised subpopulations outside the natural range and subpopulations introduced for nonconservation purposes outside the natural range when intact habitat remains within the natural range, are not included in assessments. However, if a taxon has successfully expanded its range without the aid of translocations or introductions as a result of human impact on the landscape, for example native taxa that thrive in disturbed areas such as crop fields and mining sites, such subpopulations are included in assessments.

Extinct (EX), Extinct in the Wild (EW) and Critically Endangered (Possibly Extinct)

A taxon is Extinct when there is *no reasonable doubt* that the last individual has died. Similarly, a taxon is Extinct in the Wild when there is *no reasonable doubt* that the last wild individual has died, but it is known to survive in cultivation, or as a naturalised subpopulation far outside the historic range, or as a reintroduced subpopulation in- or outside the historic range that has not yet proved to be self-sustaining.

Taxa should only be listed as Extinct or Extinct in the Wild when exhaustive surveys in all known and potential habitat, at appropriate times (diurnal, seasonal or annual) throughout the historic range and over a time period appropriate to the life history of the taxon, have failed to record an individual. Extinction is, however, very difficult to detect. Many taxa previously classified as Extinct have been rediscovered (see section 3.1). Such rediscoveries make the tracking of global extinction rates highly problematic. Also, classifying a taxon as Extinct means that conservation efforts are withdrawn, and this may leave a taxon that may be on the brink of extinction without any protection if the classification is applied in error. The classification of Extinct and Extinct in the Wild demands a rigorous evidentiary approach, unlike other categories of threat, where a precautionary but realistic approach is preferred. Such a strong evidentiary approach may lead to an underestimation of global extinction rates.

The tag 'Possibly Extinct' applied to the category Critically Endangered has been developed especially to highlight taxa that are very likely to be extinct already, but, on the balance of evidence, a small chance remains that they may still be extant. These are typically taxa that are suspected to be extinct but for which adequate field work has not been conducted to confirm their extinctions. The tag is also applied to ephemeral or cryptic taxa that are easily overlooked and extinction is therefore much harder to detect. It is intended that taxa listed as Critically Endangered Possibly Extinct are included with taxa listed as Extinct and Extinct in the Wild within bounded estimates to indicate plausible uncertainty in rates of extinction rather than absolute numbers.

The categories of threat: Critically Endangered (CR), Endangered (EN) and Vulnerable (VU)[2]

Placement of a taxon into one of the categories of threat indicates that it is at risk of extinction. The categories of threat are ranked, thus a taxon categorised as Endangered is facing a higher risk of extinction than one categorised as Vulnerable, and a taxon classified as Critically Endangered is at higher risk of extinction than one classified as Endangered. Listing in a category of higher extinction risk implies a higher expectation of extinction and also that, in the

[1] This section is adapted from IUCN (2001) and IUCN Standards and Petitions Working Group (2008).

[2] See Appendix I for the IUCN 3.1 criteria for the categories of threat.

absence of conservation action, more taxa listed in higher categories are likely to go extinct over a specified time frame sooner than those in lower categories.

To qualify for listing in a category of threat, a taxon must meet one or more of the five quantitative criteria (A–E). The criteria were derived through a wide consultation and review process (Mace *et al*. 2008) and are aimed at detecting a range of biological indicators of populations in danger of extinction so that they can be applied consistently across a broad range of organisms and life histories. The criteria are designed to target symptoms of endangerment rather than causes. Therefore any threatening process that leads to symptoms such as rapid population decline, small population sizes or small geographic distributions will result in a taxon being classified as at risk of extinction. Within each criterion, different quantitative thresholds are used to place a taxon within one of the categories of threat (Table 2.1).

TABLE 2.1. Biological indicators of extinction risk encompassed by each of the five IUCN criteria. Quantitative thresholds within each criterion determine in which category of threat a taxon is placed. This table provides a short summary of the criteria to illustrate how the quantitative thresholds change between the categories of threat. CR—Critically Endangered, EN—Endangered, VU—Vulnerable. See Appendix I for a full explanation of the structure of the criteria.

Criterion	Biological indicator	Quantitative thresholds			
			CR	EN	VU
A	Rapid population decline in relation to the life history of the taxon in the past, present or projected into the future	Proportion by which population is reduced	> 80%	> 50%	> 30%
B	Small geographic range, decline and few locations or fragmentation or population fluctuations	Size of geographic range	< 100 km^2	< 5 000 km^2	< 20 000 km^2
		Number of locations	1	5 or fewer	10 or fewer
C	Small population size, decline and fragmentation or population fluctuations	Total number of individuals in global population	< 250	< 2 500	< 10 000
		Number of individuals in largest subpopulation	< 50	< 250	< 1 000
		Proportion by which population is reduced	25%	20%	10%
D	Very small population size or very restricted distribution	Total number of individuals in global population	< 50	< 250	< 1 000
		Size of geographic range	—	—	20 km^2
		Number of locations	—	—	5 or fewer
E	Quantitative analysis of extinction risk	Probability of extinction over a specified time period	50%	20%	10%

A taxon should always be evaluated against all the criteria. Certain criteria will be inappropriate for some taxa and they will never qualify under these criteria, no matter how close they come to extinction. However, the scope of the five different criteria is designed to be broad enough so that at least some of the criteria can be appropriately used to classify any taxon. A taxon therefore only has to meet the quantitative thresholds for at least one of the five criteria to be classified in a category of threat, but it could also qualify under more than one criterion. If multiple criteria are met, the assessment should be annotated by all the criteria that are met for the category of threat for which taxon qualifies. If multiple criteria are met but the taxon is placed in different categories of threat under different criteria, then the taxon should be listed in the highest category of threat it qualifies for and only the criteria that are relevant for that category should be listed. For example, if a taxon qualifies for Endangered under Criteria A, B and C but also qualifies for Critically Endangered under Criterion A, then it should be listed as Critically Endangered under Criterion A.

The criteria are quantitative in nature, but sufficiently comprehensive and detailed, and relevant data across the entire range of a taxon are rarely available. The IUCN system is designed to be flexible, allowing for the use of estimates, inference and projection to arrive at plausible ranges or best estimates of values needed for quantitative thresholds so that even taxa for which there is very little information can be assessed. Assessors are encouraged to always make the best use of what few data are available and the liberal use of the Data Deficient category is discouraged. It is required, however, that when inference and projection are used, any assumptions made should be documented in the

assessment. For example, in the South African plant assessments, population decline is often inferred from habitat loss. Such inferences assume that there is a linear relationship between the extent of the habitat and the number of mature individuals and that the population is evenly distributed throughout the habitat.

In the absence of complete data or where there is great uncertainty in the data available for assessments, the attitude of the assessor towards uncertainty can greatly affect the outcome of the assessment. A precautionary attitude will always classify a taxon as threatened unless it is certain that it is not threatened, whereas an evidentiary approach will only classify a taxon as threatened when there is very strong evidence that it is threatened. In applying the criteria, assessors are encouraged to adopt a precautionary, but realistic attitude by avoiding 'worst case scenario' reasoning that may lead to unrealistic listings but also resisting reliance on strong evidence and high-quality, accurate data.

Near Threatened (NT)

The category Near Threatened is applied to taxa that do not meet the criteria for one of the categories of threat, but are sufficiently close enough to qualifying that they may easily become in danger of extinction in the near future. Near Threatened does not have its own criteria, but it is required that a taxon should nearly meet the thresholds for the category Vulnerable for any of the five criteria and that the criteria nearly met should be included in the assessment and justified in the assessment rationale. Under Criterion B, the application of Near Threatened requires that quantified values are within the bounds for Vulnerable for two out of the three required subcriteria and one may be outside.

Least Concern (LC)

The category Least Concern indicates taxa that are not at risk of extinction because they do not qualify and are not close to qualifying for any of the categories of threat. According to IUCN (2001) the category is typically applied to 'widespread and abundant taxa'. However, because the IUCN system measures risk of extinction, most of the criteria require that threatening processes cause an actual or potential decline in the population, or that the population is very small, consisting of less than 1 000 mature individuals. Many South African plant taxa that are not widespread and abundant are also classified as Least Concern according to the IUCN system because there are no threatening processes that are likely to cause actual or potential decline and there are no data available on numbers of mature individuals. How this issue was dealt with is explained in the section on South African categories below.

Data Deficient (DD)

A taxon is Data Deficient when there is inadequate information to make a direct, or indirect, assessment of its risk of extinction. Data Deficient is not a category of threat but it does not imply that a taxon is not threatened. Listing of a taxon in this category indicates that more information is required to establish whether or not the taxon is threatened.

Three kinds of taxa are usually classified as Data Deficient. The first is typically taxa that are known from only one or a few collections, with no or extremely uncertain locality or habitat information. For such taxa it is impossible to define the distribution range or habitat, and because threatening processes often act more severely on some habitats than on others, even within the same landscape, inferring whether a taxon is possibly threatened or not is impossible if habitat information is not available. For example, too frequent fires are a threat only to nonresprouting plants that occur on open mountain slopes and plains, as fires do not usually get into cliffs and extremely rocky sites near mountain summits, and plants that grow in such habitats are generally protected from some or even most fires.

Secondly, while a taxon can be well known and its biology well studied, appropriate and relevant data to measure against the criteria might not be available, or whatever data exist may be extremely uncertain. In such cases every effort should be made to infer and project whatever information is available, and Data Deficient should only be applied as a last resort.

The third typical use of the Data Deficient category is where taxonomic uncertainty over the validity of the taxon prohibits the distribution from being well defined and hence an assessment of its risk of extinction is not possible. Some taxa that have been formally described as separate entities are extremely difficult to distinguish owing to natural variability. In other instances, widespread and highly variable taxa may actually represent multiple taxa, but may remain as unresolved species complexes at the time of the assessment. If any taxon that is taxonomically uncertain, whether it is part of a complex or possibly belongs to another taxon, is likely to be threatened, it should be listed as Data Deficient.

The IUCN Standards and Petitions Working Group (2008) recommends the use of tags to indicate the reasons why taxa are listed in the category Data Deficient. In the South African Red List two tags are used as follows:

Data Deficient—Insufficient Information (DDD)

This tag is applied to taxonomically well-defined taxa that are too poorly known to allow an assessment of extinction risk, either because their distribution and habitat are unknown, or they are well known and suspected to be in danger of extinction but relevant data to measure against the criteria for the categories of threat do not yet exist.

Data Deficient—Taxonomically Uncertain (DDT)

This tag is applied to taxa that may be threatened but for which taxonomic uncertainty over the validity of the taxon prohibits the distribution from being defined, and hence an assessment of risk of extinction is impossible. DDT is applied to possibly threatened taxa that are likely to belong to another taxon, regardless of whether the taxon to which it is likely to belong is threatened or not. DDT is also applied to complexes, where one or more of the taxa contained within the complex are likely to be threatened.

Not Evaluated (NE)

A taxon is Not Evaluated when it has not been evaluated against the criteria. As this Red List is a comprehensive assessment of all indigenous plant taxa, there should be no South African plant taxon with a national status of NE.

National application of the IUCN categories and criteria[3]

The IUCN categories are intended to be applied at the global level, where a taxon's entire world distribution range should be included in the assessment. Allowance is, however, made to apply the categories and criteria to subsets of the global population of a taxon, especially at regional, national or local levels, provided that procedures for the regional application of the categories and criteria are followed (IUCN 2003).

The South African assessments contained within this Red List apply only to the section of the global population that occurs within South Africa's borders. Therefore, the national status of taxa that are endemic to South Africa is also their global status, and these assessments are directly submitted to the IUCN for inclusion in the IUCN Red List of Threatened Species. For taxa that are not endemic to South Africa, national assessments documented in this Red List represent regional assessments and will not necessarily be the same as the global assessment submitted to the IUCN.

The national assessment process proceeds in three steps. The first considers which of the taxa that occur within the country are to be assessed. This process is particularly important for highly mobile taxa where issues such as vagrancy, and whether or not the taxon is resident or a breeding or nonbreeding visitor, have to be taken into account, although these considerations are clearly not applicable to plants. However, a consideration that is important in the case of plants is whether or not to assess taxa at the national level when only a very small proportion of their global range falls within the country. If it is decided that such taxa are to be excluded from the list, a lower limit on the proportion of the global population that occurs within the country has to be set before assessments commence. No such limits were set for the South African Red List and all plant taxa with all or part of their natural range falling within South Africa, have been assessed.

In the second step, all taxa that qualify for listing at the national level are assessed by applying the IUCN Red List categories and criteria to the national population in the same way as to the global population. All data used in the national assessment such as area, reduction, decline, fluctuations, subpopulations, locations and fragmentation should reflect only the situation within the national population, and not be influenced or confounded by the situation in the global population outside the country. Two categories additional to the nine global IUCN Red List categories apply at the national level. *Not Applicable (NA)* applies to taxa that have been excluded from the national list through filters established in step 1. Not Applicable also applies to taxa of which the national population is not part of the natural range, e.g. feral, naturalised or introduced taxa. The second national category, *Regionally Extinct (RE)*, applies to taxa that have become extinct within the country but still survive as wild populations elsewhere in the natural range outside the country. It is possible that Regionally Extinct taxa could re-colonise the country, and in such cases the taxon should be reassessed after the first year of reproduction. Reintroduced, formerly Regionally Extinct taxa should also be reassessed as soon as the reintroduced population successfully reproduces and the offspring are shown to be viable. No taxa have been assessed as Regionally Extinct for this Red List.

In the third step, the status of conspecific populations outside the country and their effects on the risk of extinction of the population within the country should be investigated and the categorisation adjusted accordingly. If the national population is isolated from the rest of the global population, the categories and criteria for global assessments should be applied without modification. However, if the national population is not isolated either because the taxon is capable of long distance dispersal or because the global population is relatively continuous across South African borders, the national population may benefit from 'rescue effects', where dispersal from populations outside the country may reduce its risk of regional extinction, and then the national status should be adjusted. If a taxon has been assessed as nationally threatened, but populations outside the country are not declining and are likely to have rescue effects on the national population, the national status should be downgraded by one category. In such cases the downgraded status should be indicated by an asterisk following the standard status abbreviation and the assessment should be annotated by the criteria met under the global categories and criteria prior to downgrading. For example, if a taxon that has been nationally assessed as CR C2a(i), but the status has to be downgraded, the assessment should be documented as EN* C2a(i). Reasons for downgrading should be documented in the assessment rationale.

[3] This section is adapted from IUCN (2003).

Categories developed specifically for the South African plant conservation context

In addition to the nine IUCN Red List categories, three categories have been developed for the South African Red List in order to meet local conservation concerns. The IUCN system is designed to detect risk of extinction. Taxa that are not at risk of extinction are classified as Least Concern. However, some taxa that are not at risk of extinction may still be of conservation concern. The Red List statuses of South African plant taxa are used in many local conservation prioritisation processes such as conservation planning, environmental impact assessments and the classification of threatened ecosystems. Within these processes there is a need to include taxa that are of conservation concern but not necessarily in danger of extinction. The South African categories of *Critically Rare*, *Rare* and *Declining* have been developed to highlight those taxa classified as Least Concern according to the IUCN system, should be considered in conservation prioritisation processes.

It is important to emphasise that the South African categories Critically Rare, Rare and Declining are intended for use in local conservation prioritisation processes only. In submission to the IUCN Red List of Threatened Species, these taxa have to be categorised according to the IUCN system and therefore their global status will be Least Concern.

The criteria for the South African categories have been developed in consultation with local botanical experts and are as follows:

Critically Rare

A taxon is Critically Rare when it is known to occur only at a single site, but is not exposed to any known direct or plausible potential threat and does not qualify for a category of threat according to the five IUCN criteria.

Rare

A taxon is Rare when it is not exposed to any known direct or plausible potential threat and does not qualify for a category of threat according to the five IUCN criteria, but meets one or more of the following criteria[4]:

1. Restricted range: Extent of occurrence (EOO) $\leq$ 500 km^2
2. Habitat specialist: Taxon is restricted to a highly specialised microhabitat so that it has a very small area of occupancy (AOO), typically smaller than 20 km^2.
3. Low densities of individuals: Taxon always occurs as single individuals or very small subpopulations (typically fewer than 10 mature individuals) scattered over a wide area.
4. Small global population of less than 10 000 mature individuals.

Declining

A taxon is Declining when it does not meet any of the five IUCN criteria and does not qualify for the categories Critically Endangered, Endangered, Vulnerable or Near Threatened, but there are threatening processes causing a continuing decline in the population.

2.5 Information sources

These Red List assessments are based on a comprehensive collation of published and unpublished information on the South African flora. For all assessments great effort was made to assemble all available information on a taxon from as wide a range of sources as possible. South Africa is fortunate among megadiverse countries in having a disproportionably high level of capacity in terms of taxonomic expertise and field botanists, and good spatial data such as a national land-use layer and a recently updated vegetation map (Mucina & Rutherford 2006), which greatly enhanced our ability to conduct assessments meeting the data requirements of IUCN 3.1 criteria. There are a number of sources of information without which the compilation of this Red List would have been extremely difficult, if not impossible. These information sources and their applications are discussed here for the benefit of other institutions that may wish to undertake comprehensive assessments of large numbers of taxa.

National Herbarium, Pretoria (PRE) Computerised Information System (PRECIS)

PRECIS is a megadatabase containing information on plant taxa recorded within the *Flora of southern Africa* region in two components. The first is a taxonomic component which contains taxon names, synonyms and distribution within southern Africa and which is used in the compilation of checklists such as Germishuizen *et al*. (2006). The taxonomic section of PRECIS was extremely useful in the rapid compilation of a basic list of taxa occurring within South Africa that required Red List assessments. It also ensured that the list remained taxonomically up to date during the six years it took

[4] Criteria 1–3 were derived directly from the seven forms of rarity as defined by Rabinowitz (1981), which are widely used in studies of the ecology and conservation of rare species. The thresholds for AOO and subpopulation size were used only as guidelines, because relevant data are seldom available, but the cut-off for EOO was strictly applied as this is more easily calculated for all taxa by using Geographic Information Systems (GIS) and georeferenced localities.

to complete. This section of the PRECIS database also contains information on life cycle, growth forms, altitudinal range, utilisation and whether or not a taxon is a hybrid or an alien species. Unfortunately these data were too sporadically captured to be useful in the Red List and required checking against additional sources of information where such data were needed for assessments. Data on endemism were essential requirements for assessments but were not included in the PRECIS database and had to be captured for all listed taxa by staff of the Threatened Species Programme. We recommend that endemism is included as an essential component in such databases, especially since such information is also more widely needed for national biodiversity conservation plans and in the study of patterns of global biodiversity.

The second component of PRECIS contains information on all herbarium specimens housed in the National Herbarium (PRE) in Pretoria as well as on a small proportion of the specimens held at the Compton (NBG) and Bolus (BOL) Herbaria in Cape Town. Most of the specimens are georeferenced to at least quarter degree square level and during the Red List project efforts were started to georeference to finer scales. Electronic, georeferenced specimen information has been the most crucial source of information both during the initial, semi-automated rapid checking of the ± 16 000 taxa never Red-Listed before, as well as for estimating the range size and number of locations or subpopulations during detailed assessments of taxa identified as likely to be of conservation concern.

Because georeferenced, electronic specimen information was recognised as being very useful in Red List assessments, efforts have been initiated to also encode specimens housed in regional herbaria throughout South Africa. Specimens of taxa of conservation concern held at the KwaZulu-Natal Herbarium (NH) in Durban were encoded in time to be used in assessments contained in this Red List and data from other herbaria will be used in future updates to assessments. The ongoing digitisation of herbarium material is co-ordinated by the South African Biodiversity Information Facility (SABIF), the country node to the Global Biodiversity Information Facility (GBIF). One of SABIF's key focus areas is promoting the sharing of biological data under a common set of standards by facilitating access to biodiversity and related information on the internet. SABIF funds a large number of projects focused on capturing specimen data.

Undigitised specimen data

Where PRECIS lacked sufficient encoded specimens for determining a taxon's extent of occurrence, likely number of subpopulations and preferred habitat, it was necessary to visit regional herbaria to collect this information. Subpopulation data of ± 800 (17%) of the taxa listed as being of conservation concern were collected directly from herbarium sheets. Several large South African plant families poorly represented in PRECIS that required this form of data collection include the Mesembryanthemaceae, Rutaceae, Restionaceae, Cyperaceae and Bruniaceae. Most specimens of these families are housed in the Compton and Bolus Herbaria. In addition, many small genera endemic to the Fynbos, especially those in the families Asteraceae and Fabaceae, are only represented by unencoded specimens in the Compton Herbarium.

Literature

Both popular and scientific articles on South African plant taxa were searched for useful information. Locating such articles was made possible by the online botanical literature database, the Electronic Plant Information Centre (ePIC), hosted by the Royal Botanic Gardens, Kew, at http://epic.kew.org.

Although South Africa does not have a complete Flora, the first 28 volumes that were produced towards the *Flora of southern Africa* as well as the regional conspectus for the Cape Floristic Region, *Cape plants* (Goldblatt & Manning 2000) and other taxonomic monographs provided much of the information that was essential to assessments, including distribution range, habitat and additional locality data. Recent taxonomic publications provide a wealth of useful information. In addition to good distribution and habitat information, they also provide descriptions of growth forms and life histories enabling the estimation of generation length (essential for Criterion A); seed characters are an indication of possible modes of dispersal and hence a taxon's susceptibility to severe fragmentation (essential for Criterion B); notes on phenology are useful for estimating ease of detection and the likelihood of underestimation of number of individuals or locations and also for other notes on the ecology of taxa that are often essential considerations for risk of extinction. Where only older taxonomic treatments existed, much of this information, especially on habitat and locality, was not available, and many taxa in groups that have not been recently revised had to be classified as Data Deficient.

Popular articles on threatened plant species, often written by amateur enthusiasts, were very valuable sources of information on local observations of threatening processes and population declines. Such information was generally not available anywhere else in the taxonomic or scientific literature.

Botanical experts

A wide range of people with botanical knowledge were consulted to provide information for assessments. These included professional botanists and taxonomists, conservation officials, botanical consultants and amateur enthusiasts with good knowledge of their local flora. Whether or not the experts had extensive and recent field experience made the greatest difference to the value of the data they were able to contribute. Those with extensive field experience are able to add observations of additional subpopulations not documented in the literature or in herbaria, as well as good observations on local threatening processes, specifically whether they are causing continuing declines or not—something which is very

difficult to determine from static land cover data. It was found that even when experts did not know a particular taxon under discussion, they were able to comment on threatening processes likely to affect a taxon by considering their field knowledge of sites of occurrence described in the literature and on herbarium specimens. We also found that quality of contributions from experts improved dramatically once the aim of the Red List system, i.e. to estimate risk of extinction, was made clear to them and they understood the data required to meet the criteria for the categories of threat. A greater understanding of the aim and data requirements of the system also led to a large reduction in and easier resolution of conflicts around threat categories assigned to taxa.

Monitoring programmes

Observational data on numbers of mature individuals and population declines are generally very scarce for the South African flora. Data were obtained for a small proportion of taxa assessed through monitoring programmes established by provincial conservation agencies of KwaZulu-Natal and the former Transvaal and Cape Provinces as well as by the civil society volunteer programme CREW (Custodians of Rare and Endangered Wildflowers), which was started in 2003. For 381 taxa in the family Proteaceae, extensive atlas data were collected by civil society volunteers as part of the Protea Atlas Project conducted between 1990 and 2000. As a result of these excellent, globally unique data being available in database format, the Proteaceae assessments were conducted through a radically different approach compared to other assessments in this Red List (see Box 2.1).

Spatial data

For all taxa assessed, georeferenced herbarium localities were combined with other localities gathered or deduced from the literature and expert comments to calculate the extent of occurrence (EOO) using a Geographic Information System (GIS). For some areas of South Africa, experts with regional field knowledge were not available. For taxa occurring in these areas, georeferenced herbarium localities were used in combination with national land cover data (Fairbanks *et al*. 2000) to determine threat status. National land cover was also used in combination with the vegetation map of South Africa (Mucina & Rutherford 2006) to estimate extent of habitat loss for taxa listed under the A criterion.

The use of land cover data to estimate habitat loss was constrained in two ways. Firstly, only two sets of spatial data (produced in 1994 and 2000) covering all of South Africa exist. However, the two datasets were compiled using different methods and at different spatial scales, meaning that comparison between the 1994 and 2000 land cover is extremely difficult, especially at the relatively fine spatial scales at which assessments were conducted. Because the 1994 and 2000 land cover data were effectively not comparable, extent of habitat transformation could only be estimated at a single point in time (1994), and rates of habitat loss could not be determined. Attempts were made to research the time of establishment of major industries such as forestry and sugarcane cultivation in different parts of the country, but such data are not readily available and proved to be too time-consuming for individual assessments. Therefore, listing under the A criterion based on habitat loss estimated through land cover data was only applied for very long-lived taxa (those with a generation length of 30 years or more), where it was assumed that three generations extended in the past to pre-mechanised agricultural times, so that most or all of the habitat transformation was likely to have occurred within the past three generations. Listing under the A criterion for shorter-lived taxa was only applied where observational data were available, or through expert consensus in the case of medicinal plants (see section 2.8, Box 2.2).

The second problem with the land cover data used is that it is very outdated. In many areas of the country there has been rapid expansion of mining, industry, agriculture and urban areas in response to the growing South African economy over the last 10 years. In a few instances where taxa are known to occur in areas where there has been rapid habitat transformation during this time, recent habitat loss was mapped using contemporary satellite images in order to justify listing taxa as threatened under A2 and A4 (where trends in habitat loss over the last 10 years were projected into the future). This method, which was extremely time-consuming, with at least a day needed to complete a single assessment, was only used in a few selected cases.

2.6 A strategic approach to assessing a megaflora

Assessing 20 456 taxa requires a strategic approach (Figure 2.1). This section explains the approach taken to cover all 20 456 taxa within a short time frame five years. As a first step, taxa that were likely to be of conservation concern had to be prioritised for further investigation over those that were very unlikely to be of conservation concern.

About 4 000 taxa that were included in previous Red Lists (Hall *et al*. 1980; Hilton-Taylor 1996a,b, 1997; Golding 2002) were prioritised for detailed reassessment, regardless of their status on previous lists (Figure 2.1). The remaining ± 16 000 taxa were screened for further investigation using PRECIS specimen data. This automated screening process focused on extracting range-restricted taxa, as this was the only information that could be relatively quickly derived through summary queries of specimen data, and because range-restricted taxa are more likely to be of conservation concern. Most specimens in PRECIS are georeferenced only to quarter degree square level, and the number of unique quarter degree squares in which a taxon has been collected was taken as an indication of the size of its range. However, setting the threshold for maximum number of quarter degree squares occupied by a taxon for nomination for further investigation, was not easy. Considering that the IUCN threshold for restricted range under Criterion B is 20 000 km^2

for the category Vulnerable and that the average area of a quarter degree square in South Africa is 676.6 km^2, up to 30 quarter degree squares could fit within 20 000 km^2. Setting the threshold for nomination for further investigation at 30 quarter degree squares is not a realistic option, firstly because 13 400 out of the 16 000 taxa not previously assessed then fall within this threshold, and secondly because quarter degree squares of occurrence are seldom clustered together, resulting in many widespread and abundant taxa also being included. We also found that specimen data generally underestimate the range size and number of subpopulations of taxa and therefore the threshold was set at a much more conservative level of five quarter degree squares, resulting in 6 338 taxa being nominated for further investigation (Figure 2.1).

In addition to the above process, genera for which full taxonomic monographs were available as well as all taxa in the Cape Floristic Region documented in Goldblatt & Manning (2000) were systematically checked and taxa that qualified against the IUCN Red List categories and criteria or the additional South African criteria, were included (Figure 2.1).

In the second phase of the assessment process Threatened Species Programme staff worked extensively with botanical experts across the country, gathering further information on previously listed taxa, as well as those that were nominated for further investigation through PRECIS data and literature checks. Experts were also asked to nominate any other taxa not included among the initial selected group that they believed were also of conservation concern. Expert consultation was conducted in two forms, either targeting people with expertise on particular taxonomic groups, or those with general knowledge of the flora of particular regions. Where there were a number of people with expertise on particular taxonomic groups or regions, they were brought together in a workshop and assessments were discussed until consensus was reached. In most cases there were only single regional or taxonomic experts, and in these instances consultation took the form of one-on-one interviews. Altogether 7 756 assessments were conducted in close collaboration with botanical experts; 169 botanists contributed information used in these assessments.

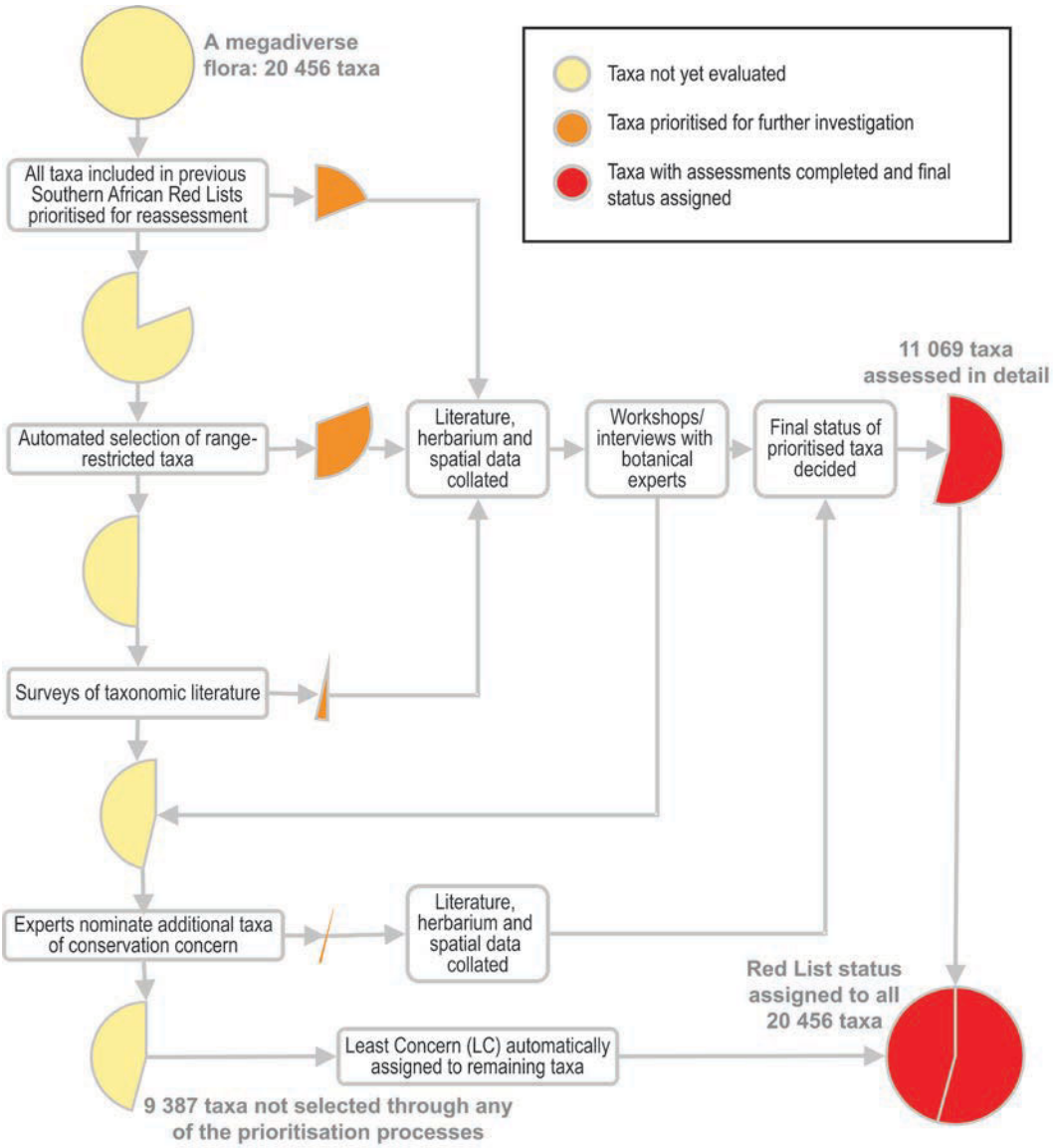


FIGURE 2.1. The process undertaken by the Threatened Species Programme to assess all 20 456 South African plant taxa.

A drawback of the quarter degree square-based screening method that emerged through the consultation phase was its inability to detect formerly common taxa that had declined significantly because of extensive habitat loss. Such taxa were often represented by large numbers of herbarium records, but closer inspection showed that most of the records were very old and did not represent extant subpopulations. We therefore suggest that future screening processes also include land cover data such as the average transformation of the quarter degree squares occupied by each taxon. Taxa occurring in areas that are highly transformed should also be nominated for investigation, regardless of the number of quarter degree squares in which they are recorded. Other taxa not detected by the screening process but that were nominated by experts for detailed assessments included widespread taxa that naturally occur at very low densities, and taxa that are removed from the wild in large volumes for use in traditional medicine or for the commercial horticultural trade.

After conducting the above process, all taxa not considered to be of conservation concern were automatically assigned to the category Least Concern. Owing to this automated approach, it is possible that some widespread taxa that have experienced and continue to experience significant declines may have been missed. It is also likely that a number of taxa with extents of occurrence less than 20 000 km^2 that also occur outside the Cape Floristic Region, have not yet been taxonomically revised and are not familiar to one of the botanical experts consulted. Such taxa could nonetheless be subject to threatening processes and could also have been missed in this assessment. As Red-Listing is an ongoing responsibility of SANBI's Threatened Species Programme, all automated assessments will be systematically checked over the next 10 years to ensure that, should such taxa qualify for a higher threat status in the future, their assessments are rapidly updated. We request that users bring any taxon suspected to be threatened or rare but that is not listed as such in this assessment, to the attention of the Threatened Species Programme.

2.7 Evaluation of Red List status

IUCN Red List methodology requires that every assessment is evaluated by an independent third party to establish whether the IUCN Red List categories and criteria have been correctly applied and whether sufficient data have been provided to support the category assigned. The assessments published here have been evaluated either by one of the Red List officers in the Threatened Species Programme who was not involved in conducting the assessment, or by one or more of the 169 botanical experts consulted as part of this Red-Listing process.

2.8 Common difficulties with assessments

The quantitative criteria of the IUCN 3.1 system demand specific biological data in order to determine the risk of extinction of a taxon. Particular types of data required to meet certain criteria are not readily available for the South African flora and often hindered the application of these criteria in many assessments. A few examples of critical data that are typically lacking for many plant taxa are as follows:

Generation length

Under Criterion A it is required that the time frame of a population reduction is scaled in relation to the longevity of a taxon, based on biological data indicating that long-lived taxa tend to be slow to reach reproductive maturity and produce relatively few offspring, while shorter-lived taxa tend to reach reproductive maturity much earlier and produce larger numbers of offspring. Short-lived taxa are better able to recover from similar population reductions over a set time period than long-lived taxa, and the incorporation of generation length under Criterion A has been designed to address this discrepancy (Mace *et al*. 2008). Generation length is defined as 'the average age of parents of the current cohort (i.e. the newborn individuals in the population)' and is intended to reflect the turnover rate of breeding individuals in a population (IUCN 2001). Besides a few anecdotal notes, data on generation length for South African plant taxa are rarely reported in scientific and taxonomic literature. In most assessments using A criterion recorded in this Red List, the habit, or growth form, of a taxon was used as an indicator of generation length. The assumption was made that trees, suffrutices and resprouting fynbos shrubs generally represent long-lived taxa with generation lengths of at least 30–50 years, but some experts believe it may be much longer, possibly more than 100 years. Generation length in other growth forms such as shrubs, perennial herbs and geophytes is much more variable, and general assumptions on the generation length of such taxa could not be made, resulting in the inability to apply Criterion A to these taxa.

Population data

Data on number of mature individuals are essential requirements for Criteria C and D. Both these criteria demand estimates of the number of mature individuals in the population, and also for subpopulations under Criterion C. Although personal observations by botanical experts indicate that South Africa has many plant taxa that occur in very low numbers, population data are only available for the Proteaceae and for a few other taxa monitored through CREW and provincial plant conservation programmes. This resulted in fewer taxa being listed under C and D criteria than what could possibly qualify. To address this problem, we would like to recommend that the number of mature individuals of a taxon occurring in low abundance observed at a collection locality be included in herbarium label notes, instead of the traditional qualitative descriptions of local abundance. More data on population size could also aid significantly in determining rates of population decline.

Rate of decline

Rate of population decline is required for Criteria A and C1. Rate of decline is typically determined by repeated surveys of populations, but acquiring such data is resource intensive, and it generally cannot be generated for large numbers of threatened taxa. The IUCN system, however, allows inference of rates population decline based on rate of habitat loss. Estimating rates of habitat loss is much more cost effective as it can be simultaneously applied to all species occurring within a particular habitat, but even such data are relatively scarce in the South African context. More analyses of current rates of habitat loss in areas of high concentrations of threatened taxa would be useful, especially in allowing the listing of more taxa with shorter generation lengths under Criterion A. A lack of spatial data on the rate and extent of habitat loss due to recently emerging land-use pressures, e.g. the expansion of rooibos tea cultivation (Box 3.1), has also prevented the use of the A and C criteria in many assessments.

Habitat data

The inclusion of habitat information on herbarium labels and in taxonomic treatments has developed only over the past 60 years. There often is no habitat information on taxa described before the 1940s, for those known only from specimens collected before 1940 and for genera not recently revised. As described under section 2.4, it is often very difficult to assign a category other than Data Deficient to taxa of unknown habitat. Taxonomic revisions of poorly known groups aid significantly in assessors' ability to assign a taxon to an appropriate Red List category.

Poorly known and inconspicuous taxa

The range and number of subpopulations of small or inconspicuous taxa are often under-represented by herbarium specimens. In addition, members of genera that have not been taxonomically revised and are thus difficult to identify, as well as taxa requiring dissection of floral parts and use of a microscope for identification, also tend to be poorly represented in herbaria. Over-listing and assigning too high a threat status are very possible in such cases.

Inference and extrapolation during assessments

According to the guidelines for using the IUCN Red List categories and criteria (IUCN Standards and Petitions Working Group 2008), assigning a taxon to the Data Deficient threat category should be avoided. It should only be used where it is not possible to extrapolate from existing data the information required to assign a taxon to one of the other seven threat categories. Owing to lack of empirical data for many taxa, it is often crucial to request experts to infer and extrapolate when conducting assessments. The best example of this comes from the work conducted to assess South Africa's medicinal plants (Box 2.2).

BOX 2.1 Assessing the conservation status of the Proteaceae—a high road scenario

The Protea Atlas Project, conducted between 1990 and 2000, involved 478 volunteers and generated detailed data on the distribution of Proteaceae throughout the African subcontinent. Some 250 000 locality records for southern African Proteaceae were generated in this globally recognised atlassing project. As far more distribution and population level information was available for taxa in the Proteaceae compared to other South African plants, an independent assessment process was followed, led by Dr A.G. Rebelo. It involved first spatially plotting Protea Atlas and herbarium georeferenced data points, and then automatically (using a script written in Automated Machine Language [AMLs] for ArcInfo) calculating Extent of Occurrence (EOO), Area of Occupancy (AOO), the degree of transformation of EOO and AOO, and a fragmentation index. This was done for both the total area of the Cape Floristic Region and for exclusively Fynbos areas, for taxa confined to these areas. These data, together with population level data collected by atlassers, were used to automatically (in Visual dBase) assign species to IUCN Red List categories, based on thresholds specified by the IUCN.



Diastella proteoides a Critically Endangered species in the family Proteaceae. Photograph: R. Turner.

Owing to the use of an automated approach, many of the IUCN subcriteria, and the category Near Threatened, that do not have specified quantitative thresholds, were assigned numerical thresholds as summarised in Table 2.2.

TABLE 2.2. Critical levels used in automation of Red List criteria, for criteria not specified in IUCN criteria (Table 2.1).

EOO = Extent of occurrence, AOO = Area of occupancy, $_f$ = Fynbos, $_t$ = transformed

Criterion	Parameters	Conditions
Population fluctuation:	EOO or EOO_f < 30 km²	Serotinous or large-nutted myrmecochorous taxa only
	AOO < 30 km²	Serotinous or large-nutted myrmecochorous taxa only
Fragmentation:	AOO/EOO < 0.05	(Fragmentation ratio presented as %.)
Population decline or continuing population decline:	EOO_t or EOO_{ft} > 20%	
	AOO_t > 20%	
NT D1:	Population < 2 500 plants	
NT D2(ii):	Locations < 10 grid squares	
NT D2(i):	EOO or EOO_f < 100 km²	
	AOO < 75 km²	(Local experts preferred an AOO < 100 km² but this was vetoed by national reviewers.)
NT A2c:	EOO_{ft} > 25%	
	AOO_t > 25%	
Pattern of decline (Decline ratio)	AOO_t/EOO_t for AOO/EOO < 1	Focussed > 1.7; Escaped < 0.33
	AOO_t/EOO_t for AOO/EOO > 1	Focussed< 0.33; Escaped > 1.7
RARE	AOO < 100 km²	
RARE	1 vegetation type > 85% records	Using SA Vegetation Map
Generation length:		
Obligate reseeder	20 (± 10) years	Only applies to Fynbos taxa
Resprouter	200–400 years	(defaults to 100 year maximum)

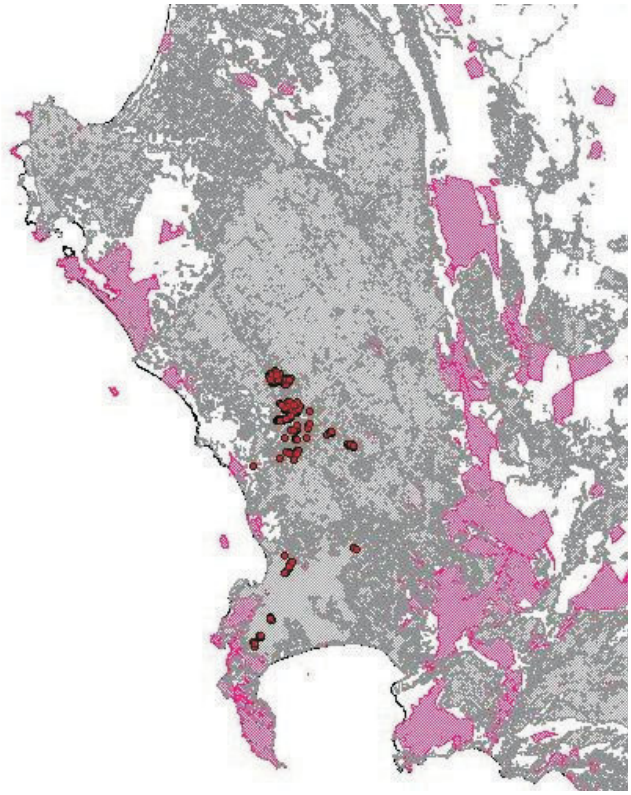
In addition, to the above, future declines were modelled by Bomhard *et al.* (2005). Some 227 Proteaceae taxa endemic to the Cape Floristic Region were modelled for the impact of different land use and climate change scenarios on their distribution ranges, up to the year 2020. Based on these models, Red List status was assigned. For those species predicted to become more threatened in the future, Criteria A3 and/or A4 were applied.

The model-generated Red List assessments were evaluated and modified where necessary at two workshops during 2005–2006, involving 21 Proteaceae experts.

Fire-related population fluctuations

One term used only in the Proteaceae assessments is 'Fire-related population fluctuations'. Many proteas are serotinous (having fruit that are stored in cones on branches and only released after a fire) or myrmecochorous (having fruit with a fleshy aril that attracts indigenous ants, which then bury the seeds in their underground nests where they are stored and only germinate after fire). These two fire-adapted life histories result in populations being highly sensitive to fire frequency, intensity and season. For example, under natural conditions two fires that occur too close together in time may result in population crashes or even complete elimination of a range-restricted taxon. Where the entire population of a taxon occurs in an area that can be affected by one fire (determined as 30 km²), the subcriterion 'extreme fluctuations', applicable for use under Criteria B and C, has been applied.

For more details see: Rebelo *et al.* (in prep.).



A distribution map of *Diastella proteiodes*. The red points on the map indicate where small subpopulations of this species were mapped by Protea Atlas volunteers. Grey areas show areas where natural habitat has been lost and pink areas are reserves. This species occurs only in small fragments outside reserves.

BOX 2.2 Assessing the conservation status of South Africa's medicinal plant taxa

Over 1 000 plant taxa are documented to be used in traditional medicine in South Africa (Arnold *et al*. 2002). A smaller number, 322, repeatedly appear in trade surveys as highly utilised and traded taxa (Victor *et al*. in prep.). The trade in these plants plays an important role in contributing to the livelihoods of many South Africans. Mander (1998) estimated that there are 27 million consumers of indigenous medicine in South Africa, with a large supporting industry. The trade in traditional medicines forms part of a multimillion rand 'hidden economy' in southern Africa (Dold & Cocks 2002). It is therefore a priority to determine the sustainability of this trade.

Many medicinal plants are destructively harvested as the plant parts used often include bulbs, roots and bark. Where studies of local medicinal markets indicate that high volumes of a taxon are traded and that harvesting is destructive, the likelihood of these plants being threatened by the medicinal plant trade is high (Williams 2007). However, medicinal plants were not easy to assess against the IUCN 3.1 criteria as they are typically widespread taxa that occur in hundreds of locations and therefore do not qualify for the restricted-range Criteria B and D. Obtaining the supporting information for listing taxa under the population decline Criteria A or C was not straightforward as this type of information is seldom included in taxonomic publications.



A range of medicinal species for sale at the Faraday Muthi Market in Johannesburg. Photographer: V. Williams.



A harvester collecting *Pelargonium sidoides*, a medicinal plant from the Eastern Cape, Lesotho and the Free State. Photographer: D. Newton.

Assessments of South Africa's medicinal plants were conducted in two phases. Firstly, a very thorough literature search of the most heavily traded species was undertaken and it provided valuable data for certain species. However, owing to limited time frames and budgets, it is not always possible to do extensive literature surveys when assessing a megadiverse flora. Nevertheless, given the value of the medicinal plant trade to South Africa's second economy, we felt it worth the time and financial investment to do comprehensive literature surveys. The detailed information obtained from the literature sets medicinal plant assessments apart from the conservation assessments of other South African plants.

The second phase of the medicinal plant assessment process was conducted during a two-day workshop with eight ethnobotanists. The distribution, suspected levels of population decline due to trade, and generation time of each species were discussed in detail. The workshop was followed by extensive email correspondence. Critical information such as total population decline over a set time frame (three generations) was extrapolated from known observed loss of individuals or subpopulations and inferred either from high volumes of material traded in local muthi markets or from reports of harvesters interviewed that they had to travel further to find their desired medicinal plants. The generation time of each taxon was estimated by combining field knowledge of growth rates of the different taxa with plants of known age monitored in either *ex situ* or *in situ* populations. Information on generation time was one of the most critical pieces of knowledge we gained from the experts as generation time is rarely cited in the literature.

Williams *et al*. (in prep.) and Victor *et al*. (in prep.) will report on the total number of medicinal plant taxa Red-Listed, their categories of threat and the proportion thereof. Based on early analyses, **under 20% of South Africa's 322 heavily traded medicinal plant taxa are threatened with extinction, most medicinal plants that were assessed are considered Least Concern** and the medicinal trade does not have a detrimental impact on their population status. **Given the role that the medicinal plant trade plays in supporting the livelihoods of many South Africans who are part of the second economy, it is important to recognise that only a small proportion of plants traded are threatened.** Conservation policies currently in place to manage the medicinal plant trade have to be adapted so that harvesting and trade of all medicinal plant taxa are not indiscriminately limited. Only taxa that are currently listed as threatened or Near Threatened have to be closely managed and monitored.

3. Patterns and trends in the Red List of South African plants

D. Raimondo & L. von Staden

3.1 Summary of key data on plant taxa of conservation concern in South Africa

South Africa has 2 577 plant taxa that are in danger of regional or global extinction, which represent 13% of the indigenous flora. A further 2 232 taxa are listed under other categories of conservation concern, which include the IUCN categories Extinct, Extinct in the Wild, Near Threatened, Data Deficient[1] and the South African categories Critically Rare, Rare and Declining. Combining the number of threatened taxa with those listed under other categories of conservation concern brings the proportion of the South African flora that is of conservation concern to 24%, or one in every four taxa (Figure 3.1, Table 3.1).

TABLE 3.1. Total number of South African plant taxa listed in the various Red List categories.

Category	Total number listed	Number of taxa listed on the South African Red List for the first time
Extinct (EX)	33	4
Extinct in the Wild (EW)	7	1
Critically Endangered, Possibly Extinct (CR PE) [a]	76	19
Critically Endangered (CR)	364	103
Endangered (EN)	715	299
Vulnerable (VU)	1 422	672
Near Threatened (NT)	382	180
Least Concern (LC)	14 635	13 626
Data Deficient—Insufficient information (DDD)	359	176
Data Deficient—Taxonomically uncertain (DDT)	1 012	787
Critically Rare	154	83
Rare	1 243	604
Declining	54	35
Total	**20 456**	**16 589**
Number of threatened taxa listed for the first time		**1 093**
Number of taxa of conservation concern listed for the first time		**2 176**

[a] Critically Endangered, Possibly Extinct (CR PE) is not strictly a category, but rather a tag applied to the category of threat Critically Endangered. Taxa listed as CR PE are therefore included under counts of numbers of threatened taxa and not under those classified as Extinct (EX or EW).

[1] Only Data Deficient taxa with the tag insufficient information are included in taxa of conservation concern (see Figure 1.1).

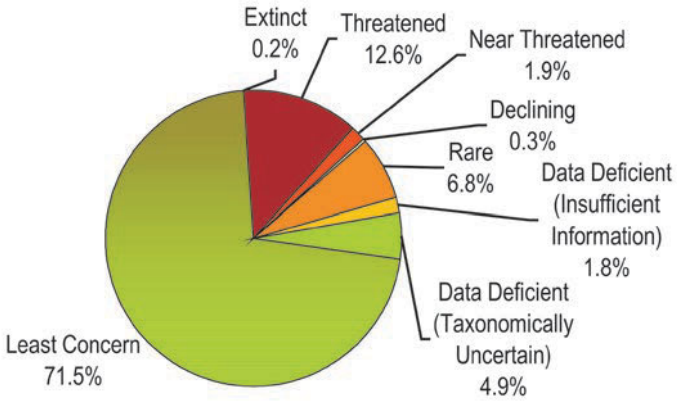


FIGURE 3.1. Taxa classified into the South African Red List categories as a proportion of the total flora. Threatened includes the IUCN categories Critically Endangered, Endangered and Vulnerable. Orange and yellow: other categories of conservation concern. Green: categories that are not of conservation concern.

The proportion of threatened taxa in South Africa is similar to that of other megadiverse countries that have completed assessments of all endemic taxa in their floras using IUCN 3.1 Categories and Criteria, such as Ecuador, with 18% of its flora classified as threatened (Griffin & Hilton-Taylor 2008). Other megadiverse countries such as Australia (21 000 taxa) and Brazil (55 000 taxa) that have not done comprehensive assessments have identified far lower proportions of their floras as threatened, only 5.7% and 2.7% respectively (Figure 3.2) (Griffin & Hilton-Taylor 2008).

South Africa has 40 plant taxa that are either extinct or extinct in the wild, and a further 76 are highly likely to be extinct (listed as Critically Endangered, Possibly Extinct). Further field surveys of the last remnants of habitat of all Critically Endangered, Possibly Extinct taxa are required before they can be officially listed as extinct.

The number of extinct taxa has decreased since Hilton-Taylor's (1996a,b, 1997) Red Data List, from 59 (Table 3.2) to 40 (Table 3.1). This large decrease is mostly due to 18 of the previously Extinct taxa having been rediscovered (Table 3.2), a phenomenon known as the Lazarus effect (Keith & Burgman 2004). In the past, application of the category Extinct was less strictly applied than it has been in this assessment. It was previously applied, in certain cases, to taxa that had not been seen for over 100 years but whose habitat still remained intact. Such extinct taxa have been listed as Data Deficient in this assessment. Only taxa where at least 98% of the original habitat has been transformed and for which repeated searches in remaining suitable habitat have been unsuccessful have been listed as Extinct. Despite the decrease in Extinct taxa, South Africa's flora has indeed become more threatened overall. Five taxa are listed as Extinct for the first time in this list and an additional 76 are listed as Critically Endangered, Possibly Extinct (CR PE). Threatened plant atlassing efforts over the next five years will focus on these CR PE taxa to establish which are definitely extinct. Some 116 taxa are considered either Extinct or Possibly Extinct—a 96% increase from Hilton-Taylor's (1996a,b, 1997) figure of 59.

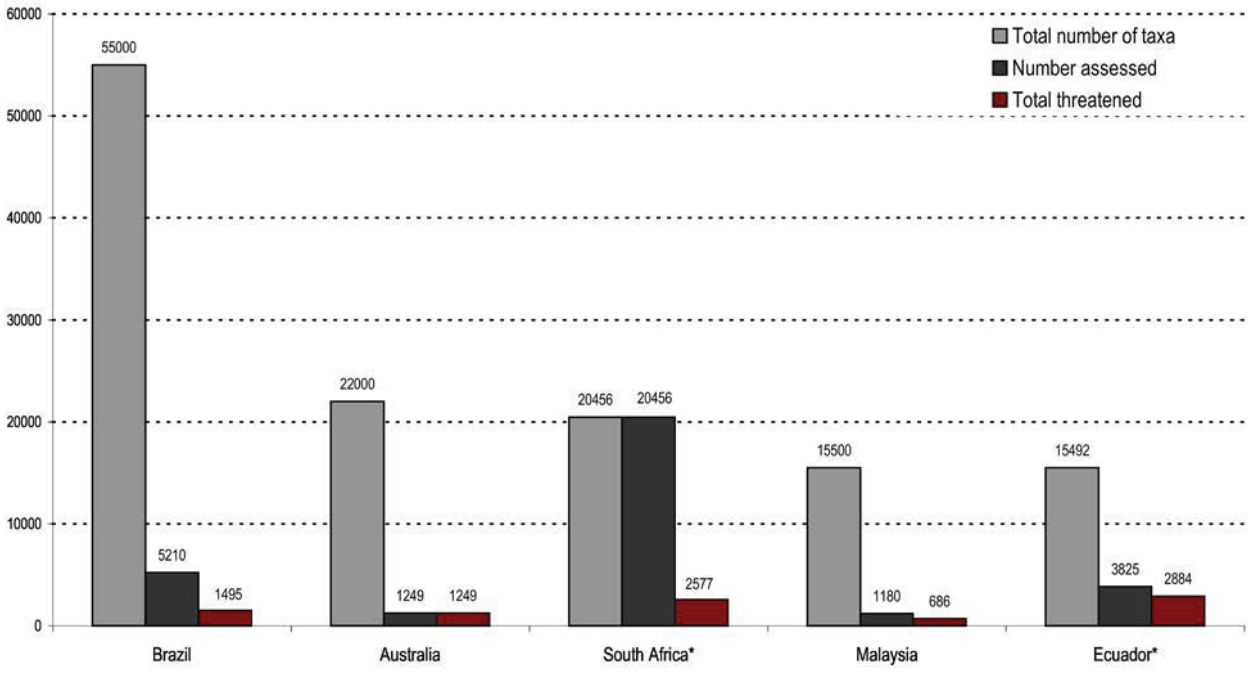


FIGURE 3.2. Number of plant taxa and number of threatened plant taxa in megadiverse countries (countries that hold 70% of global biodiversity). Those marked with * have assessed their species using the IUCN 3.1 criteria. Figures obtained from www.environment.gov.au, accessed November 2008, and Griffin & Hilton-Taylor (2008).

TABLE 3.2. Summary, with explanations of the changes in Red List status of the 59 taxa listed as extinct by Hilton-Taylor (1996a,b, 1997).

2009 status	Explanation	Number of the 59 taxa listed as extinct by Hilton-Taylor (1996a,b, 1997)
EX or EW	Still considered extinct according to IUCN Red List Categories and Criteria Version 3.1	22
CR PE[b]	Likely to be extinct	6
Threatened (CR, EN or VU)	Rediscovered	18
DD	Poorly known taxa from unexplored areas that are unlikely to be extinct	12
LC	Taxonomic changes, in synonymy under a widespread and abundant taxon	1

[b] Critically Endangered, Possibly Extinct (CR PE) is a new category in the IUCN Red List Categories and Criteria Version 3.1. It has been created to document taxa that are quite likely to be extinct, but for which the rigorous survey efforts required to list a taxon as extinct have not yet been carried out.

3.2 Main threats affecting South Africa's plant species

Habitat loss is the most significant threat having an impact on plant taxa in South Africa, affecting twice as many taxa as any other threat (Figure 3.3). The two main land uses driving habitat loss are crop cultivation and urban and coastal housing development. The impact of these two threats is seen in the number of plant species that have gone extinct or are possibly extinct—43 due to crop cultivation and 26 due to urban development (Table 3.3). Despite having well-developed planning and environmental authorisation processes in South Africa, biodiversity is still often not taken into account during land-use decision-making. Over the past decade there has been a tendency to low-density urban sprawl and coastal ribbon development, both of which have caused significant habitat loss to restricted plant taxa (Figure 3.4). Most of South Africa's large cities are situated in zones of high plant endemism, making sustainable urban expansion challenging.

TABLE 3.3. Causes of extinction of South African plant taxa (those listed as EX, EW and CR PE). In many cases, multiple threats have affected taxa that have declined to extinction. In these instances the threat that caused the most extensive decline was considered in the analysis.

Threat	Number of taxa extinct as a result of threat
Crop cultivation	43
Urban development	26
Overgrazing	10
Forestry plantations	10
Invasive alien species	7
Unknown	7
Harvesting for horticultural purposes	4
Fires	2
Mining	2
Dam construction	1
Industrial development	1
Harvesting for food	1
Harvesting for medicinal purposes	1
Natural disasters	1

After habitat loss, the second largest threat to plant species is habitat degradation (Figure 3.3). Overgrazing by livestock is the main driver causing habitat degradation, followed closely by deleterious fire regimes (Figure 3.3). Encroachment by invasive alien plants follows as the third most severe threat (Figure 3.3). It has become more severe over the past decade and currently equals habitat degradation in terms of its impact on plants (Figure 3.4). This trend can be expected to continue.

Although most plants in South Africa are not primarily threatened by plant collecting, a few select groups continue to be heavily targeted by collectors, and a substantial illegal trade exists for cycads and certain succulent and bulbous species. In addition to the illegal horticultural trade, a large informal trade exists for medicinal plants. Some 405 plant taxa are threatened by harvesting for horticultural and medicinal purposes in South Africa. Of the taxa harvested for horticulture, cycads are the most sought after and a significant local and international demand for adult plants puts wild populations under continuous threat of being poached. Of the 322 regularly traded medicinal plant species, fewer than 20% qualify as threatened. Most species in medicinal trade are widely distributed in southern African and have life histories that are resilient to harvesting (Box 2.2).

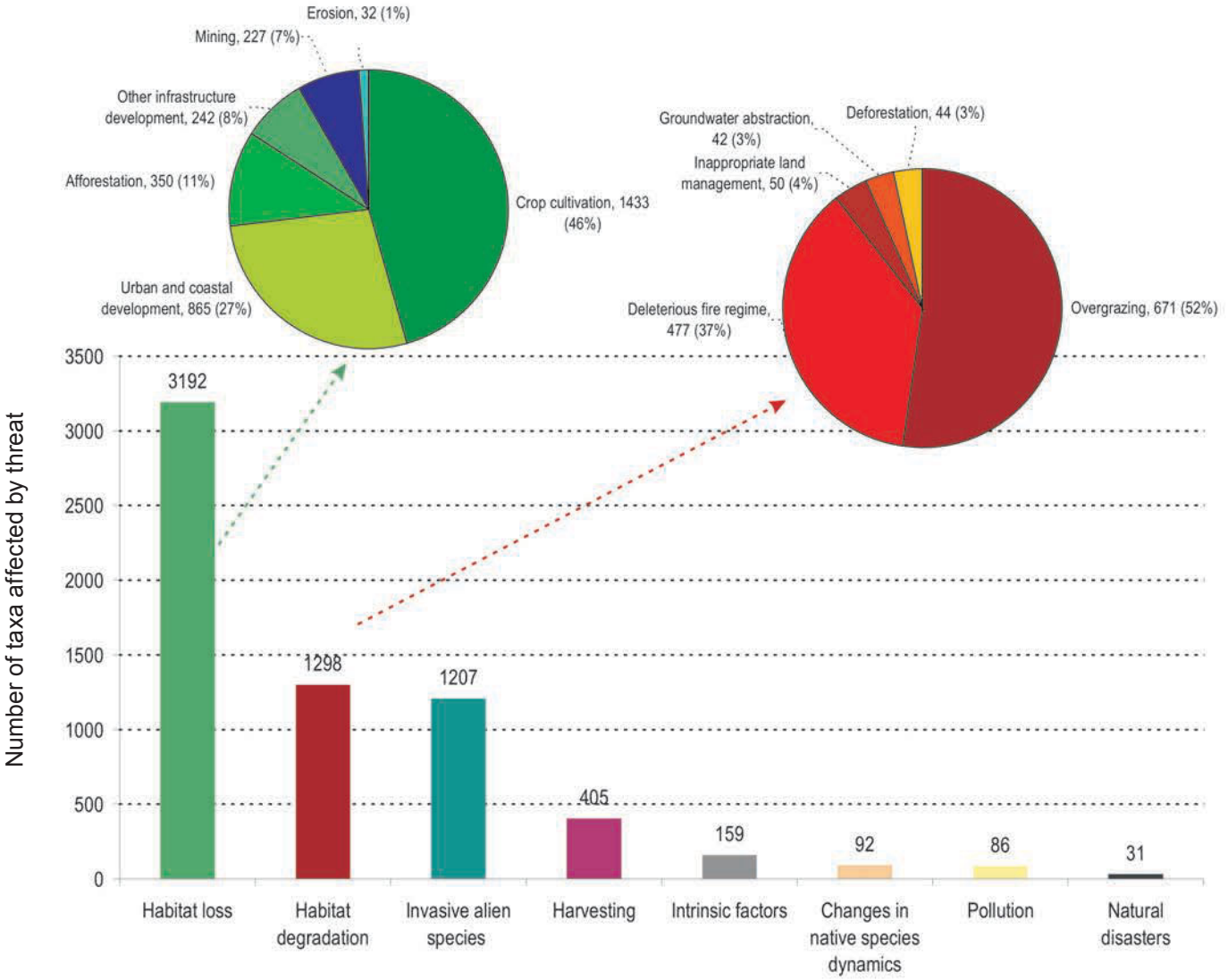


FIGURE 3.3. Threats affecting South Africa's plant taxa. Habitat loss and habitat degradation are broken down into causes of loss and degradation.

TABLE 3.4. Summaries by province of data on diversity, endemism, threatened taxa and taxa of conservation concern. Provinces are **EC** Eastern Cape, **FS** Free State, **G** Gauteng, **KZN** KwaZulu-Natal, **LM** Limpopo Province, **MP** Mpumalanga, **NC** Northern Cape, **NW** North West Province and **WC** Western Cape. [a] Mean number of taxa per quarter degree square (QDS)—see Figure 3.5.

			Floristic data				Taxa of conservation concern		Threatened taxa	
	Area (km²)	**% habitat lost**	Number of indigenous taxa	Number of endemics	% of RSA flora in province	Ende-mism %	Number (endemics in brackets)	Mean number per QDS[a]	Number (endemics in brackets)	% of RSA's threatened flora occurring in province
EC	169 886	20.4	6 072	1 006	29.7	16.6	567 (311)	6.7	261 (145)	10.1
FS	129 832	30.3	2 357	24	11.5	1.0	39 (5)	1.2	5 (1)	0.2
G	18 081	42.2	2 117	25	10.3	1.2	58 (11)	7.0	23 (8)	0.9
KZN	92 290	33.6	5 246	391	25.6	7.5	470 (198)	8.9	217 (105)	8.4
LM	123 240	26.6	3 910	174	19.1	4.5	196 (90)	3.9	78 (42)	3.0
MP	77 854	30.2	4 184	171	20.5	4.1	256 (99)	6.7	128 (74)	5.0
NC	362 440	1.8	4 635	1 111	22.7	24.0	639 (474)	2.9	246 (190)	9.5
NW	116 100	32.0	2 026	18	9.9	0.9	43 (9)	1.1	17 (6)	0.7
WC	129 557	22.0	10 816	6 772	52.9	62.6	3 177 (2 973)	45.3	1 831 (1 752)	71.1

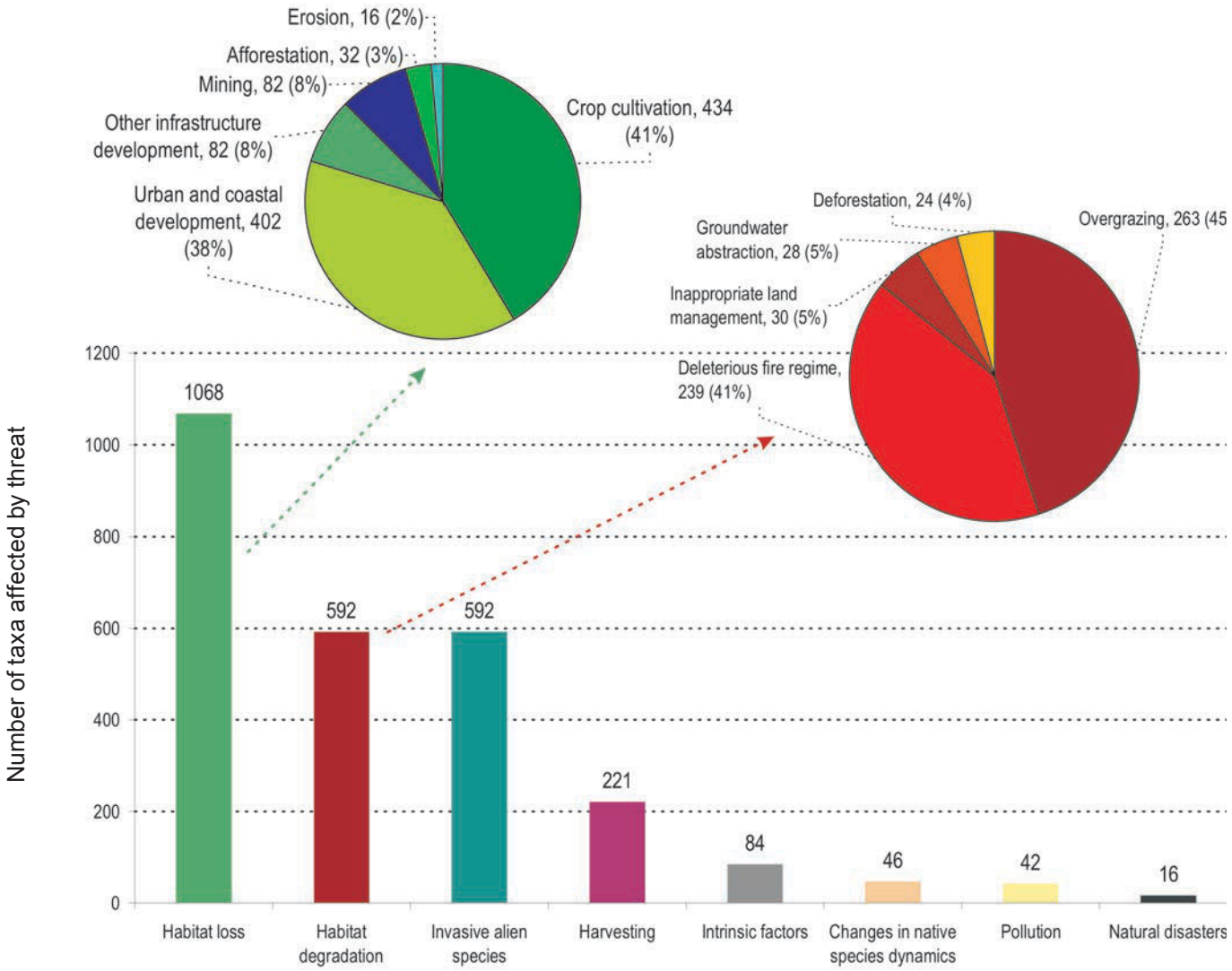


FIGURE 3.4. Current (past 10 years) threats affecting South Africa's plant taxa. Habitat loss and habitat degradation are broken down into causes of loss and degradation.

3.3 Location of South Africa's plant taxa that are threatened and of conservation concern and the main threats affecting them

High concentrations of taxa of conservation concern are found in Namaqualand (in the Northern Cape), the Western and Eastern Cape mountains and coastal lowlands, the area of the Eastern Cape and KwaZulu-Natal coast known as Pondoland, the KwaZulu-Natal Midlands and Drakensberg Mountain Range, the Mpumalanga escarpment, the Magaliesberg and associated ridges in Gauteng and the North West Province, and Sekhukhuneland and the Soutpansberg in Limpopo Province (Figure 3.5). These areas generally correspond to well-known regions of floristic endemism in South Africa (Van Wyk & Smith 2001). Areas of high concentrations of threatened taxa, on the other hand, occur where centres of endemism coincide with high levels of habitat loss (Figures 3.6 and 3.7, Table 3.4).

The Fynbos Biome, which falls mainly within the Western Cape Province, contains the highest concentration of the country's threatened taxa (67%) and taxa of conservation concern (64%) (Figure 3.8). Threatened taxa are concentrated in the lowland areas where most of the natural habitat has been lost to agriculture (Figures 3.6, 3.7, 3.9a, 3.10a). Most of the nutrient-rich shale and granite soils within the Fynbos have been converted to cereals, vineyards and deciduous fruit orchards since 1940. Most species endemic to renosterveld in the Swartland and Overberg regions are now restricted to small fragments between agricultural fields and are declining owing to factors associated with habitat fragmentation, including nutrient runoff, invasion by agricultural weeds and loss of mutualisms such as pollinators. Over the past decade, areas under crop cultivation have expanded in the Sandveld and Cederberg regions (Figure 3.5) mainly for the cultivation of rooibos tea (Box 3.1) and potatoes. Expansion of the wine industry has led to large areas of natural vegetation being ploughed in the Upper Breede River Valley and on the Agulhas Plain (Box 3.2).

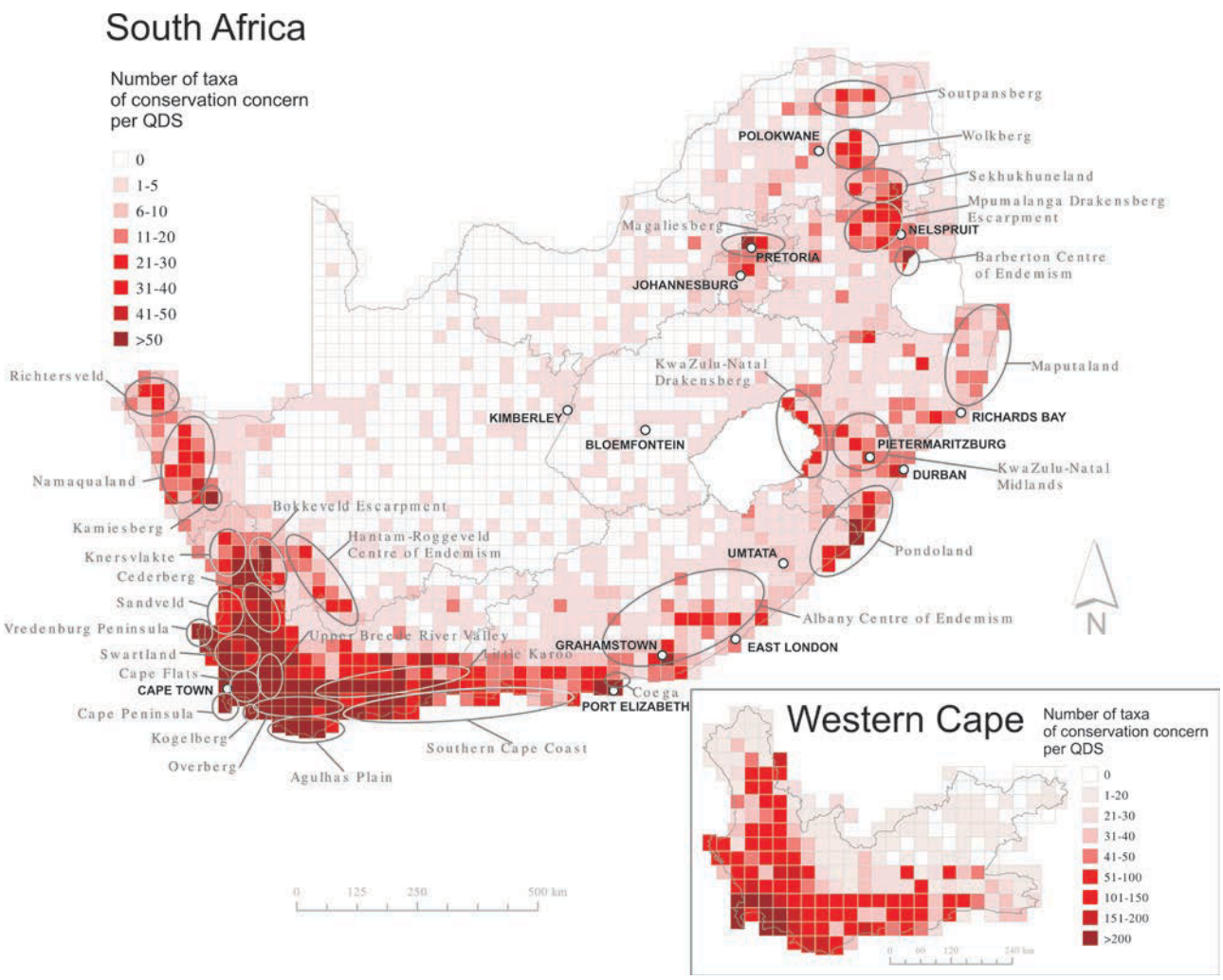


FIGURE 3.5. Number of taxa of conservation concern per quarter degree square (size of quarter degree square: ± 676.6 km^2). The Western Cape has far higher numbers of taxa of conservation concern than the rest of the country and has therefore been reclassified at a higher scale in the insert.

Urban and coastal development is second only to crop cultivation in impact on plant taxa in the Fynbos Biome. Housing development has increased substantially along the southern Cape coast, in the northern suburbs of Cape Town and on the west coast around Vredenburg (Figure 3.10a). The western expansion of Port Elizabeth is also affecting many Fynbos plant taxa.

A further reason for the high concentration of threatened plants in the Fynbos, both in the lowland and upland areas, is encroachment by invasive alien species (Figure 3.9a). The areas most affected are the Cape lowlands, specifically the Cape Flats, the Malmesbury–Atlantis flats, the Agulhas and Riversdale coastal plains and the southern Cape coast. In addition, many of the Cape Fold Mountains are being threatened by the rapid invasion of pine and hakeas. Although Fynbos is naturally adapted to burning, changes in fire frequency and intensity, as a result of anthropogenic ignitions, are causing habitat degradation (Figure 3.10a). Areas close to human settlements and roads, e.g. parts of the Cape Peninsula and the Kogelberg Biosphere, are being too frequently burnt. Slow-growing alpine species and serotinous taxa (those with fruiting bodies kept on the plant between fire events and only released after fire) are declining owing to changes in fire frequency. Groundwater extraction is an emerging threat that is starting to have an impact on plant taxa restricted to permanent seeps. This threat is currently affecting Fynbos taxa that occur in the Sandveld, in the mountains near Cape Town and in parts of the Little Karoo. Groundwater extraction is likely to become a significant future threat as the human population in the towns of the Western Cape increases (Figure 3.10a).

The Succulent Karoo Biome has the second highest concentration of threatened taxa and taxa of conservation concern (Figure 3.8). These taxa are mainly concentrated in the Little Karoo and Namaqualand (Figures 3.5 and 3.6). Overgrazing by livestock is the primary threat to this biome. In the Little Karoo, commercial ostrich farming threatens endemic dwarf succulents and bulbs, as ostriches are kept in high numbers where they trample and overgraze the natural vegetation.

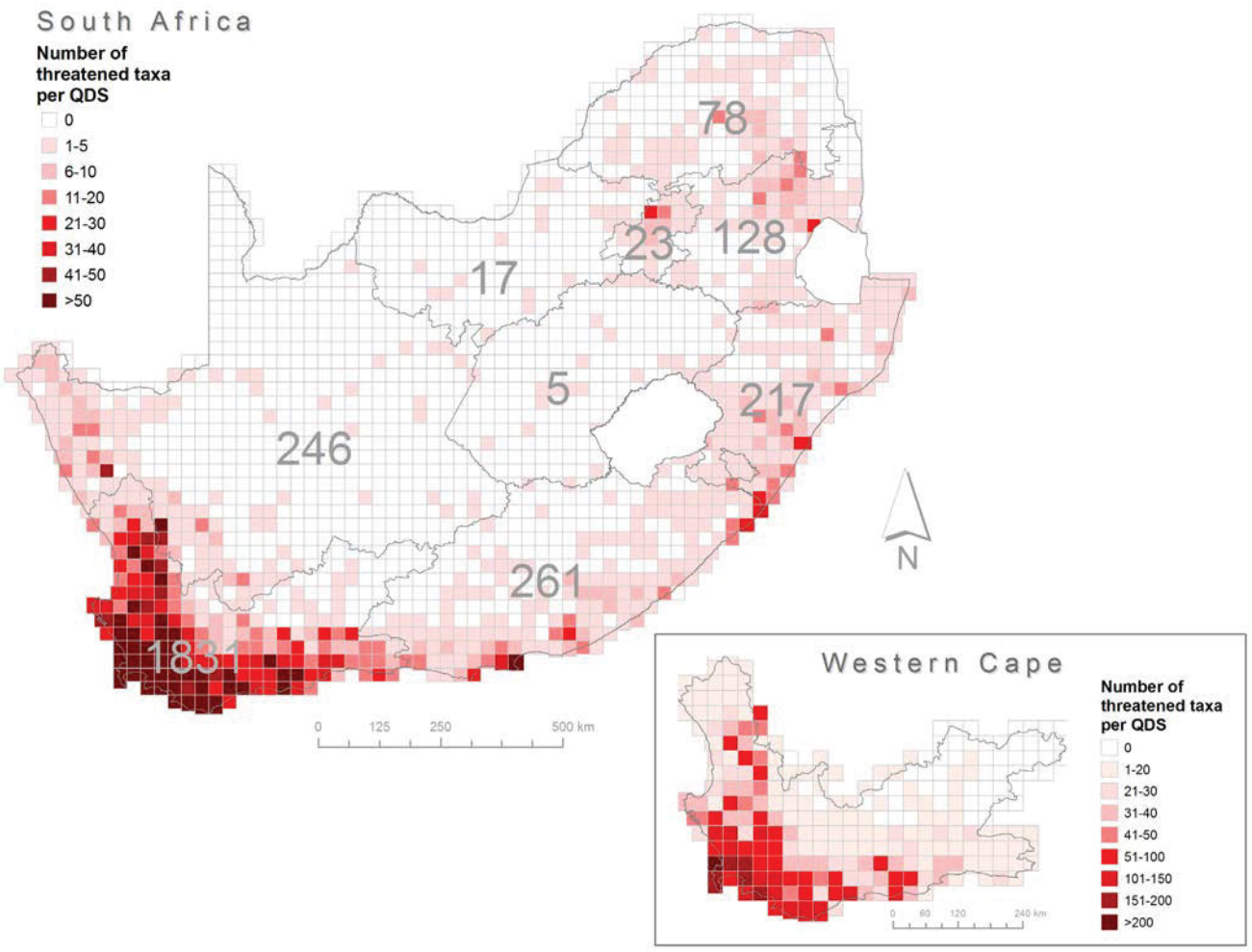


FIGURE 3.6. Number of threatened taxa (Critically Endangered, Endangered, Vulnerable) per quarter degree square (size of quarter degree square: ± 676.6 km^2). The total number of threatened taxa for each province is shown. The Western Cape has far higher numbers of threatened taxa than the rest of the country and has therefore been reclassified at a higher scale in the insert. Numbers on the map indicate the total number of threatened plant taxa occurring in each province.

Livestock stocking rates are high in many areas of Namaqualand in the Northern Cape, and where these areas coincide with high plant endemism, for example in the Kamiesberg, endemic taxa are rapidly declining (Figure 3.10a,b). Habitat loss due to crop cultivation follows overgrazing in severity (Figure 3.10a). High numbers of taxa are declining because of extensive grape and tomato farming around Vredendal on the fringes of the Knersvlakte and in certain areas of the Little Karoo. Cereal cultivation is much more localised in the Succulent Karoo than in the Fynbos, as only seasonally moist habitats are ploughed. These habitats are, however, often where range-restricted endemic plant taxa occur (e.g. Kamiesberg). Plant taxa occurring in coastal Namaqualand are also affected by the diamond-mining industry and extensive heavy-mineral sand-mining operations. The Desert Biome, a regionally very small biome situated mainly along the Orange River in the Northern Cape, also has many endemic plant taxa that are being threatened owing to loss of habitat to diamond-mining and quarrying for specific minerals (Figure 3.10a).

The Eastern Cape has high plant diversity much of which is centred around Port Elizabeth and the Albany region, where five of South Africa's nine biomes intersect in a complex mosaic of diverse vegetation types (Figure 3.8). Urban and coastal development is the primary driver of plant extinction in the Albany Thicket Biome (Figure 3.10a) owing to extensive urban expansion around Port Elizabeth, especially in the areas around Coega. The impact of large infrastructural development is also the highest in this biome owing to developments for the Coega Industrial Development Zone (Figure 3.10a, Box 3.3). High concentrations of threatened taxa have been recorded in Pondoland (Figure 3.6). This area and its botanical diversity have become well known through the work of a number of botanists over the years (see Abbott 2006). Plant taxa from other areas of the Eastern Cape that were part of the former Transkei are likely to face threatening processes similar to those recorded in eastern Pondoland. However, these areas are botanically very poorly explored (Figure 3.11) and this has resulted in very low concentrations of threatened taxa having been recorded. The number of threatened taxa in the Eastern Cape is therefore likely to be underestimated (Table 3.4, Table 3.5).

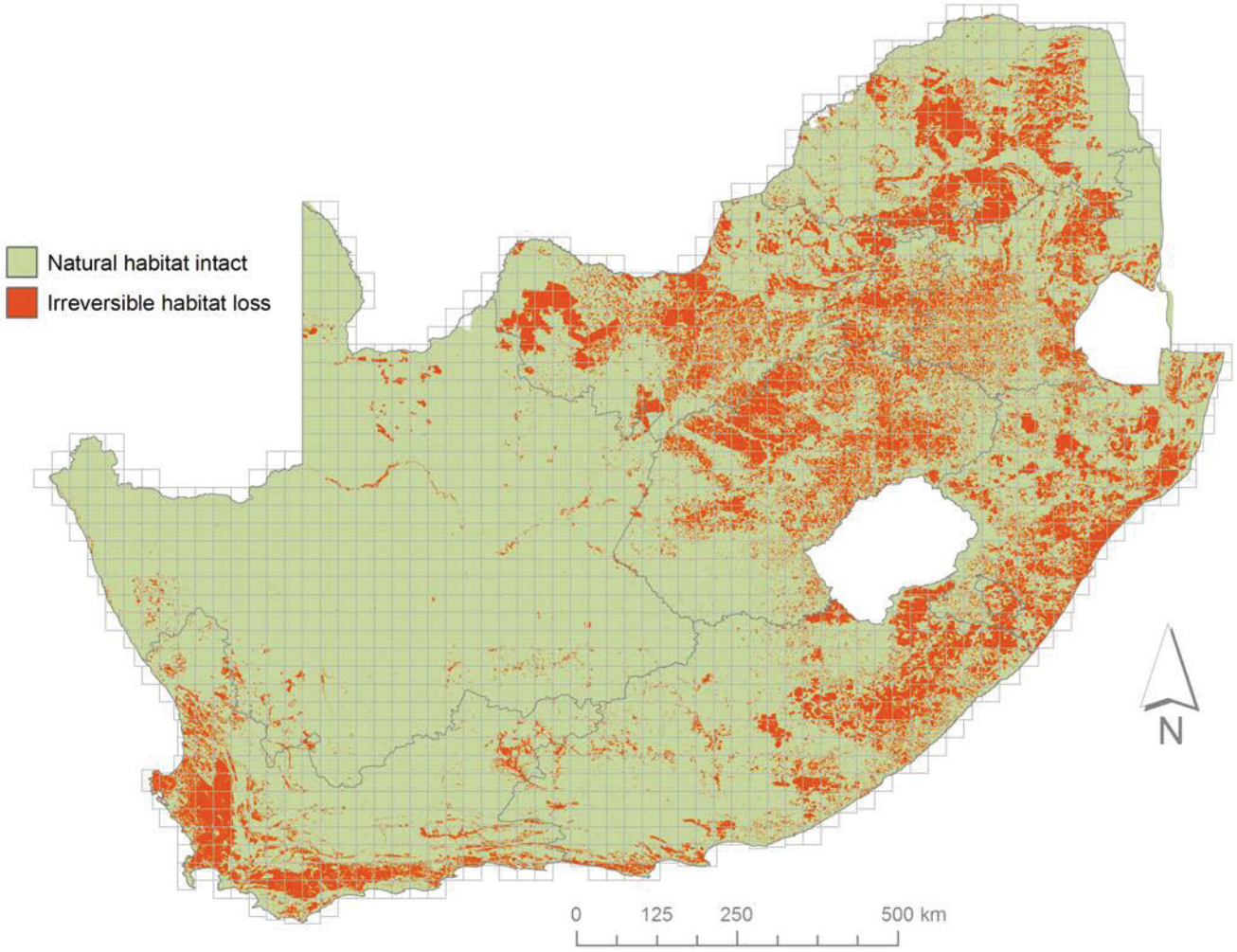


FIGURE 3.7. Areas of South Africa where irreversible loss of natural habitat has occurred.

TABLE 3.5. Summary of listed taxa by category for each province.

	EX	EW	CR PE	CR	EN	VU	NT	DDD	DDT	Critically Rare	Rare	Declining
EC	4	1	8	24	54	175	63	56	154	18	136	28
FS	0	0	0	0	1	4	9	4	12	1	8	12
G	1	0	0	1	6	16	19	1	21	0	5	9
KZN	3	1	7	19	50	141	65	28	56	7	117	32
LM	0	2	2	16	17	43	23	12	33	10	49	22
MP	1	0	0	12	27	89	35	20	33	3	45	24
NC	1	0	6	11	32	197	45	54	122	20	265	8
NW	0	0	0	2	3	12	11	0	11	1	4	10
WC	23	3	54	289	573	915	233	208	628	95	755	29

Most of the former Transkei and Pondoland and the entire KwaZulu-Natal coastline fall within the Indian Ocean Coastal Belt (IOCB) Biome. Crop cultivation is a significant threat to plants in the IOCB (Figure 3.10a), where extensive areas have historically been converted to sugarcane. Many threatened taxa remain only in small, isolated fragments between sugarcane plantations, and these remnant habitats are being continually degraded owing to lack of fire and encroachment by alien invaders. Crop cultivation in the form of small-scale cash crop production is causing ongoing habitat loss in Pondoland and Maputaland. Overgrazing is also a significant threat in the IOCB (Figure 3.10a). The Grassland and Savanna Biomes similarly have large proportions where the primary land use is stock farming, and many of these areas are being overgrazed. Coupled with overgrazing is the degradation of habitat by too frequent burning. Although these three biomes are naturally adapted to burning, in many areas vegetation is being burnt more than once a year to promote fresh grass growth and therefore good grazing. This increase in burn frequency is causing habitat degradation. Plant taxa that occur

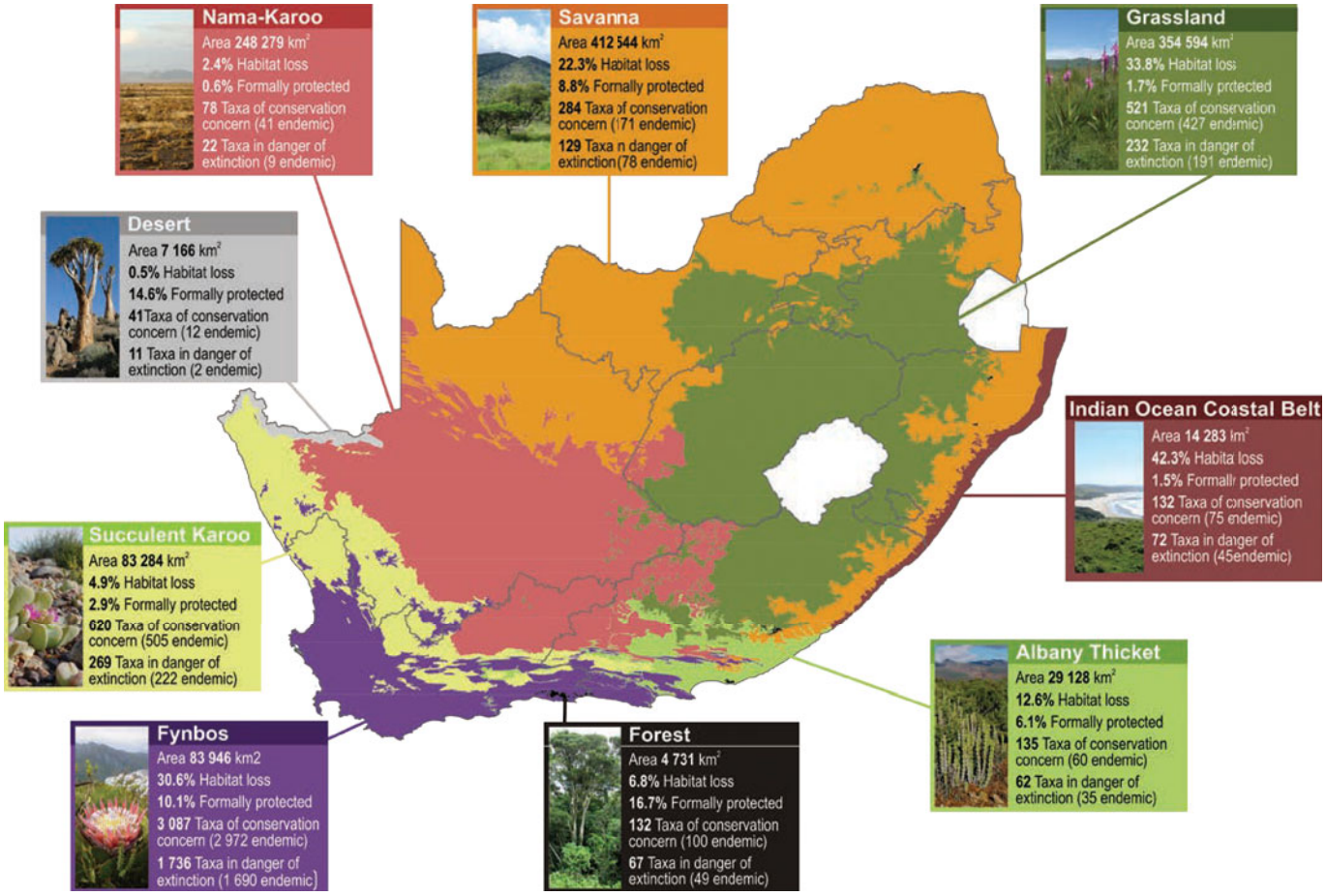


FIGURE 3.8. South Africa's nine biomes, showing percentage of habitat lost, area protected, number of taxa of conservation concern and number of threatened taxa.

in areas that are being frequently burnt, are unable to recruit, resulting in the loss of sensitive taxa. In grassland areas where patches of forest exist on hill slopes and in ravines, regular and high-intensity fires are causing forests to shrink. As a result, taxa restricted to forest margins are being negatively affected. Deforestation in the Savanna and Forest Biomes is occurring in communally owned areas, as a lack of access to electricity and other resources means that trees are often the only available source of fuel and structural building material. Plant taxa endemic to these areas are experiencing degradation of habitat from ongoing harvesting of trees.

Although overgrazing and incorrect fire regimes are major threats to plant taxa in the Grassland Biome, the primary threat to grassland plants is habitat loss to commercial forestry plantations (Figure 3.10a). Afforestation took place mainly between 1900 and 1990 and has resulted in severe population declines in many species. Although habitat loss to afforestation is not continuing in most parts of the country, plants restricted to fragments between plantations continue to decline owing to lack of fire and invasion by alien plants. The mistbelt grasslands of the KwaZulu-Natal Midlands, although already fragmented by commercial forestry, are continuing to be transformed for urban development. A similar combination of past loss of habitat to afforestation and ongoing loss to urban development is threatening grassland plant taxa restricted to the eastern escarpment areas of Mpumalanga (Figures 3.9b and 3.10b). A potential future threat to grassland plants from afforestation exists in the Eastern Cape where there are plans to expand plantations.

Harvesting is the primary threat to plant taxa in the Forest Biome. The decline of tree taxa restricted to this biome is due to harvesting for fuel and structural support material in communal areas. This threat is particularly severe in areas of the former Transkei, including Pondoland. Many medicinal plant species also occur in the Forest Biome (Figure 3.9a).

The Nama-Karoo Biome has very low numbers of taxa of conservation concern, despite its large size (Figure 3.8). Although many areas of this biome are remote and poorly collected (Figure 3.11), those that have indeed been collected have few range-restricted taxa. It is likely that even if it were better surveyed, the numbers of restricted taxa would remain low. This biome also has low levels of habitat loss, with overgrazing by livestock the only significant threat to its few taxa of conservation concern (Figure 3.10a).

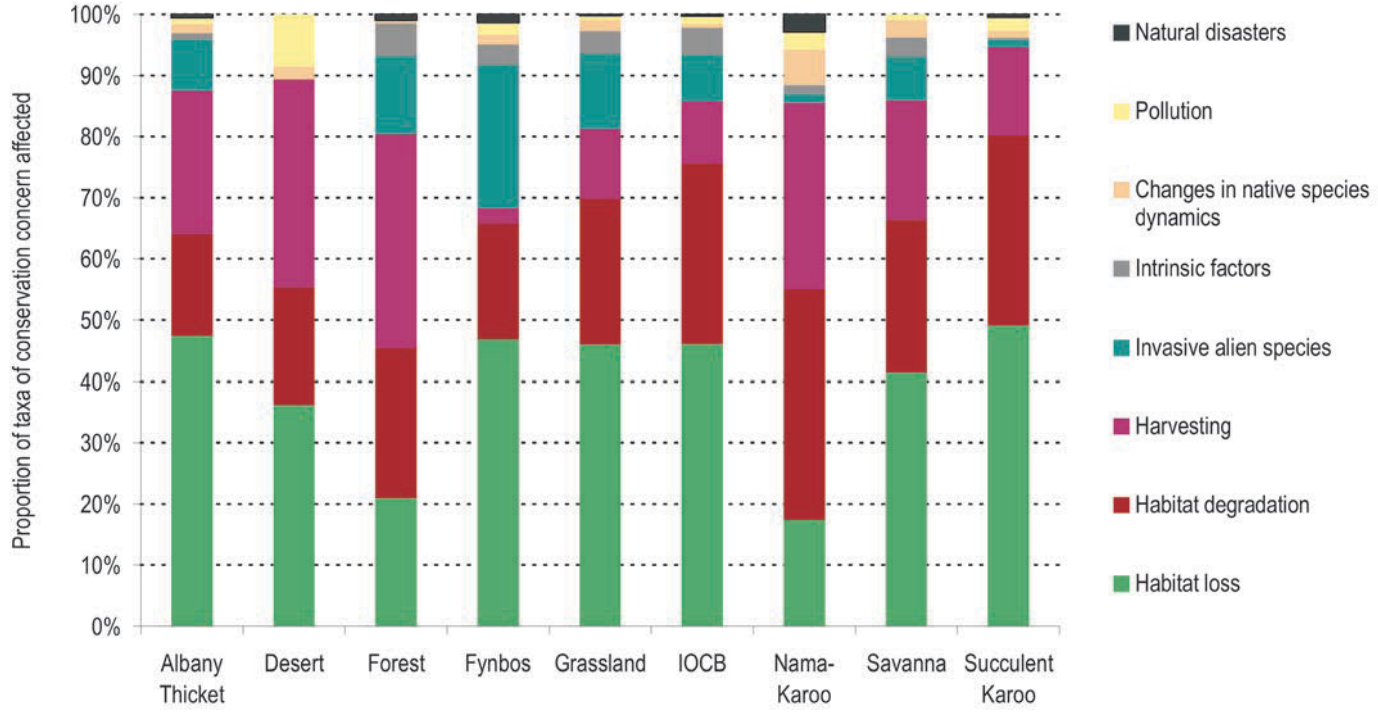


FIGURE 3.9a. Relative impact of the different threatening processes affecting taxa of conservation concern in each biome.

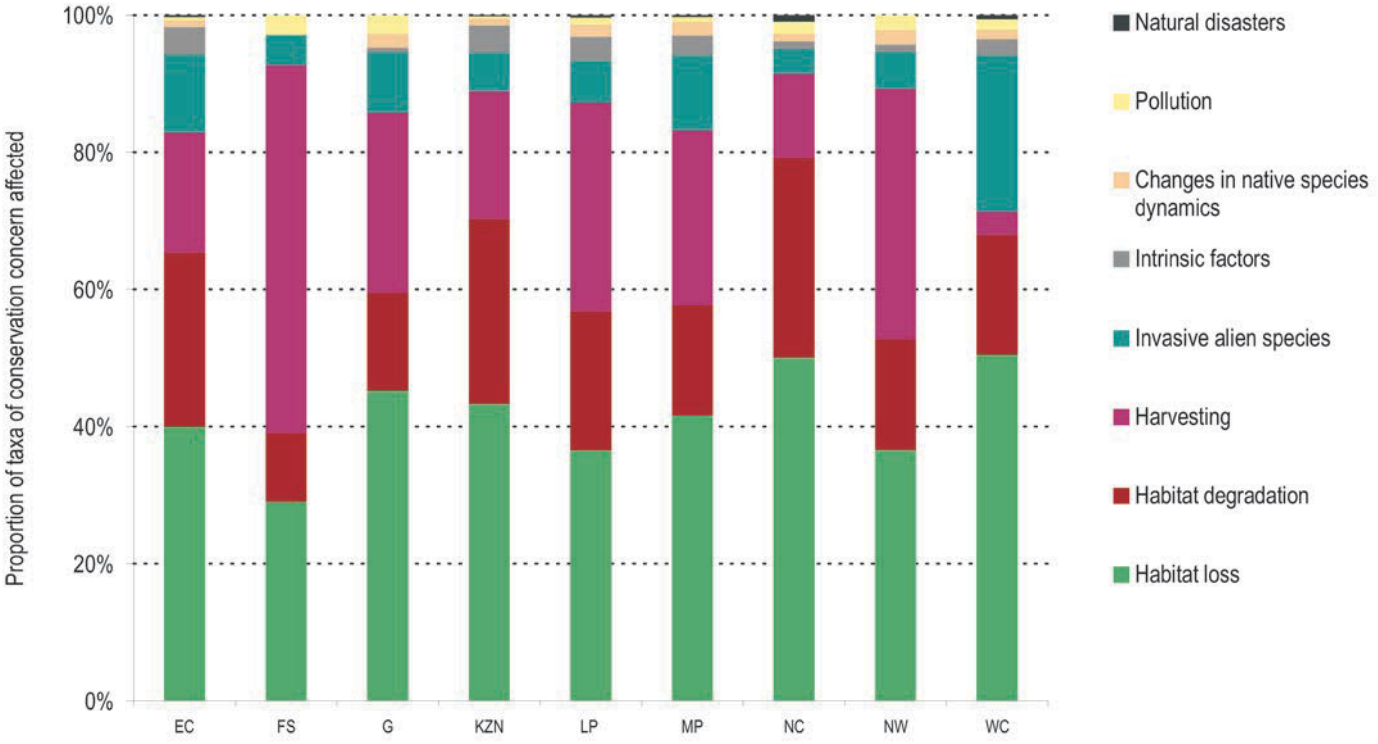


FIGURE 3.9b. Relative impact of the different threatening processes affecting taxa of conservation concern in each province.

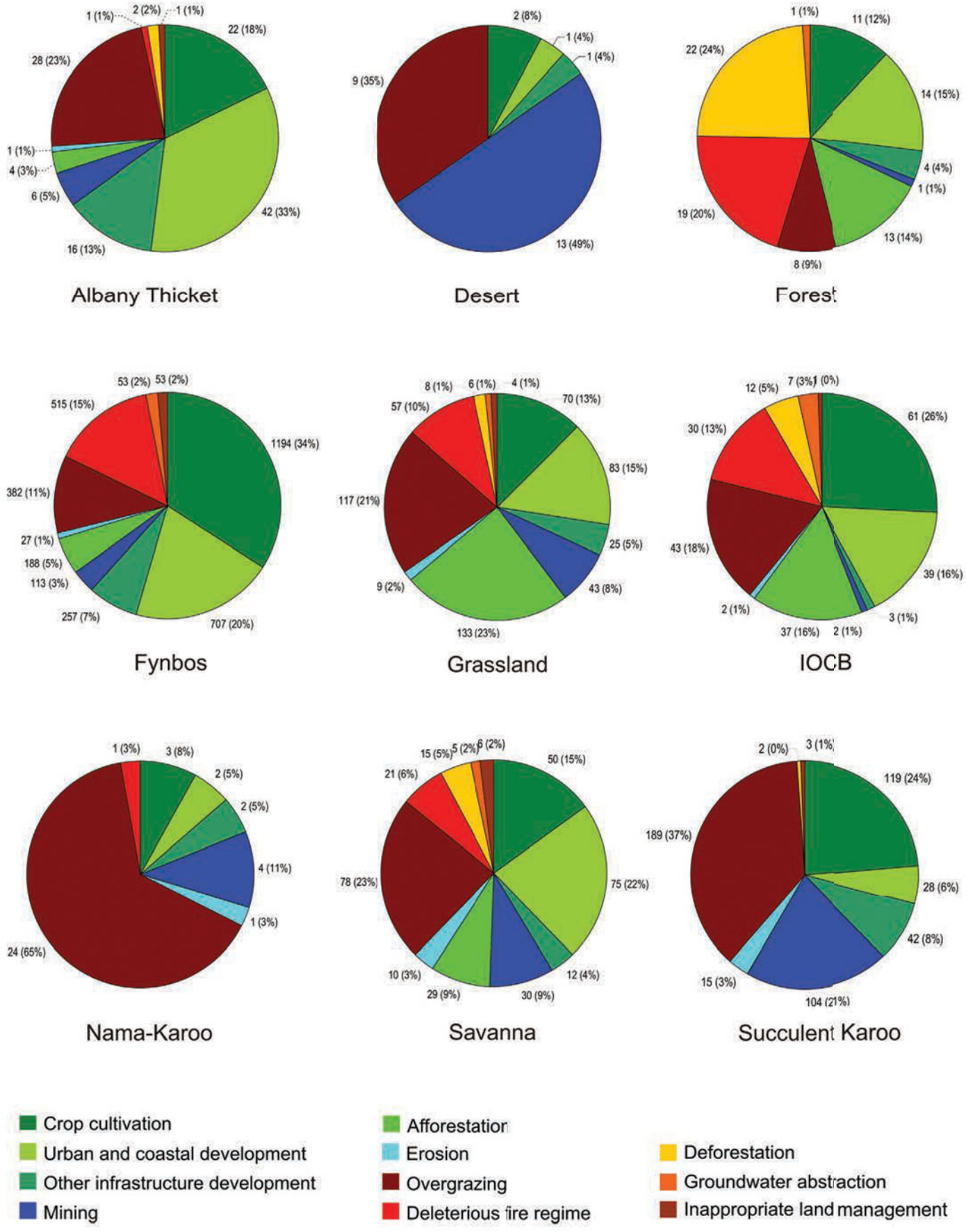


FIGURE 3.10a. Causes of habitat loss and degradation for plant taxa of conservation concern (tcc) in South Africa's nine biomes. Numbers represent the number of tcc affected by each threat.

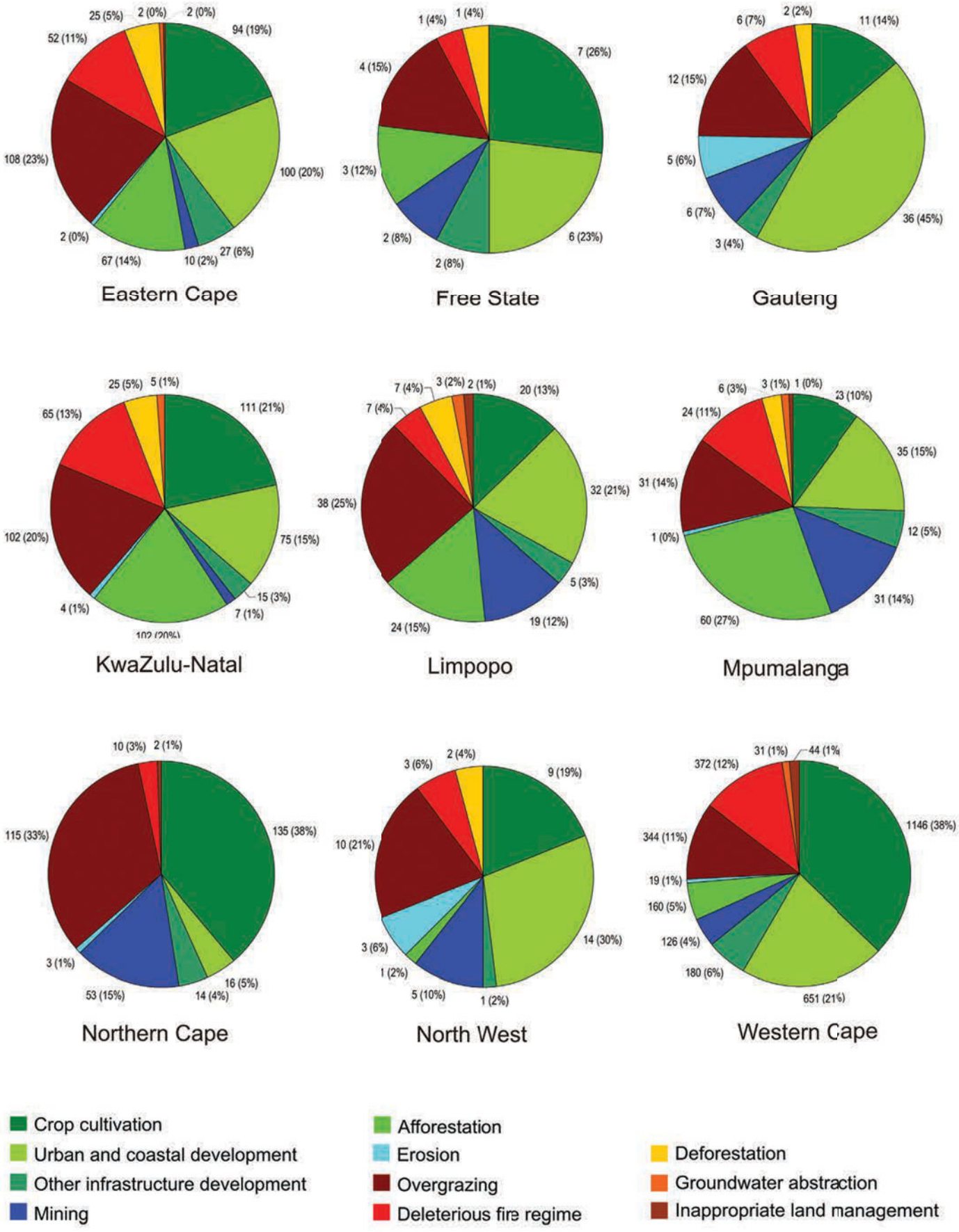


FIGURE 3.10b. Causes of habitat loss and degradation for plant taxa of conservation concern (tcc) in South Africa's nine provinces. Numbers represent the number of tcc affected by each threat.

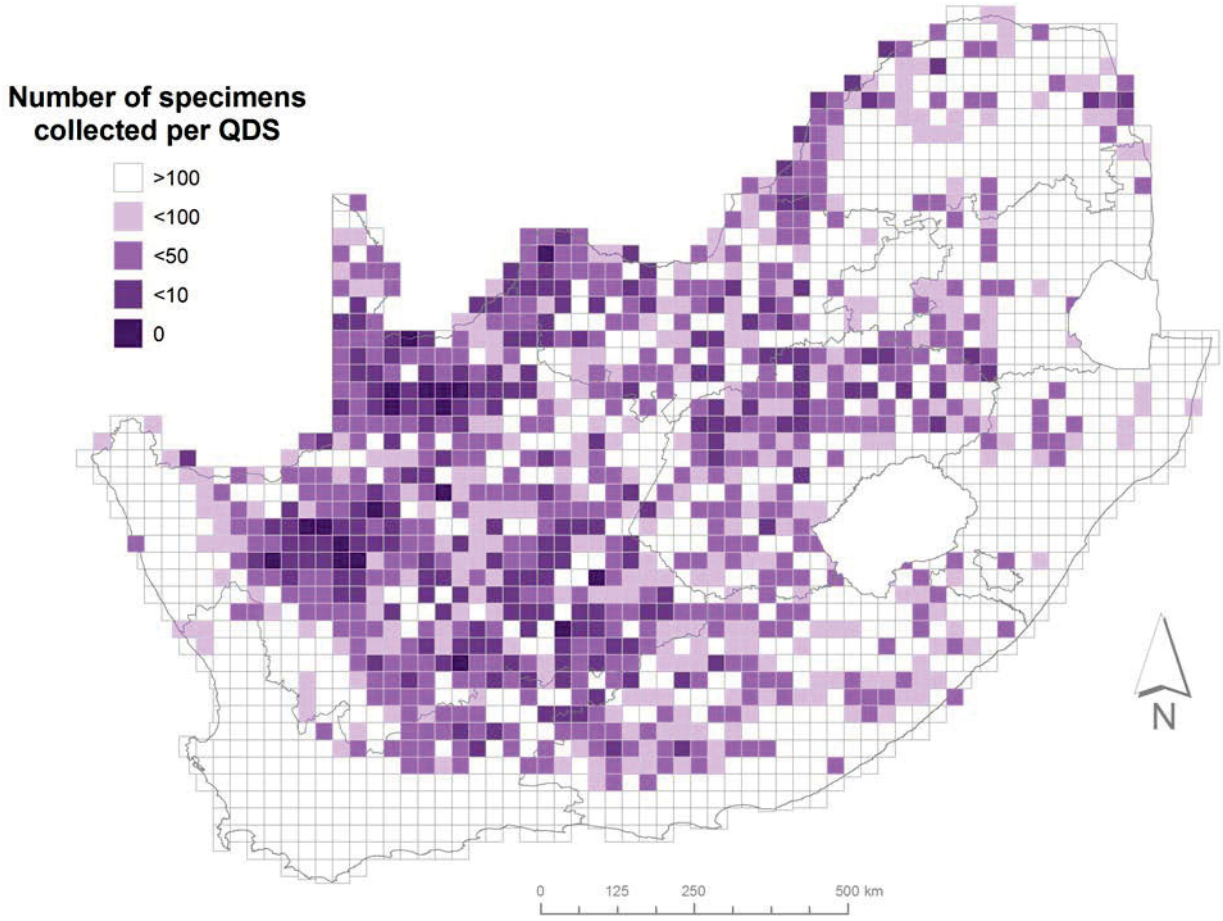


FIGURE 3.11. Areas of the country that are botanically poorly explored, showing the number of herbarium specimens collected per quarter degree square (size of quarter degree square: ± 676.6 km²).

3.4 Trend analysis—how and why the status of listed plant taxa is changing

Analyses of trends are based on comparisons of current status to the status of taxa as listed by Hilton-Taylor (1996a,b, 1997). Hilton-Taylor's Red List is not the most recent assessment of threatened plants for South Africa—Golding (2002) represents a more recent report on the status of South African threatened plants. However, in Golding (2002) only 24% of the South African taxa listed by Hilton-Taylor were reassessed. In this publication, trends in the status of listed taxa were therefore determined based on Hilton-Taylor's list as it is the most comprehensive previous assessment of South African threatened plants, rather than the most recent.

Comparisons of the status of taxa on this Red List to those assigned by Hilton-Taylor (1996a,b, 1997) are problematic and interpretations of trends are challenging because of significant changes in the IUCN Red-Listing system. Trends represented here are based on movements between broadly defined conceptual categories (Table 3.6, Figure 3.12), rather than on individual categories within the different systems. The challenges with comparison between the two systems are illustrated by the fact that changes in Red-Listing systems account for 34% of movements between categories (Figure 3.13a).

There has been a 254% increase in the number of threatened taxa listed between 1997 and 2009 (Figure 3.12). This increase is the result of 1 092 threatened taxa being listed for the first time and 909 taxa moving up from lower categories (Insufficient Information, Rare and Not Threatened). Some 34% of those taxa listed for the first time (Figure 3.13c) and 20% of taxa previously listed that have been elevated to a threat category (Figure 3.13b), have genuinely become more threatened over the past 12 years.

In the case of previously listed taxa having moved up to a category of threat, the change in the Red-Listing system is the reason for nearly 50% of the changes (Figure 3.13b). These changes are mostly the result of the IUCN 3.1 Criteria A and D, which introduced new concepts of risk of extinction that did not feature strongly in the system used in Hilton-Taylor's (1996a,b, 1997) Red List. Many taxa that were previously categorised as Not Threatened are now listed in a category of

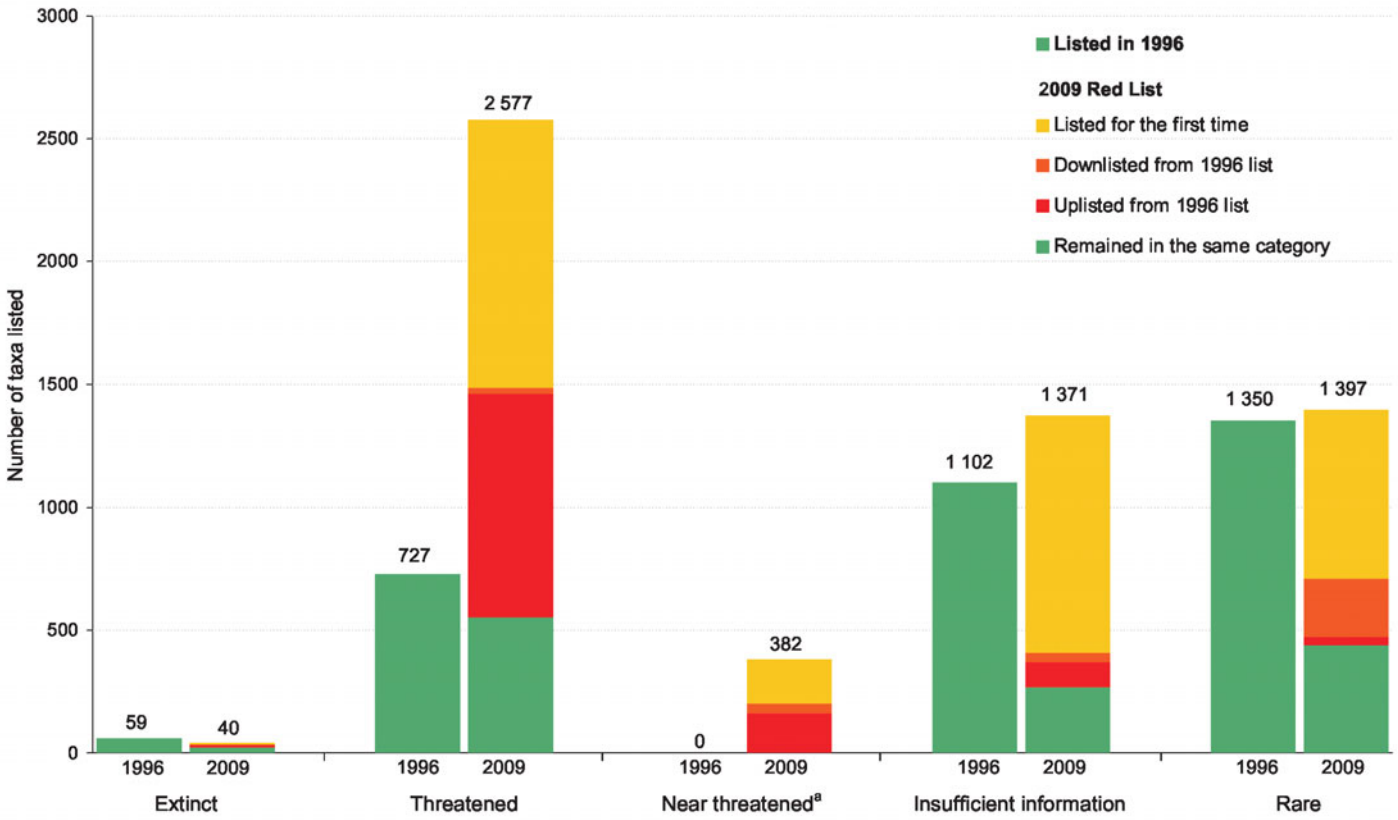


FIGURE 3.12. Changes in the number of taxa listed in the various broad categories of threat or rarity (see Table 3.6 for details of IUCN and South African categories included). Numbers reflected for 1996 represent taxa listed in Hilton-Taylor (1996a,b, 1997). [a] The category Near Threatened was not included in the Red List system used by Hilton-Taylor.

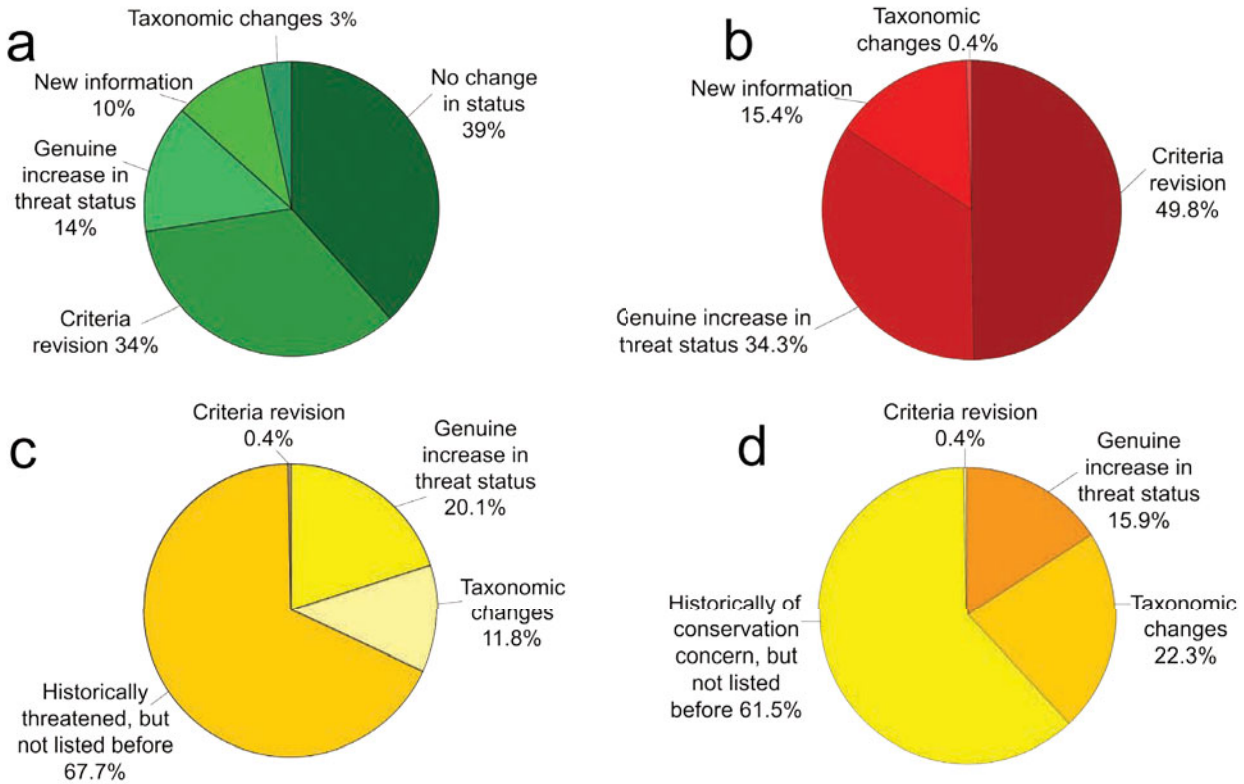


FIGURE 3.13. Reasons for changes in the numbers of taxa listed under the various categories:
a: Reasons for current status for all taxa listed in Hilton-Taylor's (1996a,b, 1997) Red List.
b: Reasons for taxa in Hilton-Taylor's (1996a,b,1997) Red List being elevated to a higher category of threat.
c: Reasons for addition of taxa to one of the categories of threat for the first time.
d: Reasons for addition of taxa of conservation concern for the first time.

threat under Criterion A. This is because Criterion A identifies risk of extinction based on extensive population decline either in the past or in the future. Thus taxa that are still locally relatively common and may have been classified as Not Threatened based on expert opinion in the past, can now be classified as threatened with extinction if there has been a large decline in the population (Appendix I). Examples of taxa that qualify under Criterion A are: long-lived resprouting shrubs that occur in lowland vegetation, e.g. renosterveld, or lowland Fynbos where most of their habitat has been converted for agriculture, and long-lived medicinal plants that despite being widespread, have been heavily harvested over the past 60 years and have experienced significant population declines. The most revolutionary concept introduced under Criterion A is categorising a taxon as in danger of extinction based on projected future population decline (Criteria A3 and A4). Climate change models have shown that a number of taxa in the Proteaceae that at present have stable populations and are unlikely to have been classified as in danger of extinction under Hilton-Taylor's (1996a,b, 1997) system, are in fact likely to decline drastically within the next 20 years. These taxa have now been listed as threatened under Criteria A3 and A4.

Criterion D recognises that taxa that occur in very small numbers or have very restricted ranges but that are not necessarily declining at present, are also vulnerable to extinction owing to unpredictable human actions and stochastic events. Taxa with small populations or very restricted ranges but that were not declining would have been classified as Rare in Hilton-Taylor (1996a,b, 1997), but would now qualify for a category of threat under the IUCN 3.1 system. Some 114 taxa previously classified as Rare have now been listed as Vulnerable under Criterion D2, and 19 others have been listed as either Endangered or Critically Endangered under Criterion D. The status of these taxa has not deteriorated since 1996, but they account for a significant proportion of taxa that have moved from other categories to a category of threat.

Most taxa listed by Hilton-Taylor (1996a,b, 1997) (39%) have remained in the same category and a relatively small percentage (14%) have moved to the categories Extinct, Threatened and Near Threatened owing to the increasing impact of threatening processes on plant populations (Figures 3.12 and 3.13a).

TABLE 3.6. Relation between and use of the various Red List categories in comparative analyses. Note how the names of categories as well as the criteria for inclusion have changed between various Red-Listing systems. Despite this, certain concepts such as extinction, danger of extinction and low risk of extinction have been consistently represented in all systems.

Publication	**Hilton-Taylor (1996a,b, 1997)**	**Golding (2002)**	**This publication**
IUCN classification system used	Davis *et al.* (1986)	IUCN Categories and Criteria Version 2.3 (IUCN 1994)	IUCN Categories and Criteria Version 3.1 (IUCN 2001) including additional South African categories[1]
Conceptual category	**Categories of each system included under conceptual category**		
Extinct	Extinct (Ex)	Extinct (EX) Extinct in the Wild (EW)	Extinct (EX) Extinct in the Wild (EW)
Threatened with extinction	Endangered (E)	Critically Endangered (CR)	Critically Endangered (CR)
	Vulnerable (V)	Endangered (EN)	Endangered (EN)
		Vulnerable (VU)	Vulnerable (VU)
Nearly threatened		Lower Risk Near Threatened (LR-nt)	Near Threatened (NT)
Not threatened	Not threatened (nt)	Lower Risk Least Concern (LR-lc)	Least Concern (LC)
Insufficient information	Indeterminate (I) Insufficiently Known (K)	Data Deficient (DD)	Data Deficient—Insufficient Information (DDD)[1]
	No information (?)		Data Deficient—Taxonomically Uncertain (DDT)[1]
Rare	Rare (R)		Critically Rare[1]
			Rare[1]
Categories excluded from conceptual categories and comparative analyses	Out of Danger (O)	Lower Risk Conservation Dependent (LR-cd)	Declining[1]

Another important reason for taxa having been moved from other categories to a category of threat is new information obtained through recent field observations by civil society volunteer groups (CREW[2] and the Protea Atlas Project, see Box 2.1) and botanical experts with extensive field experience (Figure 3.13b). Some 102 taxa previously classified as too poorly known for an assessment of their risk of extinction have been found to be in danger of extinction through new observations.

In the case of threatened species listed for the first time, nearly 68% of taxa now added to the Red List were already in danger of extinction by 1997, but they were overlooked because a comprehensive, systematic assessment of all taxa had not been done (Figure 3.13c). Similarly, 671 other taxa of conservation concern have also been overlooked owing to a lack of a systematic assessment (Figure 3.13d). One of the key lessons learnt from this Red List assessment is that large numbers of taxa of conservation concern are overlooked when an assessment relies solely on expert input for the nomination of taxa for listing—many of the previously overlooked taxa of conservation concern are from taxonomic groups that are not well known, either because there were no local taxonomic experts with an interest in the groups or because there were no recent taxonomic revisions available.

Some 357 newly described taxa have also been added to the Red List for the first time as either threatened or of conservation concern. This accounts for nearly a quarter of taxa of conservation concern listed for the first time (Figure 3.13d) and 12% of threatened taxa listed for the first time (Figure 3.13c), making taxonomic changes another significant reason for the increase in the number of Red-Listed taxa in South Africa.

3.5 Families and genera that are most threatened and rare

The most threatened plant group in South Africa are the cycads of which 70% of the taxa are threatened (Table 3.7). Cycads are also the most threatened plant family globally (Donaldson 2003). The main reason for their ongoing decline is the severe harvesting pressure from the specialist horticultural trade. As many as 32 of the 38 (84%) South African cycad species are threatened by over-collecting. Despite significant financial resources being spent by provincial conservation agencies to protect cycads through microchipping of plants and the enforcement of a strict permitting system, numbers of individuals continue to decline. Over the past 10 years, the threat status of 20 species has increased and two species, *Encephalartos brevifoliolatus* and *E. nubimontanus*, have been poached to extinction in the wild in the Limpopo Province. The Proteaceae is the next most threatened family, with 49% of its taxa listed as threatened (Table 3.7). There is excellent information available on the Proteaceae as a result of the Protea Atlas Programme (Box 2.1). This has allowed Proteaceae taxa on average to qualify against more of the IUCN criteria than other plant taxa in South Africa and is one reason why the family has high numbers of threatened taxa. The Proteaceae also has high numbers of restricted-range endemics that are vulnerable to threats.

TABLE 3.7. The top 20 most threatened large families (families containing 10 or more taxa).

	FAMILY	Number of taxa	Number of threatened taxa	Percentage threatened
1	ZAMIACEAE	37	26	70.27
2	PROTEACEAE	377	185	49.07
3	LAURACEAE	12	4	33.33
4	RUTACEAE	307	92	29.97
5	ERIOSPERMACEAE	95	28	29.47
6	PENAEACEAE	28	8	28.57
7	STILBACEAE	14	4	28.57
8	AMARYLLIDACEAE	233	64	27.47
9	IRIDACEAE	1 143	295	25.81
10	BRUNIACEAE	77	19	24.68
11	GESNERIACEAE	65	16	24.62
12	ASPHODELACEAE	558	115	20.61
13	DIOSCOREACEAE	15	3	20.00
14	ERICACEAE	943	185	19.62
15	PLUMBAGINACEAE	22	4	18.18
16	RHAMNACEAE	195	33	16.92
17	ROSACEAE	184	31	16.85
18	PASSIFLORACEAE	18	3	16.67
19	FABACEAE	1 632	262	16.05
20	RESTIONACEAE	338	53	15.68

[2]CREW, the Custodians of Rare and Endangered Wildflowers, is a programme that involves volunteers from the public in the monitoring and conservation of South Africa's threatened plants. CREW is run by SANBI's Threatened Species Programme (Raimondo 2004, 2007).

The Zamiaceae, Amaryllidaceae, Rutaceae, Asphodelaceae, Proteaceae, Ericaceae, Iridaceae and Fabaceae have a significantly higher proportion threatened taxa than other plant families (Figure 3.14). Of these, the Rutaceae, Asphodelaceae, Proteaceae, Ericaceae and Iridaceae also have very high numbers of range-restricted endemics (Figure 3.15), one of the main reasons for their being particularly vulnerable to anthropogenic threats. The Restionaceae has very high numbers of range-restricted endemics, but many occur in mountainous habitats where there are few threats and the family does not have a high proportion of threatened taxa. Fabaceae shows the opposite trend—there are more threatened taxa than would be expected from the proportion of taxa that are range-restricted (Figures 3.14 and 3.15). This is due to many of the widespread summer-rainfall grassland Fabaceae taxa being long-lived suffrutices that qualify as threatened under the population decline criterion, Criterion A.

Of the 1 964 vascular plant genera in South Africa, only 213 (10%) have more than 20 taxa, but with 14 519 taxa these genera contain the bulk (71%) of South Africa's 20 456 taxa. *Encephalartos*, of the family Zamiaceae, is the most threatened large genus in South Africa owing to the severe ongoing horticultural harvesting pressure it faces. The Proteaceae genera *Serruria*, *Leucospermum* and *Leucadendron* follow as the next most threatened genera. Taxa in these genera face multiple threats, but are mainly affected by habitat loss to urban and agricultural development and by invasive alien plants (Table 3.8). *Erepsia* of the Mesembryanthemaceae is also highly threatened owing to habitat loss as it is mostly restricted to lowland soils targeted for agriculture. Many other genera of the Mesembryanthemaceae are likely to be highly threatened as they have high numbers of range-restricted taxa occurring in threatened lowland habitats. However, the taxonomic status of these genera, including *Drosanthemum* and *Ruschia,* is currently too poorly known for assessment of their status (Table 3.9). *Lampranthus,* although listed as the genus with the highest number of Data Deficient taxa, is currently being revised (Klak, pers. comm.) and many taxa currently listed as Data Deficient for taxonomic reasons will soon be put into synonymy. *Babiana* is the most threatened of the Iridaceae genera (Table 3.8), mainly because it is restricted to nutrient-rich lowland soils targeted for agriculture. Although a close relationship between genera with the highest proportion of range-restricted taxa (Table 3.10) and those with the most threatened taxa (Table 3.8) is expected, only three of the top ten range-restricted and threatened genera are shared between these two groupings—*Serruria*, *Encephalartos* and *Acmadenia*. Other range-restricted genera, including *Sorocephalus*, *Osmitopsis* and *Berzelia*, are not highly threatened as they have many species that occur only in untransformed mountain habitats where few threats exist.

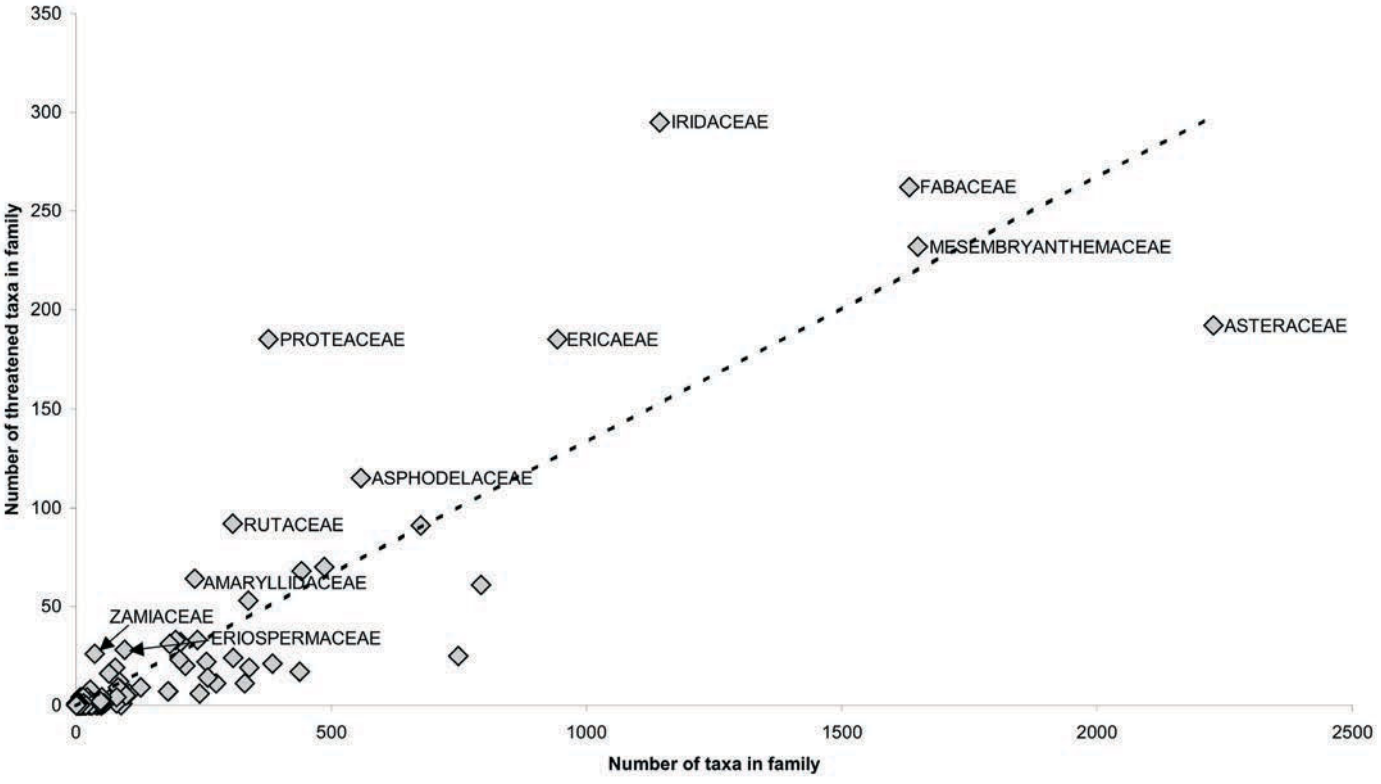


FIGURE 3.14. Number of threatened taxa per family plotted against total number of taxa in that family. The dashed line represents the linear function of expected threatened taxa per family.

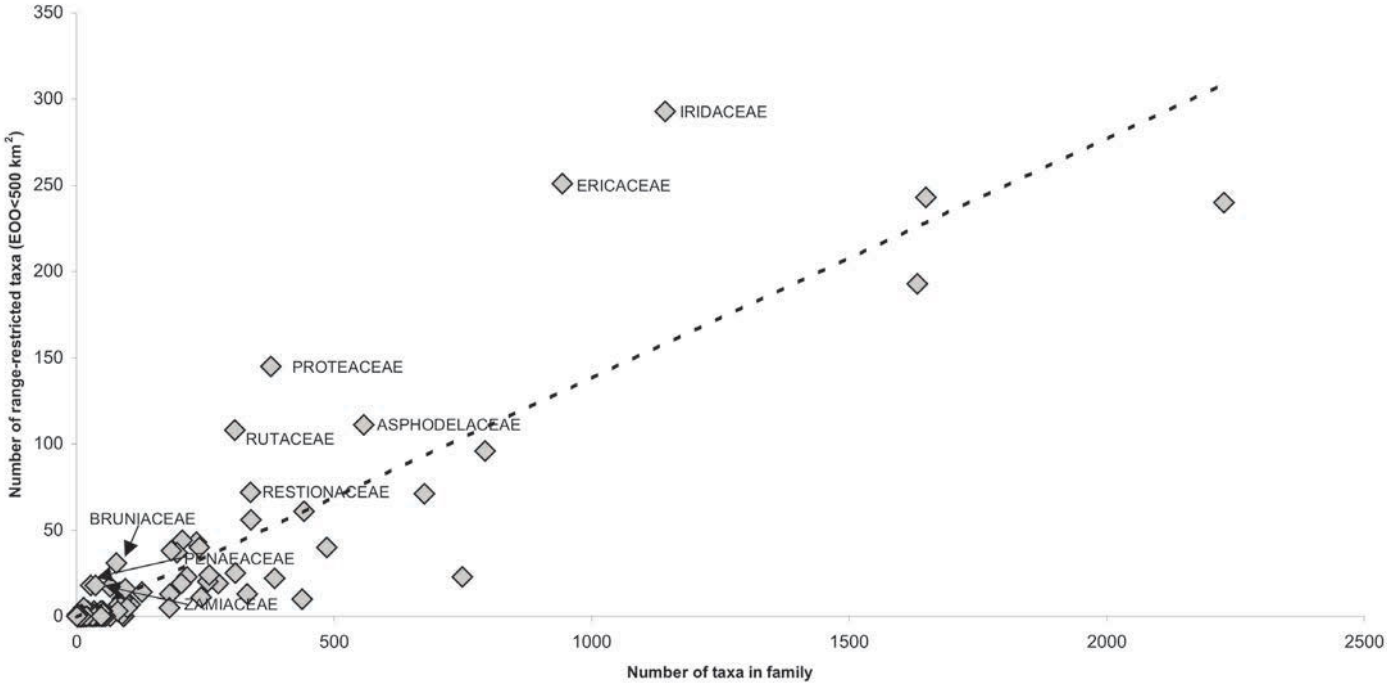


FIGURE 3.15. Number of range-restricted taxa (EOO < 500 km²) per family plotted against total number of taxa in that family. The dashed line represents the linear function of expected range-restricted taxa per family.

TABLE 3.8. The top 10 most threatened large genera (genera containing 10 or more taxa).

Genus	Family	Number of taxa	Number of threatened taxa	Percentage threatened
Encephalartos	ZAMIACEAE	37	26	70.27
Serruria	PROTEACEAE	56	35	62.50
Leucospermum	PROTEACEAE	51	28	54.90
Leucadendron	PROTEACEAE	98	51	52.04
Diosma	RUTACEAE	28	14	50.00
Erepsia	MESEMBRYANTHEMACEAE	31	15	48.39
Liparia	FABACEAE	21	10	47.62
Spatalla	PROTEACEAE	20	9	45.00
Acmadenia	RUTACEAE	33	14	42.42
Babiana	IRIDACEAE	90	38	42.22

TABLE 3.9. The 10 most poorly known genera (genera with the most Data Deficient taxa listed). Note that only large genera (with 10 or more taxa) are included.

Genus	Family	Number of taxa	Number of DD taxa	Percentage DD
Lampranthus	MESEMBRYANTHEMACEAE	194	121	62.37
Drosanthemum	MESEMBRYANTHEMACEAE	107	41	38.32
Ruschia	MESEMBRYANTHEMACEAE	207	76	36.71
Struthiola	THYMELAEACEAE	34	11	32.35
Adenogramma	MOLLUGINACEAE	10	3	30.00
Silene	CARYOPHYLLACEAE	10	3	30.00
Wahlenbergia	CAMPANULACEAE	179	52	29.05
Cyphia	LOBELIACEAE	83	24	28.92
Arctotis	ASTERACEAE	60	17	28.33
Thesium	SANTALACEAE	171	46	26.90

TABLE 3.10. The top 10 large genera (genera containing 10 or more taxa) with highest percentage of range-restricted taxa (EOO < 500 km²).

Genus	Family	Number of taxa	Number of range-restricted taxa	Percentage range-restricted
Sorocephalus	PROTEACEAE	11	9	81.82
Serruria	PROTEACEAE	56	37	66.07
Nivenia	IRIDACEAE	11	7	63.64
Osmitopsis	ASTERACEAE	11	7	63.64
Gibbaeum	MESEMBRYANTHEMACEAE	17	10	58.82
Berzelia	BRUNIACEAE	12	7	58.33
Mimetes	PROTEACEAE	13	7	53.85
Pentameris	POACEAE	10	5	50.00
Encephalartos	ZAMIACEAE	37	18	48.65
Acmadenia	RUTACEAE	33	16	48.48

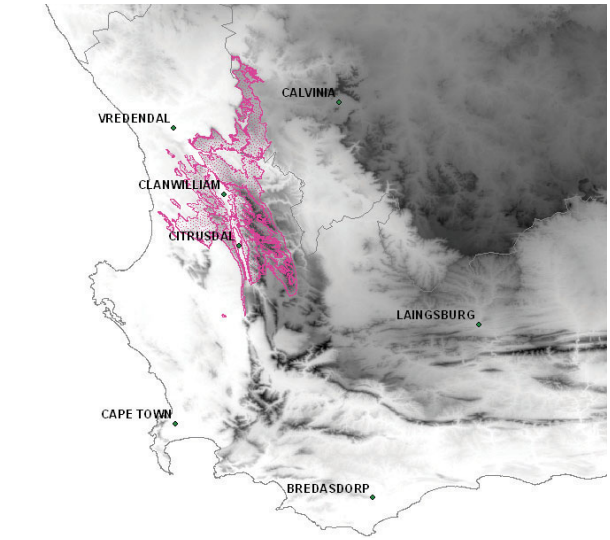
There are 291 genera that have between five and nine taxa. These small genera together contain 1 952 taxa—10% of the national flora. Some of these small genera are highly threatened, for example *Polhillia* of the Fabaceae and *Marasmodes* of the Asteraceae, both with five of their six described taxa threatened as they are restricted to lowland flats in the Overberg and Swartland regions respectively (Table 3.11). These areas have been largely transformed for cereal cultivation and remaining subpopulations of the taxa are highly fragmented and restricted to remnants that are not conserved and are continuously being degraded.

TABLE 3.11. The top 10 small genera (five to nine taxa) with the highest proportion of threatened taxa.

Genus	Family	Number of taxa	Number of threatened taxa	Number of range-restricted taxa	Percentage threatened	Percentage range-restricted
Polhillia	FABACEAE	6	5	6	83.3	100.0
Marasmodes	ASTERACEAE	6	5	5	83.3	83.3
Acrodon	MESEMBRYANTHEMACEAE	6	5	2	83.3	33.3
Clivia	AMARYLLIDACEAE	7	5	1	71.4	14.3
Diastella	PROTEACEAE	9	6	7	66.7	77.8
Steirodiscus	ASTERACEAE	6	4	2	66.7	33.3
Merciera	CAMPANULACEAE	6	4	2	66.7	33.3
Eustegia	APOCYNACEAE	6	4	0	66.7	0.0
Freylinia	SCROPHULARIACEAE	9	5	6	55.6	66.7
Daubenya	HYACINTHACEAE	8	4	4	50.0	50.0

BOX 3.1 Rooibos tea expansion

Rooibos tea is produced from the plant *Aspalathus linearis* subsp. *linearis* which occurs naturally in the Cederberg and on the Bokkeveld Escarpment. Rooibos relies on a specific soil bacterium that only occurs in the Western Cape and it cannot be successfully cultivated anywhere else in the world. Over 90% of the rooibos tea found in South African supermarkets, and in the fast-growing international market, is produced from cultivated rooibos. The opening up of export markets in the post-Apartheid era and the appeal of rooibos to health-conscious consumers in the northern hemisphere have led to huge expansions in rooibos production in the Greater Cederberg area (742% increase in exports from 1993–2003). This has driven the expansion of rooibos plantations into the natural habitat of wild *A. linearis* subsp. *linearis*. Rooibos occurs naturally and is cultivated mainly in four vegetation types: Cederberg Sandstone Fynbos, Bokkeveld Sandstone Fynbos, Graafwater Sandstone Fynbos and Olifants Sandstone Fynbos. Of the 435 vegetation types recognised nationally (Mucina & Rutherford 2006), Cederberg Sandstone Fynbos has the highest number of endemic



Areas (pink-stippled) where there has been significant expansion of rooibos production over the past 12 years.



Cullumia floccosa occurs only near Redelinghuys and has been listed as Critically Endangered as it is known only from two sites and from 61 plants, 60 of which occur in one subpopulation. It has lost more than 80% of its habitat over the past 25 years as a result of the cultivation of rooibos tea and potatoes. Photograph: N. Helme.



Small-scale rooibos tea farmer harvesting his crop near Nieuwoudtville on the Bokkeveld Escarpment.

plant species (195). Also, Bokkeveld Sandstone Fynbos is among the top ten most endemic-rich vegetation types, with 101 endemics occurring only in this vegetation type. Many of these endemics are restricted to the deep, well-drained, sandy habitats where *A. linearis* subsp. *linearis* grows. As a result of the massive expansion of the rooibos industry between 1994 and 2006, many indigenous and endemic species have lost habitat and are now at risk of extinction. In 1997, 37 taxa from the area where rooibos tea is grown were listed as threatened with extinction. Some 12 years later 149 taxa are listed as threatened, a 300% increase in the number of species threatened with extinction as a result of rooibos cultivation. Within the two most severely threatened categories of Endangered and Critically Endangered, only five species were listed in 1997—now there are 57.

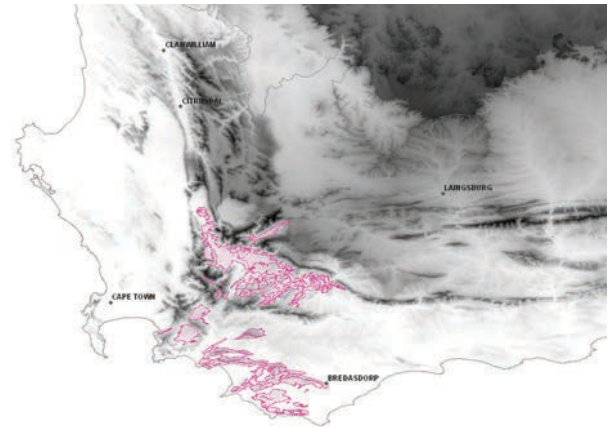
Awareness of the increasing threat to these species in the rooibos production sector has led to progressive partnerships among concerned parties, especially over the last two years. The Rooibos Biodiversity Initiative (RBI) is the result of a co-operative partnership between CapeNature and the South African Rooibos Council (SARC) in the context of the Greater Cederberg Biodiversity Corridor. Drawing on the success of the Biodiversity and Wine Initiative (see Box 3.2), the aim of the RBI is to promote the value and conservation of biodiversity, and to highlight the long-term production and economic sustainability to be gained from good land use practice amongst rooibos producers.



Babiana sambucina subsp. *longibracteata* is listed as Endangered, as it is a narrow endemic to the Bokkeveld plateau around Nieuwoudtville where it occurs in deep, sandy soils on flats and gentle slopes. Currently extant at only five sites, most of the habitat of this species has been transformed over the last 10 years owing to the expansion of the rooibos tea industry in the area. Photographer: H. Erhardt.

BOX 3.2 Vineyard expansion

South Africa is the world's eighth largest producer of wine, contributing 3.5% of global wine production, and exports a significant quantity of table grapes. Both the wine and table grape industries in the Western Cape have expanded enormously over the past decade, particularly since the lifting of trade sanctions in 1992. The area most seriously affected by vineyard expansion over the past 10 years is the Upper Breede River Valley, with important expansion in the southern Overberg and Agulhas Plain (associated with the search for cooler *terroir*). The vegetation types currently suffering the highest rates of loss to vineyards are Breede Alluvium Fynbos, Muscadel Riviere, Breede Alluvium Renosterveld and Robertson Karoo, with important areas of Overberg Sandstone Fynbos and Elgin Shale Fynbos also being affected. The first four are all restricted to the Upper Breede River Valley, and have high numbers of endemic geophytes of the Iridaceae family and succulents of the Mesembryanthemaceae family. Other groups affected are the genera *Aspalathus* of the Fabaceae and *Haworthia* of the aloe family (Asphodelaceae).



Areas (pink-stippled) in the southwestern Cape where there has been significant expansion of viticulture over the past 12 years.



Sparaxis grandiflora subsp. *grandiflora,* listed as Endangered, is endemic to the Tulbagh Valley. This subspecies has lost over 50% of its habitat to the expansion of wheatfields and vineyards over the past 100 years. It is known only from nine remaining fragments between vineyards. Photographer: R. Koopman.



Vineyards near Robertson. Expansion of viticulture, especially in the Upper Breede River Valley, has resulted in a 200% increase in the number of plant taxa listed as threatened or data deficient on the Red List over the past 12 years. Photographer: A. Stevens.

In Hilton-Taylor's (1996a,b, 1997) Red List, 119 species from wine-producing areas were included, but only 76 of them were listed as threatened or as insufficiently known. In the current analysis there are 221 species listed as threatened or data deficient—a 200% increase. Some 105 species from these areas have been added to the Red List for the first time, all of them either threatened or data deficient. Of the 119 species listed by Hilton-Taylor (1996a,b, 1997), 87 (73%) have experienced a genuine increase in threat status owing to vineyard expansion. As a result of the significant impact of the wine industry on endemic plant species in the Fynbos region, the Biodiversity and Wine Initiative (BWI) was started in 2004. This initiative is a collaboration between the conservation sector and the wine industry. The goal of the BWI is to minimise further loss of threatened natural habitat and to contribute to sustainable wine-producing practices through the adoption of biodiversity guidelines by the South African wine industry. The BWI enlists interested producers and growers to champion the initiative. These champions are provided with biodiversity guidelines for managing their vineyards and many are encouraged to conserve their remaining natural areas via CapeNature's Stewardship Programme. In return, producers and growers are assisted with branding their wine as Biodiversity-friendly. For further information, see www.bwi.co.za.



Aristea nigrescens, listed as Endangered, is a recently described species with a restricted range (EOO 90 km^2) that only flowers after fire. It is known from three sites and is declining owing to expansion of deciduous fruit orchards and vineyards, lack of fire and encroachment by invasive alien plants. One of the three known sites is protected within the Romansrivier Contract Nature Reserve. Photographer: R. Koopman.

BOX 3.3 Coega Industrial Development Zone and the associated urban development

The Coega Industrial Development Zone (IDZ) is situated 20 km east of the city of Port Elizabeth on the southeastern Indian Ocean coast of South Africa, adjacent to a new deepwater port at the mouth of the Coega River.

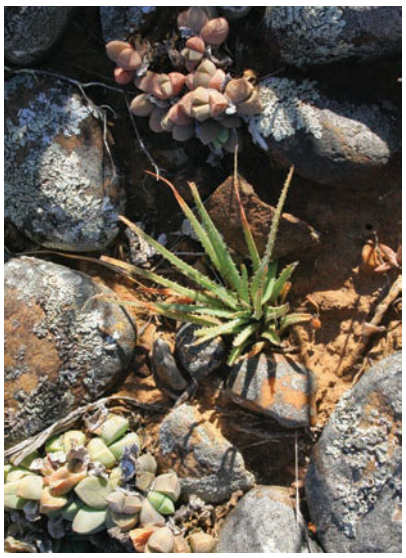


Orthopterum coegana, Critically Endangered, a highly restricted species that occurs only at Coega (EOO < 10 km^2, AOO < 1 km^2). There were three subpopulations on rocky outcrops. The western 'Kop' subpopulation was destroyed as a result of quarrying for the Coega harbour between 1995 and 2000. Although plants were translocated, they have not done well and are declining.

The Coega IDZ is the location of new industrial investments covering 11 500 ha of land. It is a phased development around industry clusters dedicated for export-oriented manufacturing companies located in the zone.

The vegetation at Coega is rich, with three unique vegetation types occurring in the area of development: the Sundays Valley Thicket with 32 endemic plants, the Coega Bontveld with seven endemics and the Albany Alluvial Vegetation with two endemics.

In Hilton Taylor's (1996a,b, 1997) Red Data List nine of the plant species that occur at Coega were listed as threatened. Owing to development of this area over the past seven years, 14 plant species not previously threatened have now been added to the List. Some 67% of those listed in 1997 have worsened in threat status. There are three plant species currently Listed as Critically Endangered, all of which have very small ranges restricted to the Coega surrounds, and they may become extinct in this area over the next five years if development at the IDZ and its surrounds is not carefully managed. Currently the IDZ developers are aware of the environmental value of the area and are trying to follow a path of sustainable development by keeping natural green areas within the development matrix. The IDZ has an open space system to protect and link some of the most important areas of natural vegetation. These areas feed into the Nelson Mandela Bay Municipality's open space system designed to keep representative examples of each type of habitat. Sadly, natural areas outside the IDZ are also under major pressure from a commercial quarry and from rapid expansion of low-cost housing developments for the thousands of people that have flocked from rural areas in the Eastern Cape to the Coega area in the hope of finding work in Port Elizabeth and at the IDZ. The influx of rural people has led to an increase in grazing by livestock, which is causing significant ongoing degradation to remaining areas of natural vegetation.



Aloe bowiea, Critically Endangered, a species restricted to the area between Uitenhage and Port Elizabeth. It is locally extinct at four of seven recorded sites. The species is currently extant in three severely fragmented subpopulations. The planned industrial expansion of Coega and the influx of people seeking work there could result in massive urban expansion and a large increase in cattle stocking rates. This species is predicted to experience a further 20% decline over the next five years. Photographer: I. Ebrahim.



Coega Kop overlooking the development of the IDZ in 2003. Much of this habitat will eventually be replaced by industry.

4. Applications of the Red List for conservation practitioners

M. Driver, D. Raimondo, K. Maze, M.F. Pfab & N.A. Helme

4.1 Introduction

The *Red List of South African plants* provides a powerful tool for enabling protection and sustainable use of plants of conservation concern. This section explores the various ways in which conservation practitioners and others can use the Red List to support and enable such protection.

Recommended applications of the *Red List of South African plants* include the following:

- In spatial biodiversity planning (also known as conservation planning), to contribute to the identification of geographic priority areas for biodiversity conservation.
- In environmental impact assessments, to inform decision-making about development applications.
- As one criterion for identifying threatened ecosystems in listing of threatened ecosystems in terms of the National Environmental Management: Biodiversity Act (Act 10 of 2004) (NEMBA).
- As one factor in determining species suitable for the development of Biodiversity Management Plans in terms of NEMBA.
- To inform prioritisation of sites for Biodiversity Stewardship Programmes, in support of expansion of protected areas.
- To support sustainable use of medicinal plants to ensure their continued availability.
- To contribute to global indicators of biodiversity health, including the CBD indicators.
- To monitor trends in species status as part of monitoring and reporting on national biodiversity and reporting on the state of environment.

The Red List should not be used on its own to determine priorities for conservation action or to guide allocation of scarce conservation resources. As noted by Possingham *et al.* (2002), Red Lists are one tool to help with biodiversity planning and prioritisation, best used in conjunction with a range of other criteria relating, for example, to ecosystems and socio-economic factors.

Key users of the Red List are likely to include the following:

- Environmental assessment practitioners (EAPs) and specialists involved in the EIA process (for example botanical specialists and freshwater specialists).
- Conservation planners.
- Researchers in ecology and related fields.
- Plant systematists.
- Scientific staff and managers of conservation agencies.
- Staff of national and international conservation NGOs.
- Officials involved in land-use decision-making, for example in provincial environmental departments.
- Those involved in monitoring and reporting on the state of the environment, nationally and internationally.

In addition to exploring applications of the Red List, this section discusses the relationship of the Red List to other international, national and provincial species lists, and explains why there are differences between this Red List and these other lists.

Lastly, the section points to research priorities that have emerged from the Red-Listing process.

As noted in section 1, information from the Red List is available on the SANBI website (www.sanbi.org) and can be used in combination with this book. This web-based version will be updated with the latest information and assessments every six months, and also provides the option of accessing more detailed information than could be included in this book (see Box 1.2 in section 1). Further benefits of the web version include the ability to create customised lists for particular provinces, taxonomic groups or biomes.

4.2 Using the Red List to enable protection and sustainable use of taxa of conservation concern

The Red List can be used in several ways to support and enable protection of taxa of conservation concern, each of which is explained and discussed below. Some rely on particular provisions in South African legislation; others could be applied in other countries as well.

As noted previously, the biggest threat to South African plant taxa is loss of habitat, especially through cultivation, urban development, afforestation and mining (see section 3.2). Many of these applications of the Red List are aimed directly or indirectly at addressing the threat of habitat loss. There are several other mechanisms for addressing plant taxa threatened by utilisation that complement the Red List. They are discussed in section 4.3.

4.2.1 Spatial biodiversity planning

Spatial biodiversity plans (also called conservation plans) identify geographic priority areas for conservation action and provide maps of these priority areas that are used for two main purposes:

- Guiding protected area consolidation and expansion by conservation agencies, including through stewardship programmes (see section 4.2.5).
- Informing land-use planning and decision-making by a range of sectors, to avoid loss of natural habitat in biodiversity priority areas that fall outside the protected area network.

Spatial biodiversity plans are produced at various spatial scales in South Africa, from national to local. Bioregional plans published in terms of NEMBA are based on spatial biodiversity plans, and consist of maps of critical biodiversity areas at the district or local level together with guidelines on how critical biodiversity areas should be considered in land-use planning and environmental assessment. The fact that bioregional plans are formally published, gives them additional legal weight.

South Africa uses the systematic approach to biodiversity planning[1], which is based on two key principles: representation (the need to conserve a representative sample of biodiversity, both ecosystems and species); and persistence (the need to conserve ecological and evolutionary processes that allow biodiversity to persist over time). The third hallmark of systematic biodiversity planning is the setting of quantitative biodiversity targets, which tell us how much has to be conserved. Targets can be set for ecosystems (e.g. a certain number of hectares of a vegetation type) or for species (e.g. a certain number of individuals or subpopulations of a species).

Most biodiversity plans incorporate a range of biodiversity features, both ecosystems (e.g. vegetation types, river types, wetland types) and species. Ecosystems represent most of the common and widespread taxa but seldom adequately represent taxa of conservation concern. To ensure adequate representation and persistence of these taxa and associated rare microhabitats, it is important to include species-level biodiversity features in the biodiversity plan, such as rare and threatened fauna and flora, in addition to ecosystem features. For species data to be useful in a provincial or local biodiversity plan, point locality data with good spatial coverage are required. Coarse-scale species datasets, for example at a quarter degree scale, are useful only at the national scale.

Using species data in a biodiversity plan can be complex. Some of the issues that have to be considered are briefly discussed below. Input from specialists who have an ecological understanding of the area for which the plan is being produced and of the taxa concerned, is required to resolve each of these issues.

- Which taxa of conservation concern should be included?
  Typically all threatened taxa as well as range-restricted rare species should be included. Taxa listed under certain criteria (e.g. Criteria A, E) or taxa for which there are insufficient spatial data may be excluded.
- What targets should be set for taxa of conservation concern included in the plan?
  Biodiversity targets for taxa of conservation concern should aim to avoid an increase in the extinction risk of Endangered and Vulnerable taxa or the extinction of Critically Endangered taxa, while preventing the remaining taxa of conservation concern (i.e. Critically Rare, Rare, Near Threatened and Declining taxa) from becoming Vulnerable because of loss of habitat. This implies that all known subpopulations of Critically Endangered, Endangered and Vulnerable taxa listed under the B, C or D criteria, as well as all known subpopulations of Critically Rare taxa, should be conserved *in situ*. For Critically Endangered, Endangered and Vulnerable taxa listed solely under the A or E criteria, as well as Near Threatened and Rare taxa, at least 11 locations (or 11 subpopulations in the absence of threats) and 10 000 mature individuals should be conserved. Where taxa are not endemic to the planning domain, targets should be proportionately assigned, for example if 10% of the extent of occurrence of a taxon is within the planning domain, only 10% of the target should be applied.

[1] For more on the principles and methods of systematic biodiversity planning, see Driver *et al.* (2003) and Driver *et al.* (2005).

- How should subpopulations of these taxa be mapped?
  Usually the data available are historically recorded localities. Decisions have to be made about the size of the area needed for a subpopulation to be viable, and how that area should be spatially delineated. Often the exact locations of subpopulations of taxa of conservation concern are unknown. In order to include these taxa as biodiversity features in a biodiversity planning exercise, suitable habitat can be mapped in the immediate vicinity of historically recorded localities. In some cases, biodiversity plans include not only known locations of taxa of conservation concern but also potential distribution based on modelling. It is advised that if the biodiversity plan is intended to be used to inform land-use planning and decision-making, only known locations should be included, not potential locations based on modelling.

Finally, ecological processes supporting and maintaining subpopulations of taxa of conservation concern, such as pollination and dispersal, should also be incorporated into the biodiversity plan, for example by planning for wildlife corridors and conserving habitats important for pollinators.

4.2.2 Environmental impact assessments

Environmental impact assessments (EIAs) are required in South Africa in terms of the National Environmental Management Act (Act 107 of 1998) (NEMA) and its associated EIA Regulations. Broadly speaking, developments likely to have a major impact require scoping and EIA, and those likely to have a lesser impact require a Basic Assessment. In both cases, many of the activities involve change of land use and thus often loss of natural habitat, which is the greatest threat to plant taxa in South Africa (see section 3.2). In terms of the principles of NEMA (Section 2), sustainable development requires the consideration of all relevant factors including disturbance of ecosystems and loss of biodiversity, both of which should be avoided or, if that is not possible, should be minimised and remedied.

If natural vegetation will be affected by a proposed development, a specialist botanical survey should be commissioned as part of the environmental assessment process. If a subpopulation of a taxon of conservation concern is found to occur on the proposed development site, it would be one indicator that the proposed activity is likely to result in loss of biodiversity, bearing in mind that loss of subpopulations of these taxa will either increase their extinction risk or may in fact result in their extinction. The detection of a threatened taxon on a site during an environmental assessment should result in a record of decision from the competent authority that avoids, mitigates, remedies or offsets loss of habitat for the taxon in question. The competent authority may also refuse authorisation for the proposed activity. In practice, the mitigation requirements that allow the proposed development to proceed, including the amount of natural habitat set aside, differ widely, depending on the environmental assessment practitioner's recommendations and the policies of the competent authority. In order to strengthen the environmental assessment process and improve consistency, this section provides:

- Guidelines for environmental assessment practitioners on how botanical specialists should be chosen and when and in what way botanical surveys should be conducted.
- Guidelines for botanical specialists on the specific recommendations that should be made if a taxon of conservation concern is found on a site as well as general recommendations for the habitat conservation of such taxa.

Taxa of conservation concern are only one aspect of biodiversity that should be considered in the EIA process. The presence of threatened ecosystems on the site and the role of the site in contributing to ecological processes are as important and are frequently neglected. Ecosystem guidelines for environmental assessment have been developed for the Western Cape Province (De Villiers *et al.* 2005) to assist environmental assessment practitioners and specialists to take the full range of the potential ecological impact into account, and can be developed for other provinces in future. Ecosystem guidelines for environmental assessment complement the guidelines given below.

4.2.2.1 General guidelines for environmental assessment practitioners and botanical specialists

Who should be commissioned to undertake a botanical specialist survey?

A botanical specialist with local botanical and ecological knowledge and experience should be contracted to undertake the survey.

South Africa's flora is highly diverse and is characterised by many regions where there are high levels of plant endemism. In addition, very different ecological processes that maintain species diversity are at work in the nine different biomes. For example, grassland systems require frequent burning (typically on a less than three-year rotation for maintenance of species), while the Thicket Biome does not burn. Vegetation types within biomes have different ecological needs, for example Cederberg Sandstone Fynbos is an arid fynbos system requiring fire at a longer time interval (typically 20 to 30 years) compared to the more mesic Fynbos on the Cape Peninsula where a fire return interval of between seven and 15 years is appropriate. Given the high levels of endemism and

the need for local-scale ecological understanding, it is critical that only specialist botanists who are familiar with the ecology of the region in which the site occurs, are employed.

When should a specialist survey take place?

In the summer-rainfall areas of the country botanical surveys should take place between October and April while in the winter-rainfall areas they should take place between August and October.

South Africa's highly diverse flora is characterised by many plant groups of which the species within a genus look vegetatively very similar and can only be told apart if flowering or fruiting. Most taxa of conservation concern are from such groups. There are also a number of taxa that are ephemeral and may appear only after a certain environmental event such as fire. Given this temporal element to species identification, it is vital that specialist surveys are conducted in the appropriate season, preferably during the flowering time of the taxa expected to occur in the local area. Within the summer-rainfall areas of the country this season is from October to April while in the winter-rainfall areas it is from August to October.

How should a survey be conducted?

The specialist should research possible taxa of conservation concern before undertaking the survey, collect specimens during the survey and have them identified by taxonomists specialising in the relevant plant groups. Taxa should be identified to species level wherever possible, not genus level. Taxa that may be dormant should also be reported.

As part of the botanical survey, prior to visiting the site, the specialist consultant should download a list of taxa that could potentially occur at the site from the BGIS website (http://bgis.sanbi.org). This list is provided at the quarter degree square level of accuracy. At this broad scale, the list will often include many species that may not be found at the proposed site. However, taxa from the BGIS list that are of conservation concern should be well researched before a site visit is conducted to ensure that the specialist knows what to look for. In Gauteng, the provincial conservation authority also provides consultants with a list of species of conservation concern that may occur, or have actually been confirmed, on a site.

During a site visit, conducted in the most appropriate field season, it is very important that specimens are collected as part of the botanical survey, especially for taxonomic groups likely to be of conservation concern (see section 5 for information on these groups and taxa). Once specimens are collected, they should be identified at a herbarium. Potential taxa of conservation concern sampled should be identified by a taxonomist specialising in the plant group in question. Final species lists for sites produced by specialist consultants that include many taxa identified only to genus level, for example *Gladiolus* sp., *Melolobium* sp., should not be accepted by the Environmental Assessment Practitioner as of adequate quality, as it indicates that specimens were possibly not collected or were not identified at a herbarium. There will almost always be some taxa found on a site that cannot be identified because they are without flowers or fruit, and such taxa may be listed only as a genus without a specific epithet. It is therefore the overall proportion of unidentified species that should be an indication of how well a survey has been conducted. Specialist botanists should also include in their reports a list of taxa of conservation concern that may occur at a site but may be dormant as a result of unfavourable environmental conditions, for example species that were not seen because the vegetation at a site has not been burnt for many years.

Once a plant species list for a site has been obtained, it can be submitted to SANBI at www.sanbi.org in text format and it will be returned with threat status included as well as any changes in taxonomy that the specialist may not have been aware of. If a taxon of conservation concern with a threat status marked [a] in Table 4.1 was found during a site survey, details on the subpopulation in question should be provided to SANBI's Threatened Species Programme at redlist@sanbi.org.za. The fact that a subpopulation of this taxon has been found at a site zoned for development means that its Red List status has to be reviewed and is likely to be upgraded.

4.2.2.2 Recommendations for taxa of conservation concern found on proposed development sites

Table 4.1 provides guidelines for specialists on appropriate recommendations for taxa of conservation concern found on a proposed development site. The recommendations differ depending on how threatened the relevant taxa are. As a result of the development of this Red List, the provision of such a table is possible because all plant taxa of conservation concern now have clear criteria that explain the reason for their status.

TABLE 4.1. Guidelines on EIA recommendations for taxa of conservation concern found on proposed development sites.

Status	Criterion[b]	Guideline for Recommendation
[a]Critically Endangered	PE	No further loss of natural habitat should be permitted as the taxon is currently considered possibly extinct, and all known subpopulations have been lost. The subpopulation in question is likely to be newly discovered and the only remaining subpopulation of this taxon.
Critically Endangered	A,B,C,D	No further loss of natural habitat should be permitted as the taxon is on the verge of extinction.
Endangered	B,C,D	No further loss of habitat should be permitted as the taxon is likely to go extinct in the near future if current pressures continue. All remaining subpopulations have to be conserved if this taxon is to survive in the long term.
Endangered	Listed under A only	If this taxon has a restricted range, EOO < 2 000 km^2, recommend no further loss of habitat. If range size is larger, the taxon is possibly long lived but widespread, and limited habitat loss may be considered under certain circumstances, such as the implementation of an offset whereby another viable, known subpopulation is formally conserved in terms of the National Environmental Management: Protected Areas Act (Act 57 of 2003), and provided that the subpopulation to be destroyed does not occur (i) within a threatened ecosystem or (ii) within an area required for biodiversity conservation in terms of a relevant spatial biodiversity plan or (iii) on a site associated with additional ecological sensitivities.
[a]Vulnerable	D	This taxon either constitutes less than 1 000 individuals or is known from a very restricted range. No further loss of habitat should be permitted as the taxon's status will immediately become either Critically Endangered or Endangered, should habitat be lost.
Vulnerable	B,C	The taxon is approaching extinction but there are still a number of subpopulations in existence. Recommend no further loss of habitat as this will increase the extinction risk of the taxon.
Vulnerable	Listed under A only	If this taxon has a restricted range, EOO < 2 000 km^2, recommend no further loss of habitat. If range size is larger, the taxon is possibly long lived but widespread, and limited habitat loss may be considered under certain circumstances, such as the implementation of an offset whereby another viable, known subpopulation is formally conserved in terms of the Protected Areas Act, and provided that the subpopulation to be destroyed does not occur (i) within a threatened ecosystem or (ii) within an area required for biodiversity conservation in terms of a relevant spatial biodiversity plan or (iii) on a site associated with additional ecological sensitivities.
[a]Data Deficient	D	This taxon is very poorly known, with insufficient information on its habitat, population status or distribution to assess it. However, it is highly likely to qualify as threatened. If a Data Deficient taxon will be affected by a proposed activity, the subpopulation should be well surveyed and the data sent to the Threatened Species Programme. Assessments will be repeated and the new status of the taxon, with a recommendation, will be provided within a short timeframe.
Data Deficient	T	There is uncertainty regarding the taxonomic status of this taxon, but it is likely to be threatened. Contact the taxonomist working on this group to resolve its taxonomic status; status will then be reassessed by the Threatened Species Programme.
[a]Near Threatened	D	Currently known from fewer than 10 locations, therefore preferably recommend no loss of habitat. Should loss of this taxon's habitat be considered, then an offset that includes conserving another viable subpopulation (in terms of the Protected Areas Act) should be implemented, provided that the subpopulation to be destroyed does not occur (i) within a threatened ecosystem or (ii) within an area required for biodiversity conservation in terms of a relevant spatial biodiversity plan or (iii) on a site associated with additional ecological sensitivities.

Near Threatened	B,C	The taxon is approaching thresholds for listing as threatened but there are still a number of subpopulations in existence and therefore there is need to minimise loss of habitat. Conservation of subpopulations is essential if they occur (i) within a threatened ecosystem or (ii) within an area required for biodiversity conservation in terms of a relevant spatial biodiversity plan or (iii) on a site associated with additional ecological sensitivities.
Near Threatened	Listed under A only	If this taxon has a restricted range, EOO < 2 000 km^2, then recommend no further loss of habitat. If range size is larger, the taxon is possibly long lived but widespread, and limited habitat loss may be considered. Conservation of subpopulations is essential if they occur (i) within a threatened ecosystem or (ii) within an area required for biodiversity conservation in terms of a relevant biodiversity conservation plan or (iii) on a site associated with additional ecological sensitivities.
[a]Critically Rare		This is a highly range-restricted taxon, known from one site only, and therefore no loss of habitat should be permitted as it may lead to extinction of the taxon. The Threatened Species Programme is not aware of any current threats to this taxon.
[a]Rare		This taxon is likely to have a restricted range, or be highly habitat specific, or have small numbers of individuals, all of which makes it vulnerable to extinction should it lose habitat. Recommend no loss of habitat. The Threatened Species Programme is not aware of any current threats to this taxon.
Declining		This taxon is declining but the population has not yet reached a threshold of concern; limited loss of habitat may be permitted. Should the taxon be a known medicinal species and if individuals will not be conserved *in situ*, plants should be rescued and used as mother stock for medicinal plant cultivation programmes.

[a] Please provide information on the subpopulation to the Threatened Species Programme: redlist@sanbi.org.za. The fact that a subpopulation of this taxon has been found at a site zoned for development, means that its Red List status has to be reviewed and is likely to be upgraded.

[b] Criteria are defined and explained in Appendix 1.

In addition to recommendations based on status of taxa found on the site, botanical specialists should include recommendations pertaining to long-term persistence of the taxa concerned.

Maintaining habitat connectivity

In many cases, a proposed development such as a township development can be accommodated on a site where a taxon of conservation concern is present. It should be recommended that the subpopulation be conserved in a contiguous natural open space system. This natural area should provide sufficient space for the subpopulation (equivalent to its entire area of occupancy) and a buffer zone of at least 200 m to mitigate deleterious edge effects. In addition, the open space system must be sufficient to conserve pollinators. Connectivity with natural vegetation on adjacent sites should be promoted and habitat fragmentation should be minimised (e.g. by clustering development in the ecologically least sensitive areas).

The need for an Ecological Management Plan

If a development is authorised on a site with taxa of conservation concern, an Ecological Management Plan for the open space system on the site should be recommended, to be compiled by a suitably qualified specialist as part of the broader Environmental Management Plan, for implementation by an appropriate management authority (such as a body corporate or Section 21 company). The Ecological Management Plan must ensure the long-term persistence of the taxon of conservation concern, include a monitoring programme for the taxon of conservation concern, facilitate/augment natural ecological processes such as fire and herbivory, provide for the habitat and life history needs of important pollinators, minimise artificial edge effects (e.g. water runoff from developed areas and application of chemicals), and include an ongoing monitoring and eradication programme for nonindigenous taxa, with specific emphasis on invasive and weedy taxa.

Mitigation of impact during construction

Mitigation measures to protect the taxon of conservation concern during construction should be recommended, for example fencing off the open space system prior to construction. Landscaping with locally indigenous taxa is preferable and could include forage and host plants required by pollinators.

Strong avoidance of *ex situ* ('search and rescue') options for conserving taxa of conservation concern

In situ conservation is vital and should be recommended as the only option for conserving taxa of conservation concern. *Ex situ* conservation, i.e. the removal of a subpopulation from its natural habitat to an artificial environment, a practice often termed 'search and rescue', will result in the erosion of the inherent genetic diversity and characteristics of that taxon and increase its extinction risk in the wild. Similarly, translocation of subpopulations is an unacceptable conservation measure. Translocations are expensive and rarely successful. Even if they are successful, translocated individuals may harm other taxa within the receiving environment, the translocated individuals may transmit pathogens and/or parasites, and translocation may result in rapid changes in the taxon itself.

4.2.2.3 What should the final report of the botanical specialist include?

The final report of the botanical specialist should include:

- The date when the botanical survey took place.
- A list of plant taxa found on the site.
- A list of taxa of conservation concern found on the site, including those that may be dormant.
- Any limitations of the botanical survey, for example related to seasonality.
- A clear recommendation on whether to avoid, mitigate, remedy or offset loss of habitat for the taxa of conservation concern as a result of the proposed development (based on Table 4.1).
- Clear recommendations on appropriate mitigation measures, including mitigation during construction, maintaining habitat connectivity, and the need for an Ecological Management Plan.

Recommendations from the botanical specialist have to be summarised in a clear and explicit way in the specialist's report, in such a way that they can be copied into the main Basic Assessment or EIA report and then into the record of decision.

4.2.3 Listing of threatened ecosystems

South Africa's National Environmental Management: Biodiversity Act (Act 10 of 2004) provides for an important new legislative tool for protecting biodiversity: listing of threatened or protected ecosystems. In 2008 SANBI and the then Department of Environmental Affairs and Tourism developed the first draft list of threatened terrestrial ecosystems, publication of which is expected in 2009. The purpose of listing threatened ecosystems is primarily to reduce the rate of extinction of ecosystems and species. This includes preventing further loss of habitat in threatened ecosystems, as well as facilitating proactive management of these ecosystems. Threatened ecosystems can be listed in one of three categories: critically endangered, endangered or vulnerable.

Six criteria were developed to identify threatened terrestrial ecosystems. Of particular relevance to threatened species, is Criterion D, which identifies ecosystems that contain a high number of threatened species. Under criterion D1, an ecosystem is categorised as critically endangered if 80 or more threatened plant taxa are associated with the ecosystem, as endangered if 60 or more threatened plant taxa are associated with the ecosystem, and as vulnerable if at least 40 threatened plant taxa are associated with the ecosystem.[2]

Criterion D1 was applied to ecosystems delineated based on the 434 vegetation types in the South African Vegetation Map (Mucina & Rutherford 2006) and the 26 national forest types recognised by the Department of Water Affairs and Forestry (now Department of Agriculture, Forestry and Fisheries).

Of the 225 threatened ecosystems in the proposed draft list, 24 (11%) met thresholds for Criterion D1. All of them are in the Fynbos Biome, highlighting both the exceptional diversity of the Fynbos Biome and the extent to which it is under threat. Eleven ecosystems were listed solely on the basis of Criterion D1. Eight ecosystems qualified for a higher threat status under Criterion A1 (proportion of natural habitat lost) than under Criterion D1.

Listed ecosystems have explicit links to the EIA regulations, which require that at least a Basic Assessment be carried out for any proposed loss of indigenous vegetation in a critically endangered or endangered ecosystem. Listed ecosystems must also be taken into account in municipal Integrated Development Plans and Spatial Development Frameworks. Lastly, as discussed below, the Biodiversity Act provides for the development of

[2] Threatened Red List plant species used for Criterion D1 include the Red List categories of critically endangered (CR), endangered (EN), vulnerable (VU), extinct (EX), and extinct in the wild (EW). They do not include plant species listed under the category Vulnerable D2 (VU D2), which identifies species with a restricted area of occupancy (i.e. species that are naturally rare).

Biodiversity Management Plans for ecosystems, which could specifically target ecosystems with high numbers of taxa of conservation concern to ensure long-term persistence of both the ecosystem and the species.

The list of threatened ecosystems will be reviewed at least every five years, as required in the Biodiversity Act. Up-to-date, reliable Red Lists for species will play an important role in identifying ecosystems under threat.

Further information about the list of threatened ecosystems is available on SANBI's BGIS website (http://bgis.sanbi.org).

4.2.4 Biodiversity Management Plans for species

Another new tool for biodiversity conservation provided for by the Biodiversity Act is the publication of Biodiversity Management Plans (BMPs). A BMP can be developed for an ecosystem, an indigenous species or a migratory species. Norms and standards for BMPs for species were published in March 2009 (Regulation 214, Gazette No. 31968, 3 March 2009).

A BMP must be aimed at ensuring the long-term survival in nature of the species or ecosystem to which the plan relates, and must provide for a responsible person, organisation or organ of state to monitor and report on progress with implementation of the plan.

The *Red List of South African plants* should be one factor in prioritising species for which BMPs should be developed. It is not recommended that BMPs should be developed for all taxa of conservation concern, and threat status is not necessarily the most important criterion for prioritising species for BMPs. For example, a critically endangered species that occurs only on one site probably does not require a BMP. BMPs are most appropriate for species:

- For which co-ordination between multiple role players is required to ensure long-term persistence.
- That contribute to livelihoods of local communities.
- That are nationally or internationally traded, including heavily traded medicinal plant species and horticultural species.
- In which the private sector has a direct interest.

4.2.5 Protected area expansion, including through biodiversity stewardship programmes

One important tool for protecting taxa of conservation concern is through the protected area network. South Africa's protected area network covers 6.5% of the country, close to 8 million hectares, with strong support nationally for protected area expansion. The National Protected Area Expansion Strategy (NPAES) (SANBI & DEAT 2008) sets ecosystem-based targets for protected area expansion and identifies focus areas for protected area expansion using systematic biodiversity planning techniques. It highlights two main mechanisms for protected area expansion: land acquisition and contract protected areas. Contract protected areas, which allow for land to remain in private or communal hands while being formally recognised in terms of the Protected Areas Act, are often appropriate for small fragments of natural habitat with high numbers of taxa of conservation concern. These small fragments usually occur in production landscapes, for example in between agricultural lands or forestry plantations, making it impractical to include them in large state-owned protected areas.

Through biodiversity stewardship programmes, several provinces are working with private and communal landowners to secure priority sites through contract protected areas, involving long-term contracts between landowners and the conservation authority concerned.

Although the identification of focus areas for protected area expansion in the NPAES was not based on the location of taxa of conservation concern, the location of these taxa can be valuable in helping to identify specific sites for protected area expansion within the focus areas, whether through acquisition or contract protected areas. The location of taxa of conservation concern can also help to identify sites within threatened ecosystems that should be prioritised for contract protected areas. Where possible, within the framework of contributing to ecosystem-based protected area targets, it makes sense to include sites with known taxa of conservation concern in new or expanded protected areas.

SANBI's Threatened Species Programme has 22 volunteer groups who monitor the status of threatened plants through a programme called Custodians of Rare and Endangered Wildflowers (CREW) (Raimondo 2004, 2007). These groups are based in priority areas for threatened plant conservation and work closely with provincial biodiversity stewardship programmes to help identify priority sites for stewardship contracts. The Threatened Species Programme also ensures that management plans developed for contract protected areas include the management interventions required to conserve the threatened plants occurring on these sites.

4.2.6 Using the Red List to ensure sustainable use of medicinal plants

Only a small proportion, less than 20%, of South Africa's 322 heavily traded medicinal plant taxa are threatened, according to this Red List assessment (Williams *et al.*, in prep). Most medicinal plant taxa that were assessed were categorised as being of Least Concern, with medicinal trade not having a detrimental impact on their population status. Given the important role that the medicinal plant trade plays in supporting livelihoods of South Africans who are part of the second economy, it is encouraging that by far the majority of medicinal plants are not threatened.

There are two main reasons why most heavily traded medicinal plants are not threatened. The first is that in some cases the harvested plant parts (e.g. leaves, stems, fruit, flowers or bark) are able to re-grow after harvesting. Even with high levels of harvesting, individuals within subpopulations do not die as a result of harvesting and populations of these taxa are not declining. The second reason is that even for taxa that are destructively harvested, many are widely distributed, have large numbers of individuals and are able to recruit rapidly. This means that population growth is rapid and that despite widespread and regular harvesting, the population is able to sustain itself. One such example is the African Potato, a popular muthi plant within the genus *Hypoxis*, which is widely harvested for its bulbs. The rapid growth rate and high levels of recruitment mean that species of African Potato are currently not declining, in spite of widespread harvesting.

The implication is that conservation policies currently in place to manage the medicinal plant trade should not indiscriminately limit harvesting and trade of medicinal plant taxa. Only taxa that are currently listed as threatened or Near Threatened have to be closely managed and monitored, and should be included on national and provincial lists of threatened species (i.e. lists other than the Red List—see section 4.3). No restrictions on harvesting or trading should be placed on those that are listed as being of Least Concern, while those listed as Declining should be targeted in medicinal plant cultivation projects.

SANBI's Threatened Species Programme will be working with conservation authorities to revise threatened species lists to ensure that they do not include nonthreatened medicinal plants and that threatened medicinal taxa are given appropriate levels of protection. SANBI is also exploring other tools for ensuring sustainable use of threatened medicinal plants, for example development of Biodiversity Management Plans for species in terms of the Biodiversity Act (see section 4.2.4).

4.2.7 Monitoring

The Red List is a crucial tool for reporting on the state of biodiversity at the international, national and provincial level. As with other uses of the Red List, it should be complemented by ecosystem-based approaches and not used in isolation for state of biodiversity monitoring and reporting.

The Convention on Biodiversity has identified 17 headline indicators for assessing progress towards the 2010 target of reducing biodiversity loss, one of which is the change in status of threatened species (www.twentyten.net, accessed April 2009). One tool to measure change in status of threatened species is the Red List Index which tracks overall changes in the threat status of the species from one Red List Assessment to the next. The index is based on the number of species that move between categories as a result of genuine changes in threat status (excluding moves resulting from improved knowledge or taxonomic changes) (Butchart *et al.* 2005). To date, the Red List Index has been calculated only for birds and amphibians as they are the only two taxonomic groups for which two thorough assessments have been conducted. This Red List assessment of all of South Africa's plant taxa is an important baseline dataset, against which future biodiversity loss can be measured via the calculation of the Red List Index.

Nationally, SANBI is mandated by the Biodiversity Act to monitor and report on the state of biodiversity and has developed a national biodiversity monitoring and reporting framework with a series of headline indicators. The Red List provides key inputs for several of these indicators, not only for those dealing directly with changes in the threat status of species but also for some indicators tracking the relative impact of various threats to biodiversity. The Red List also feeds into national, provincial and municipal state of environment reporting. As this is the first comprehensive assessment of all South African plants, it provides an important baseline for all future monitoring and reporting related to the status of plant taxa.

4.3 Relationship of this Red List for plants to other species lists

This Red List is not the only species list relevant to conservation of plants in South Africa, meaning that there is potential for confusion around the various lists. This section explains the difference between the Red List and other lists, including:

- Threatened or protected plant species listed in terms of the Biodiversity Act.
- Threatened or protected plant species listed in terms of provincial conservation legislation.
- Protected tree species listed in terms of the National Forest Act.
- Plant species listed on the CITES appendices.

Congruence between the Red List and these other lists is not high, as shown in Table 4.2. This is for good reason: the different lists serve different purposes. All the lists are briefly described below, and the degree of congruence with the Red List is quantified.[3]

While the Red List is intended to highlight species threatened for various reasons (including habitat loss), national and provincial conservation legislation is intended to protect only those species threatened by utilisation. The CITES list is intended to protect only those species threatened or potentially threatened by utilisation for international trade. The Red List is therefore the only list of species that enables protection of species from habitat loss, through the role it can play in informing land-use planning (through spatial biodiversity planning products), the environmental assessment process and the listing of threatened ecosystems.

TABLE 4.2. Overlap between Red List and other lists of plant species in South Africa.

	Total number of taxa listed	Red List taxa of conservation concern included	Percentage of 4 809 Red List taxa of conservation concern included	Red List threatened taxa included	Percentage of 2 577 Red List threatened taxa included	Red List taxa of conservation concern threatened by utilisation included	Percentage of 293 Red List taxa of conservation concern threatened by utilisation included
Biodiversity Act	74	61	1.3%	47	1.8%	50	17.0%
Provincial legislation	7 543	2 501	52.0%	1 481	57.5%	229	78.2%
CITES	494	137	2.8%	79	3.1%	63	21.5%

4.3.1 Listing of threatened species in terms of the Biodiversity Act

The Biodiversity Act empowers the Minister to publish a list of Threatened or Protected Species in one of four categories: critically endangered, endangered, vulnerable or protected. The Act prohibits the carrying out of a range of restricted activities involving specimens of these species without a permit. Restricted activities requiring a permit do not include any form of habitat destruction, only activities relating to utilisation (extractive use) of individuals of a species such as harvesting, hunting, trading etc.

Although the Biodiversity Act uses some of the same terms (critically endangered, endangered and vulnerable) as the IUCN Red List, the list of Threatened or Protected Species and the Red List serve very different purposes. Only species affected by restricted activities are intended to be listed as Threatened or Protected Species in terms of the Biodiversity Act. This is why only 1.3% of Red-Listed taxa of conservation concern and 1.8% of Red-Listed threatened taxa are listed as Threatened or Protected Species in terms of the Biodiversity Act.

According to the Red List, the actual number of plant taxa threatened by utilisation is 293. However, only 50 (17%) of these taxa are included on the current list of Threatened or Protected Species. This means that when it is revised, the additional plant taxa threatened by utilisation should be added. Altogether 24 plant taxa currently listed in terms of the Biodiversity Act are not actually threatened by any form of utilisation and should be removed from the list.

4.3.2 Listing of threatened species in terms of provincial legislation

South Africa's nine provinces have plant species listed in provincial nature conservation legislation.[4] Altogether there are 7 543 taxa listed in terms of these provincial ordinances and acts. Of these, 2 501 are Red-Listed as taxa of conservation concern, representing 52% of Red-Listed taxa of conservation concern (Table 4.2).

As with the national list of Threatened or Protected Species in terms of the Biodiversity Act, provincial legislation is intended to regulate the utilisation of species, by requiring an authorising permit for picking, possession, trade or transport of a specimen of a listed taxon, but does not protect species from habitat loss. However, of the 7 543 taxa on the provincial lists, only 229 are taxa of conservation concern that are threatened by utilisation. This means that the vast majority, 7 314 taxa, are not in need of the type of regulation provided by provincial legislation, and managing the permitting requirements for these taxa is likely to be placing unnecessary strain on the financial and human capital resources within the provincial conservation authorities.

[3] The list of protected tree species in terms of the National Forest Act is not included in Table 4.2 as only a small proportion of Red-Listed plant taxa are trees. The relevant statistics for protected tree species are given in section 4.3.3.

[4] These include the Western Cape Nature Conservation Laws Amendment Act (3 of 2000), the North West Nature Conservation Ordinance (12 of 1983), the Mpumalanga Nature Conservation Act (10 of 1998), the Northern Cape Nature and Environmental Conservation Ordinance (19 of 1974), the Limpopo Environmental Management Act (7 of 2003), the Gauteng Nature Conservation Ordinance (12 of 1983), the Free State Nature Conservation Ordinance (8 of 1969), the KZN Nature Conservation Ordinance (15 of 1974) and the Eastern Cape Nature and Environmental Conservation Ordinance (19 of 1974). Several of them are under review.

On a positive note, 78% of the 293 taxa of conservation concern threatened by utilisation in South Africa are covered by provincial legislation (Table 4.2). SANBI's Threatened Species Programme will be working closely with provinces to ensure that when provincial legislation is revised, remaining taxa of conservation concern threatened by utilisation that are not currently represented on provincial lists, are included.

4.3.3 List of protected tree species in terms of the National Forest Act

The former Department of Water Affairs and Forestry has published a list of protected tree species in terms of the National Forest Act (Act 84 of 1998). No person may cut, disturb, damage or destroy any protected tree, or possess, trade or transport a protected tree without a licence from the Minister of Water Affairs and Forestry (now Agriculture, Forestry and Fisheries). Forty-six tree taxa are currently protected on this list, of which 18 are taxa of conservation concern. The Red List includes 122 tree taxa of conservation concern, of which 63 are threatened. Only 15% of these appear on the list of protected tree species.

4.3.4 CITES appendices

In addition to national and provincial legislation, South Africa is party to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). CITES is an international agreement between governments that aims to ensure that international trade in specimens of wild animals and plants does not threaten their survival. Currently 173 governments are party to CITES. The species covered by CITES are listed in three appendices, according to the degree of protection they need.

In South Africa's case, 494 of its plant taxa are listed on CITES. Of these, 63 are taxa of conservation concern threatened by utilisation according to the Red List. Many CITES-listed species are listed in Appendix II of CITES for 'look alike' reasons. For example, only a few aloes, ceropegias and orchids are threatened by trade, but all remaining taxa in these genera and families are listed because they look very similar to targeted taxa and customs officials are not able differentiate taxa as it requires specialised taxonomic knowledge. The large number of 'look alike' taxa partly explains why only a small proportion of taxa on CITES appendices are of conservation concern.

All South Africa's cycads in the genus *Encephalartos* are included on CITES Appendix I and are also afforded national and provincial protection in terms of the Biodiversity Act and legislation in all provinces. This protection is much needed given that this is the most threatened genus in the country (see section 3.7). However, these listings with their associated permitting controls are currently proving ineffective in preventing the rapid demise of this highly sought after group.

Most plant taxa on the CITES appendices were added in the 1970s. However, many groups that were then popular in trade are now no longer collected from the wild for international trade, for example aloes and ceropegias. New groups such as brachystelmas have now become popular. There is therefore a need to revise the South African plants currently listed on the CITES appendices.

4.4 Research priorities to support Red-Listing for plants

While conducting assessments of all of South Africa's plant taxa, many individual taxa and taxonomic groups were encountered that could not be adequately assessed because of lack of data. Both plant systematists and ecologists are urged to focus their future work on some of the gap areas identified below.

4.4.1 Systematics

An urgent focus on taxonomic monographs for groups with high number of taxa listed as DDT is recommended.

The major priority is for plant systematists to focus on taxonomic monographs for groups with high numbers of taxa listed here as data deficient for taxonomic reasons (DDT). Based on this Red List assessment, it is estimated that currently between 20% and 30% of plant taxa in South Africa either have never been revised or have not had revisions done since 1945. Families with the highest proportion of taxa listed as data deficient for taxonomic reasons are Santalaceae, Campanulaceae, Oxalidaceae, Lobeliaceae and Mesembryanthemaceae.[5]

Old taxonomic revisions do not have information required for conservation assessments. Without adequate revisions, it is impossible to establish vital information on a taxon such as its distribution, current accepted localities where it occurs and life history traits such as recruitment strategies and longevity. Without this information, conservation assessments cannot be carried out.

[5] A more thorough evaluation of the current state of plant taxonomic coverage, priority genera that require revision as well as details on the data that have to be included in monographs, will be included in a forthcoming paper, Priorities for plant systematics in South Africa emerging from a comprehensive conservation assessment of South Africa's indigenous flora (Raimondo & Von Staden, in prep.).

4.4.2 Atlassing work and climate change

Atlas data are exceptionally useful for Red List assessments as well as for monitoring shifts in distribution and abundance in response to climate change.

The Protea Atlas Project, which was conducted between 1992 and 2003 and generated 250 000 locality records for taxa within this family, has been the most useful data set for conducting conservation assessments (see Box 2.1). Further atlassing projects would greatly assist with assessments as they provide more accurate distribution ranges than herbarium specimens and are typically the only source of data on population abundance. Atlas projects are also an excellent way of involving the public in biodiversity work. SANBI has a key co-ordinating and facilitating role to play in such projects.

With many South African plant taxa predicted to be affected by climate change (Midgley *et al*. 2002), more atlas data, especially for those groups predicted to be affected by climate change (e.g. Ericaceae, Iridaceae, Restionaceae and particular groups within the Mesembryanthemaceae), will greatly assist not only in producing accurate conservation assessments but also in monitoring future shifts in plant distribution and population abundance.

In addition to atlas projects, ecological research on the response of species restricted to certain microhabitats, for example quartz patches, as well as the response generally of different plant life histories to climate change, is needed for better understanding of the effects of climate change.

4.4.3 Population ecology studies

Population ecology studies that include species longevity and population growth rates as well as studies on fire response among slow-growing, nonresprouting taxa, are a priority.

Many widespread plant taxa suspected to have undergone severe declines, such as grassland taxa that have lost a large proportion of their original distribution range to afforestation and crop cultivation, are currently listed as Least Concern or Data Deficient. This is because of a lack of ecological studies that determine both longevity as well as population growth rates, meaning that Red List Criteria A (Population Decline) and E (Quantitative Analyses) cannot be applied. Population ecological studies that include longevity and population growth rates are a priority.

Lastly, many taxa that occur in the Grassland and Fynbos Biomes have been listed as threatened or potentially threatened as a result of too frequent fire. Studies determining the impact of changes in fire regimes on plant populations are few and far between. More ecological research on fire response is urgently required, especially for plant taxa suspected to be negatively affected by frequent fire, such as slow-growing, nonresprouting taxa.

5. Assessments of taxa of conservation concern

5.1 PTERIDOPHYTES

CYATHEACEAE

Cyathea Sm.

Cyathea capensis (L.f.) Sm. var. **capensis**

Status: **Declining**

J.E. Victor

Distribution: EC KZN LM MP WC. From the Cape Peninsula eastwards along the coast and northwards throughout the eastern half of South Africa. Also in Zimbabwe, Mozambique, Malawi and southern Tanzania.

Habitat: Forest, near waterfalls, streams and permanently moist seepages.

Rationale: A widespread taxon (EOO > 30 000 km^2). It is declining in Mpumalanga because of mature individuals being collected for sale in the local horticultural trade.

ISOETACEAE

Isoetes L.

Isoetes aequinoctialis Welw. ex A.Braun

Status: **VU** D2

J.P. Roux & D. Raimondo

Distribution: MP. Also Mali, Ghana, Tanzania, Zambia, Zimbabwe and Namibia.

Habitat: Temporarily wet places, such as shallow depressions and streambeds, 1 225–1 350 m.

Rationale: One known location in South Africa is potentially threatened by grazing livestock.

F **Isoetes capensis** A.V.Duthie Plate 1

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

J.P. Roux, D. Raimondo & I. Ebrahim

e**Distribution:** WC. Darling to Stellenbosch and Cape Flats.

Habitat: Seasonally flooded depressions and in pools on granite or shale.

Rationale: Endangered because of very limited EOO (4 250 km^2) and AOO (< 10 km^2), known from six severely fragmented subpopulations. The number of subpopulations declined drastically, principally as a result of urban development. This loss is ongoing.

F **Isoetes schweinfurthii** A.Braun ex Baker Plate 2

Status: **Rare**

J.P. Roux & D. Raimondo

Distribution: LM. Also Madagascar, Morocco to Namibia and Botswana.

Habitat: Seasonally flooded pans and along watercourses, 800–1 100 m.

Rationale: Occurs at one site in South Africa, in a pan in the Kruger National Park, where it is not threatened.

F **Isoetes stellenbossiensis** A.V.Duthie Plate 1

Status: **NT** B1ab(iii)

J.P. Roux & D. Raimondo

e**Distribution:** WC. Darling to Stellenbosch and Cape Flats.

Habitat: On sandy soil in seasonally flooded pans and on seeps on rock faces.

Rationale: EOO 3 500 km^2. Known from more than 10 locations. It has lost habitat to urban development. It continues to decline because of invading alien plants and infrastructure development.

Isoetes stephanseniae A.V.Duthie Plate 2

Status: **CR** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

J.P. Roux & D. Raimondo

e**Distribution:** WC. Stellenbosch.

Habitat: Vernal pools on granite.

Rationale: EOO and AOO < 4 km^2. Known from two historical locations, one of which was lost to the development of Stellenbosch University. The remaining subpopulation is threatened by invading alien plants and eutrophication from an adjacent sewerage farm.

F **Isoetes transvaalensis** Jermy & Schelpe Plate 1

Status: **NT** B2ab(ii,iii,iv,v)

J.E. Burrows & L. von Staden

Distribution: FS KZN LM MP. From KwaZulu-Natal, Free State and Lesotho Drakensberg Mountains to Mpumalanga and Limpopo.

Habitat: High-altitude seasonal pools, on sandstones in montane grassland, 1 600–2 000 m.

Rationale: AOO < 500 km^2. Known from 13 locations. Restricted to a rare and vulnerable habitat (high-altitude seasonal pools). Experiencing a rapid decline in Mpumalanga as a result of infrastructure development, encroachment by invasive alien plants, and quarrying. It is relatively safe elsewhere in its range.

F **Isoetes welwitschii** A.Braun ex Kuhn Plate 1

Status: **NT** D2

J.E. Victor

Distribution: KZN MP. Also tropical Africa (Ethiopia to Ghana).

Habitat: In seepage areas but never in standing water, 1 400–1 600 m.

Rationale: Known from one location in South Africa. Potentially threatened by grazing livestock. Can disperse long distances and has subpopulations in neighbouring countries.

Isoetes wormaldii Sim Plate 1

Status: **CR** B2ab(i,ii,iii,iv,v)c(iv); C2a(i)b; D

J.E. Victor & A.P. Dold

e**Distribution:** EC. Grahamstown to East London.

Habitat: Temporary pools and streams or perennially submerged in slow-flowing rivers.

Rationale: AOO < 1 km^2. Known from three, possibly four locations. It occurs as small subpopulations, each with a maximum of 15 plants. Subpopulations fluctuate in response to grazing (numbers increase after temporary pools are grazed). Without grazing, plants temporarily disappear. Declining because of urban development.

LOMARIOPSIDACEAE

Elaphoglossum Schott ex J.Sm.

Elaphoglossum drakensbergense Schelpe

Status: **Rare**

J.E. Victor

e**Distribution:** EC KZN. Injasuti, Bushman's Nek and Cathedral Peak.

Habitat: Weathered sandstone rock faces or earthy faces overhung by rock, often shaded.

Rationale: A rare habitat specialist endemic to the KwaZulu-Natal Drakensberg range. Not threatened.

MARSILEACEAE

Marsilea L.

F **Marsilea farinosa** Launert subsp. **arrecta** J.E.Burrows Plate 2

Status: **VU** D2

J.P. Roux & D. Raimondo

Distribution: LM NW. Also southern Botswana.

Habitat: Seasonally flooded places and along rivers and streams.

Rationale: Small range (EOO < 5 000 km²), known from five locations. This taxon is potentially threatened by overgrazing by livestock.

Marsilea schelpeana Launert

Status: **VU** B1ab(ii,iii)+2ab(ii,iii)

J.E. Victor & A.P. Dold

e**Distribution:** EC WC. Port Elizabeth, Alexandria, Grahamstown to Albertinia.

Habitat: Margins of seasonal pools and along watercourses from near sea level to ± 200 m.

Rationale: EOO 7 500 km². Known from fewer than 10 locations. Declining because of urban expansion and agriculture.

OPHIOGLOSSACEAE

Ophioglossum L.

Ophioglossum bergianum Schltdl. Plate 2

Status: **Rare**

D. Raimondo & J.P. Roux

e**Distribution:** NC WC. Kamiesberg to Cape Peninsula.

Habitat: Seeps on sandstone or granite slopes.

Rationale: A widespread (EOO 23 000 km²) but rare habitat specialist. Subpopulations on the Cape Flats and Stellenbosch have been lost to urban development. Other subpopulations tend to be safe and no ongoing significant decline is currently taking place.

F **Ophioglossum gracillimum** Welw. ex Hook. & Baker Plate 2

Status: **EN** D

J.E. Burrows, M. Lötter & L. von Staden

Distribution: LM MP. In South Africa near Polokwane and Bronkhorstspruit. Also occurs in central Africa.

Habitat: Seasonally moist areas in open deciduous woodland. Depends on mycorrhizal associations, 1 000–1 300 m.

Rationale: An extremely rare species known from two sites in South Africa. The total number of plants in the South African subpopulation is estimated to be between 50 and 100 mature individuals. One site is potentially threatened. There is a large disjunction between the South African subpopulations and those in central Africa.

PTERIDACEAE

Cheilanthes Sw.

F **Cheilanthes deltoidea** Kunze **subsp. nov.**

Voucher: *Klopper & Klopper 217* PRE

Status: **VU** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v); C2a(i); D1+2

J.E. Victor & M.F. Pfab

e**Distribution:** G LM. Waterberg, Centurion and Irene, Gauteng.

Habitat: Southwest-facing soil pockets and rock crevices in chert rock.

Rationale: Subpopulations that differ markedly from other subpopulations in morphology and habitat were recently discovered between Centurion and Irene in Gauteng. This undescribed taxon has an EOO of 900 km² and an AOO of 2–5 km², is known from nine locations and the total population is estimated to be between 600–800 mature individuals. This taxon is declining as a result of urban development, invading alien plants, incorrect fire regime and trampling.

THELYPTERIDACEAE

Amauropelta Kunze

Amauropelta knysnaensis (N.C.Anthony & Schelpe) Parris

Status: **VU** D2

C.J. Geldenhuys & J.E. Victor

e**Distribution:** WC. George.

Habitat: Damp places in coastal forest.

Rationale: Known from three locations. Potentially threatened by logging.

Christella H.Lév.

Christella altissima Holttum

Status: **DD**D

L. von Staden & J.E. Burrows

e**Distribution:** KZN LM. Extinct in Durban, but possibly also occurs in the Wolkberg Mountains in Limpopo Province.

Habitat: Coastal forest and possibly riverine forest.

Rationale: A very poorly known species that was collected at an unspecified site near Durban over 100 years ago. It has not been recorded since, and is most likely extinct in this area as a result of urban expansion. A plant that is very like this species was collected in the Wolkberg in Limpopo Province in 1990. However, the identity of this plant remains uncertain as John Burrows, a local fern expert, has not been able to compare this specimen with the type.

WOODSIACEAE

Hypodematium Kunze

F **Hypodematium crenatum** (Forssk.) Kuhn var. **crenatum**

Status: **VU** D1

J.E. Burrows, M. Lötter & L. von Staden

Distribution: MP. Bourke's Luck Potholes and Sodwala in South Africa. Widespread but very rare in Africa, Madagascar and Asia.

Habitat: Crevices on dolomite cliffs or in soil at the base of dolomite outcrops, from 1 260–1 600 m.

Rationale: Very rare in South Africa, with a very small total population, but not threatened. This national assessment is not down-listed because significant dispersal (the closest sites are in northeastern Zambia and Madagascar) is unlikely, and the taxon is also very rare in these areas. Total population is estimated between 250 and 1 000 mature individuals.

Plate 1



J.E. Burrows

Isoetes wormaldii CR



J.E. Burrows

Isoetes capensis EN



J.P. Roux

Isoetes stellenbossiensis NT



J.P. Roux

Isoetes transvaalensis NT



J.E. Burrows

Isoetes welwitschii NT

Plate 2



J.E. Burrows

Ophioglossum bergianum Rare



J.E. Burrows

Ophioglossum gracillimum EN



J.P. Roux

Isoetes stephanseniae CR



J.E. Burrows

Isoetes schweinfurthii Rare



J.E. Burrows

Marsilea farinosa subsp. *arrecta* VU

5.2 GYMNOSPERMS

CUPRESSACEAE

Widdringtonia Endl.

Widdringtonia cedarbergensis J.A.Marsh

Status: **CR** A2ab

E.C. February, S. Higgins, S. Fox, D. Raimondo & J.E. Victor

e**Distribution:** WC. Cederberg.

Habitat: Fynbos, rocky areas, predominantly on quartzitic sandstones, prefers areas with 80% rock cover, also occurs on some shales and mudstones, 800–1 500 m.

Rationale: EOO 660 km^2, AOO 39.6 km^2. A long-lived tree, endemic to the Cederberg, this species has been declining over the past century as a result of a deleterious fire regime. Monitoring of permanent plots set up 29 to 35 years ago distributed across the range of this species indicates that a 94% decline of mature individuals has taken place in less than one generation (generation length is estimated to be between 66 and 200 years). Decline has not ceased.

Widdringtonia schwarzii (Marloth) Mast.

Status: **NT** D2

J.E. Victor & A.E. van Wyk

e**Distribution:** EC. Baviaanskloof and Kouga Mountain.

Habitat: In fire refuges either in ravines or on steep slopes.

Rationale: A paleoendemic known from 12 locations. It is unable to survive fire and is potentially threatened by too frequent fires.

STANGERIACEAE

Stangeria T.Moore

Stangeria eriopus (Kunze) Baill. **Plate 3**

Status: **VU** A2acd; A4cd

V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya

Distribution: EC KZN. Bathurst to southern Mozambique.

Habitat: Scarp and coastal forest, Ngongoni and coastal grassland.

Rationale: At least 20% of the habitat has been lost over the last three generations (150 years) and harvesting for the traditional medicine trade has caused at least a further 10–20% decline in population size. It is a sought-after medicinal plant that is over-exploited in much of its range. It is likely to be threatened in future by further by habitat loss and increased harvesting as a result of the proposed N2 highway being extended through the Eastern Cape.

ZAMIACEAE

Encephalartos Lehm.

Encephalartos aemulans Vorster

Status: **CR** B1ab(v)+2ab(v); C1

J.S. Donaldson

e**Distribution:** KZN. Vryheid.

Habitat: South-facing sandstone cliffs in short grassland.

Rationale: Occurs almost completely at a single location (two males known from a second location). EOO 12 km^2, AOO 2 km^2. There are records of continued decline, and the landowner of the private nature reserve in which they occur believes that plants are still being removed. The population is believed to have declined substantially in the 1980s but the extent of decline is difficult to quantify. Scott-Shaw (1999) classified as EN, but in terms of AOO and EOO it qualifies as CR. Total wild population is 150–250 mature individuals.

Encephalartos altensteinii Lehm. **Plate 4**

Status: **VU** A2acd; C1

J.S. Donaldson

e**Distribution:** EC KZN. Eastern Cape and southern KwaZulu-Natal coast, inland to the Amathole Mountains.

Habitat: Open shrubland, steep, rocky slopes and forests near the coast. Often along riverbanks.

Rationale: Total estimated remaining population < 10 000 mature individuals. Repeat photography of sites first photographed between 1906 and 1950 and photographed again between 1996 and 1998 showed > 30% decline. The removal of large numbers of plants to gardens has been corroborated by arrests of poachers and documented removal from specific sites, e.g. 438 plants removed from near Tamara in 1995.

Encephalartos arenarius R.A.Dyer

Status: **EN** A2acd; B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v); C1

J.S. Donaldson

e**Distribution:** EC. Port Elizabeth.

Habitat: Coastal dune forest and scrub bush on dunes.

Rationale: EOO 250 km^2, AOO 20 km^2. Both EOO and AOO have declined because of changing land use and the removal of mature plants by collectors. Conservation officials estimate that many mature plants have been removed by collectors over the past 40 years. Estimated decline exceeds 50%, based on matched photographs. The number of locations is probably less than five, based on knowledge of plants at Nanaga, Canon Rocks and Kaba Valley.

Encephalartos brevifoliolatus Vorster

Status: **EW**

J.D. Bosenberg

e**Distribution:** LM. Formerly occurred near the Blyde River Canyon Nature Reserve.

Habitat: Short grassland in open protea savanna.

Rationale: When this species was described in 1996, there were thought to be five mature plants in one site in the Limpopo Province. Collectors removed most of the remaining plants and left only a few damaged stems. These were removed by conservation officials for *ex situ* conservation.

Encephalartos caffer (Thunb.) Lehm.

Status: **NT** A2

J.S. Donaldson

e**Distribution:** EC KZN. Humansdorp to Oribi Gorge.

Habitat: Grassland and occasionally thicket, often among rocks.

Rationale: A widespread species whose habitat has deteriorated in places such as Bathurst as a result of overgrazing by livestock, and plants have also been removed by collectors in several places. The extent of decline is difficult to quantify, but is suspected to be close to 30%.

Encephalartos cerinus Lavranos & D.L.Goode

Status: **CR** A2acd; B1ab(i,ii,iv,v)+2ab(i,ii,iv,v); C2a(ii)

J.S. Donaldson

e**Distribution:** KZN. Central KwaZulu-Natal.

Habitat: Dry, hot, east-facing cliffs in rocky grassland.
Rationale: EOO and AOO 10 km². The population declined rapidly after it was first described in 1998. The species continues to be targeted by collectors and some experts believe that very few plants remain. The population at the type locality is considered to be extinct, meaning that it now occurs in a single subpopulation. Estimates of the number of remaining plants vary from 10–70.

Encephalartos cupidus R.A.Dyer

Status: **CR** A2acd; B1ab(ii,iv,v)+2ab(ii,iv,v)
J.S. Donaldson

[e]**Distribution:** LM MP. Extinct throughout most of the range in Limpopo and Mpumalanga, currently restricted to a small area in northern Mpumalanga.
Habitat: Grassland, on steep, rocky slopes or cliffs and sometimes near seepage areas bordering gallery forests.
Rationale: EOO 50 km², AOO 10 km². Now known from one site. Formerly occurred throughout both Mpumalanga and Limpopo Provinces in South Africa. Surveys in 2004 show it is extinct in Limpopo and now only occurs in the Blyde River Canyon Nature Reserve in Mpumalanga. Based on the number of specimens in collections and the rapid decline in Limpopo, it is estimated that it has declined by > 80% over the past 50 years.

Encephalartos dolomiticus Lavranos & D.L.Goode

Status: **CR** C1
J.S. Donaldson

[e]**Distribution:** LM. Sekhukhuneland.
Habitat: Grassland, in shallow soils on dolomite ridges.
Rationale: The total population is less than 250 plants. Although it is not possible to quantify overall decline, there has been intensive collecting of all cycads throughout the Limpopo Province. Recent surveys by nature conservation officials indicate that subpopulations have declined slightly between 1993 and 2004. A decline of 45 plants (25%) over the next 30 years (one generation) is highly probable.

Encephalartos dyerianus Lavranos & D.L.Goode

Status: **CR** B1ab(i,v)+2ab(i,v)
J.S. Donaldson

[e]**Distribution:** LM. Phalaborwa.
Habitat: Open grassland and shrubland on the slopes of low granite hills.
Rationale: AOO 0.3 km². Now known from one location (i.e. excluding the few isolated plants that are not reproductive). Although it is now relatively secure within a private reserve, the population was reduced by collectors in the 1970s and almost all cycads in Limpopo Province have been targeted by collectors in recent years.

Encephalartos eugene-maraisii I.Verd. **Plate 4**

Status: **EN** C1
J.S. Donaldson

[e]**Distribution:** LM. Waterberg.
Habitat: Sandstone hills and rocky ridges in open grassland and savanna.
Rationale: There has been significant collecting over the past 30 years based on the number of mature plants in private collections and the population is suspected to have declined by 20% (generation length 30 years). Between 900 and 1 000 mature individuals are now estimated to be extant. Collecting seems to have decreased in the existing nature reserves. The managers of the farms where they occur are concerned about ongoing poaching although conservation officials noted relatively little evidence of illegal collecting during a population census in 2004. There is good reason to regard cycads in this region as at high risk because of large-scale poaching of cycads across Limpopo Province.

Encephalartos friderici-guilielmi Lehm. **Plate 3**

Status: **VU** C1
J.S. Donaldson

[e]**Distribution:** EC KZN. Queenstown to Kokstad.
Habitat: Montane grassland and open shrubland on rocky ridges.
Rationale: Total population size estimated between 5 000–10 000 mature individuals. A continuing decline of at least 10% is expected within the next 30 years (one generation) owing to harvesting for medicinal purposes.

Encephalartos ghellinckii Lem.

Status: **VU** C1
J.S. Donaldson

[e]**Distribution:** EC KZN. Eastern Cape and KwaZulu-Natal Drakensberg Mountains.
Habitat: Rocky outcrops in montane grasslands, sandstone cliffs and associated with montane fynbos in the Drakensberg.
Rationale: The population size estimated at < 10 000, with declines recorded in several subpopulations. Future decline is expected to exceed 10%, within a generation length of 30 years. Subpopulations on the lowlands are especially vulnerable to illegal collecting, whereas those at higher elevations are less accessible and therefore at lower risk.

Encephalartos heenanii R.A.Dyer **Plate 4**

Status: **CR** B2ab(ii,iv,v)
J.S. Donaldson
Distribution: MP. Southeastern Mpumalanga and Swaziland.
Habitat: Open areas of montane grasslands amidst scarp forest in deep valleys and ravines.
Rationale: AOO 5 km². Now known from one location with ± 500 mature individuals. Continuing decline due to habitat loss, poor reproduction and harvesting for medicinal and horticultural purposes.

Encephalartos hirsutus P.J.H.Hurter

Status: **CR** A4acd; B2ab(iii,iv,v); C1
J.S. Donaldson

[e]**Distribution:** LM. Soutpansberg Mountains.
Habitat: Exposed quartzite cliffs in mountain bushveld.
Rationale: AOO 5 km². Known from a very restricted area and from three locations, now extinct at two of them. The total population is less than 100 individuals, occurring as small, severely fragmented subpopulations. It is estimated that the total population has declined by > 25% over the past 30 years (one generation) and will continue to decline in future.

Encephalartos horridus (Jacq.) Lehm.

Status: **EN** A2cd
J.S. Donaldson

[e]**Distribution:** EC. Port Elizabeth to Uitenhage.
Habitat: Xeric thicket, often on rocky quartzite outcrops.
Rationale: Extinct in several parts of its former range, notably west of Port Elizabeth and near Uitenhage. It has a restricted distribution but does not qualify for EN in terms of the B criterion because there are more than five subpopulations that are not severely fragmented. Overall

decline is difficult to judge, but is estimated as being over 50% based on habitat loss and declines recorded in repeat photographs.

Encephalartos humilis I.Verd.

Status: **VU** A2acd; C1

J.S. Donaldson

Distribution: MP. Crocodile River.

Habitat: Montane and mistbelt grassland, rocky sandstone slopes.

Rationale: Many former sites have been converted to pine plantations. Some illegal collecting occurs, but it is a less popular species amongst collectors. It is, however, also harvested for medicinal purposes. Population estimated at 4 500–10 000 mature individuals. The population is suspected to have declined by 30% over 90 years (three generations).

Encephalartos inopinus R.A.Dyer

Status: **CR** A2acd; B1ab(i,ii,iv,v)+2ab(i,ii,iv,v); C1+2a(i)

J.S. Donaldson

Distribution: LM. Northern Limpopo and southern Mpumalanga.

Habitat: Shallow soils on steep, rocky slopes and gorges, restricted to dolomite.

Rationale: EOO 50 km^2, AOO 7 km^2. This species is popular with collectors and has declined by over 80% over the past 30 years. Individuals occur as small fragmented subpopulations. Conservation officials recorded 677 plants in 1992 and only 81 in 2004. Subsequent ground surveys indicate further decline and even possible extinction in the wild.

Encephalartos laevifolius Stapf & Burtt Davy **Plate 4**

Status: **CR** A2acde

J.S. Donaldson

Distribution: EC KZN LM MP. Restricted to high mountain peaks in eastern Mpumalanga and parts of Swaziland. Locally extinct in Limpopo, KwaZulu-Natal and Pondoland.

Habitat: Steep, rocky slopes in mistbelt grassland, 1 300–1 500 m.

Rationale: Subpopulations across the range have declined substantially. Dramatic declines have been recorded at Kaapsehoop, all subpopulations in Limpopo Province are now extinct, and the subpopulation on Mariepskop is virtually extinct. Where it has been monitored, decline has exceeded 80%. All subpopulations are also affected by a fusarium fungus that attacks the cones, preventing the production of viable seeds.

Encephalartos lanatus Stapf & Burtt Davy **Plate 4**

Status: **VU** B1ab(iii)+2ab(iii)

J.S. Donaldson

Distribution: G MP. Gauteng and eastern Mpumalanga.

Habitat: Sheltered, wooded ravines in sandstone ridges, 1 200–1 500 m.

Rationale: EOO 1 100 km^2, AOO 100 km^2. Declining because of habitat destruction at two known locations, but other locations not currently threatened. Subpopulations are severely fragmented.

Encephalartos latifrons Lehm. **Plate 3**

Status: **CR** A2ad; B2ab(ii,iii,v); C1+2a(i)

J.S. Donaldson

Distribution: EC. Albany and Bathurst districts.

Habitat: Rocky outcrops and slopes in thicket as well as open grassland.

Rationale: EOO 350 km^2, AOO 10 km^2. Now comprises several small subpopulations and is extremely fragmented, resulting in no natural seed set. However, individuals are being hand-pollinated and successful seed set has been observed. Based on the number of mature (wild-collected) plants in private collections, the population has declined by > 80% over the past 50 years and continues to decline. Only ± 70 mature individuals remain in the wild.

Encephalartos lebomboensis I.Verd. **Plate 4**

Status: **EN** A2acd; B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

J.S. Donaldson

Distribution: KZN MP. Lebombo Mountains of southern Mpumalanga, Swaziland and Mozambique.

Habitat: Cliffs and rocky ravines in savanna and grassland.

Rationale: The exact status of *E. lebomboensis* depends on how the species is defined. Some sources regard only the populations at Mananga and northern Swaziland as true *E. lebomboensis*, in which case it may qualify as CR. If populations in northern KZN are included, the species is less threatened. The current assessment is based on the wider distribution (EOO 450 km^2). Some subpopulations have declined substantially because of collecting (e.g. Mananga) and, based on these subpopulations, it is estimated that overall decline exceeds 50%. The number of locations is taken here to be fewer than five, taking sites such as Mananga, Piet Retief and northern Swaziland as individual locations.

Encephalartos lehmannii Lehm.

Status: **NT** B1ab(v)

J.S. Donaldson

Distribution: EC WC. Western and Eastern Cape dry interior.

Habitat: Arid, low, succulent shrubland on rocky ridges and slopes.

Rationale: EOO 12 000 km^2, but known from 10–20 locations. Continuing decline due to harvesting for horticultural and medicinal purposes, drought, poor reproduction and damage by porcupines.

Encephalartos longifolius (Jacq.) Lehm. **Plate 4**

Status: **NT** B1ab(v); C1

J.S. Donaldson

Distribution: EC. Kouga Mountains to Grahamstown.

Habitat: Steep rocky slopes in dense thicket.

Rationale: EOO 7 000 km^2. Known from more than 10 locations. Population size 7 000–15 000 individuals, but current rate of decline unknown, uncertain if it exceeds 10%. It continues to decline because of collecting.

Encephalartos middelburgensis Vorster, Robbertse & S.van der Westh.

Status: **CR** A2acd; C1

J.S. Donaldson

Distribution: G MP. Witbank and Middelburg.

Habitat: Open grasslands and in sheltered valleys.

Rationale: Recent surveys by conservation officials indicate the overall population is ± 120 individuals.

Subpopulations have continued to decline owing to illegal collecting and some are also affected by disease. Overall decline over the past three generations (90 years) exceeds 80%. Surveys of seed set and pollinator abundance also indicate that several subpopulations are not producing viable seed.

Encephalartos msinganus Vorster

Status: **CR** B1ab(iii,v)+2ab(iii,v); C1+2a(ii)

J.S. Donaldson

[e]**Distribution:** KZN. Msinga.

Habitat: Grasslands, occurs on steep, north-facing slopes, usually among boulders.

Rationale: EOO 2 km^2, AOO 0.5 km^2. Known from a single small location and recorded as declining by Scott-Shaw (1999). There are also less than 250 plants in the wild and most of the plants occur in one subpopulation. Based on general illegal trade in rare cycads, it is estimated that over 25% of the remaining plants could be removed within the next 30 years.

Encephalartos natalensis R.A.Dyer & I.Verd.

Plate 3

Status: **NT** A2ad

J.S. Donaldson

[e]**Distribution:** EC KZN. Northern Eastern Cape and KwaZulu-Natal as far north as Vryheid.

Habitat: Cliffs, either hot, dry slopes or cool, south-facing, often forested slopes.

Rationale: There is substantial population decline, estimated to be close to 30%. The subpopulation at the type locality is on the verge of extinction and a subpopulation at Hopewell has been devastated by harvesting for muthi to the extent that no adult plants survive.

Encephalartos ngoyanus I.Verd.

Status: **VU** A4acd; C1

J.S. Donaldson

Distribution: KZN. Lebombo Mountains in Swaziland and Mozambique. An isolated subpopulation occurs in central KwaZulu-Natal.

Habitat: Open grassland and forest margins, often among boulders.

Rationale: Subpopulations have declined over the past 30 years and are projected to continue declining as a result of harvesting for private collections and local use. Past decline is suspected to be over 20% and future decline is likely to exceed 10% over the next generation (30 years). It is apparently extremely difficult to find at the type locality near Ngoye Forest. Only ± 5 000 mature individuals are estimated to remain in the wild.

Encephalartos nubimontanus P.J.H.Hurter

Status: **EW**

J.S. Donaldson

[e]**Distribution:** LM. Formerly occurred in the mountains north of Penge.

Habitat: Steep cliffs in low open woodland.

Rationale: Surveys conducted in Limpopo Province show a decline from 66 plants in the 1990s to eight plants in 2001 and no recorded plants in 2004. As with other cycad species in Limpopo Province, it was mostly affected by illegal collecting.

Encephalartos paucidentatus Stapf & Burtt Davy

Plate 3

Status: **VU** A2acd

J.S. Donaldson

Distribution: MP. Barberton and Swaziland.

Habitat: Forest, occurs on steep rocky slopes and alongside streams in deep gorges.

Rationale: Although once regarded as relatively abundant, subpopulations have declined across its range. The full extent of decline is unknown, but it has been substantial in some subpopulations as a result of harvesting for horticultural purposes. Afforestation has also led to habitat loss in the past. Overall population decline is suspected to exceed 30%.

Encephalartos princeps R.A.Dyer

Status: **VU** A4acd; C1

J.D. Bosenberg

[e]**Distribution:** EC. Great Kei River catchment.

Habitat: Dolerite cliffs and rocky outcrops along river valleys.

Rationale: Subpopulations have declined as a result of collecting, overgrazing by livestock and possibly heavy infestation of the invasive alien *Lantana camara*. A well-known cluster of plants near the Kei Cuttings was damaged by collectors who had sawed off the large stems. Only ± 5 000 mature individuals are estimated to remain in the wild. Past decline and projected future decline over three generations (90 years) exceed 30%.

Encephalartos senticosus Vorster

Plate 3

Status: **VU** A2acd

J.D. Bosenberg

Distribution: KZN. Lebombo Mountains, northern KwaZulu-Natal and Swaziland.

Habitat: Rocky slopes and cliffs in dry shrubland.

Rationale: Estimated to have declined by at least 30% over the last 90 years (generation length estimated to be 30 years) as a result of harvesting for medicinal and horticultural purposes.

Encephalartos trispinosus (Hook.) R.A.Dyer

Status: **VU** A4cd; C1+2a(i)

J.S. Donaldson

[e]**Distribution:** EC. Albany, Bathurst, Fort Beaufort and Peddie districts.

Habitat: Arid, low, succulent shrubland on rocky ridges and slopes.

Rationale: Decline is expected to exceed 10% over the next 30–90 years. There are less than 1 000 mature plants in each subpopulation. Subpopulations have declined in the Bushmans and Kariega River basins because of collecting and land use and, in the Helspoort area northwest of Grahamstown, owing to heavy grazing. Based on populations monitored since 1988, the continuing decline is estimated to exceed 30%.

Encephalartos woodii Sander

Plate 3

Status: **EW**

J.S. Donaldson

[e]**Distribution:** KZN. Ngoye Forest.

Habitat: Forest.

Rationale: The species was described from a single individual comprising several stems. The last stems were removed from the wild in the early 20th century as they were being badly affected by harvesting for medicinal bark.

Plate 3



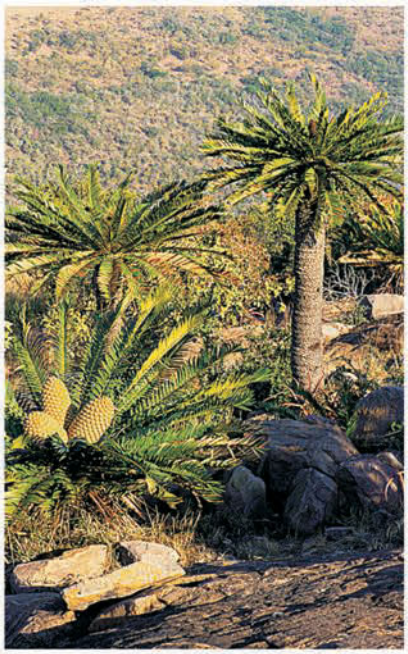
J.S. Donaldson

Encephalartos woodii (male) EW



S.P. Fourie

Encephalartos paucidentatus VU



J.S. Donaldson

Encephalartos senticosus VU



J.S. Donaldson

Stangeria eriopus VU



J.S. Donaldson

Encephalartos latifrons CR



J.S. Donaldson

Encephalartos natalensis (male) NT



J.S. Donaldson

Encephalartos friderici-guilielmi (female) VU

Plate 4



J.S. Donaldson

Encephalartos laevifolius CR



J.S. Donaldson

Encephalartos altensteinii VU



C. Paterson-Jones

Encephalartos longifolius NT



J.S. Donaldson

Encephalartos lebomboensis EN



J.S. Donaldson

Encephalartos lanatus VU



S.P. Fourie

Encephalartos eugene-maraisii EN



M. Lötter

Encephalartos heenanii CR

5.3 ANGIOSPERMS: MONOCOTYLEDONS

AGAPANTHACEAE

Agapanthus L'Hér.

Agapanthus africanus (L.) Hoffmanns. subsp. **walshii** (L.Bolus) Zonneveld & G.D.Duncan

Status: **EN** B1ab(ii,iii); C1

G.D. Duncan & D. Pillay

e**Distribution:** WC. Elgin Valley.

Habitat: Rocky sandstone slopes.

Rationale: Known from a restricted range (35 km^2) in the Elgin Valley, recorded from fewer than five locations, with continuing decline of the largest subpopulation occurring as a result of informal settlement expansion.

Agapanthus coddii F.M.Leight.

Status: **Rare**

D. Pillay

e**Distribution:** LM. Western Waterberg.

Habitat: Montane grassland, found in permanently moist seepage areas below cliffs.

Rationale: A range-restricted species (EOO 160 km^2). The habitat is inaccessible and mostly protected within private conservancies and the Marakele National Park. This species is not considered threatened.

ALLIACEAE

Tulbaghia L.

Tulbaghia coddii Vosa & Burb.

Status: **VU** D2

J.E. Victor

e**Distribution:** MP. Roossenekal to Lydenburg.

Habitat: Northern Escarpment Dolomite Grassland.

Rationale: Known from three locations in an area severely affected by forestry in the past. Expansion of forestry lands has halted but the species remains potentially threatened by grazing livestock and housing development.

F **Tulbaghia cominsii** Vosa

Status: **VU** D2

J.E. Victor & A.P. Dold

e**Distribution:** EC. King William's Town district.

Habitat: Buffels Thicket.

Rationale: Known from a small area around King William's Town and Buffalo River, from two locations where it is potentially threatened by invasive alien animals (naturalised pigs).

AMARYLLIDACEAE

Amaryllis L.

F **Amaryllis paradisicola** Snijman **Plate 5**

Status: **VU** D1+2

D.A. Snijman, J.E. Victor & D. Raimondo

e**Distribution:** NC. Richtersveld.

Habitat: Shaded quartzite cliffs.

Rationale: An extremely rare species, known from one location with less than 1 000 individuals.

Apodolirion Baker

F **Apodolirion amyanum** D.Müll.-Doblies

Status: **EN** B1ab(i,ii,iii)

A.P. Dold & J.E. Victor

e**Distribution:** EC. Grahamstown.

Habitat: Margin of thicket along quartz outcrops.

Rationale: Restricted to a small area in the Grahamstown district (EOO < 500 km^2), known from fewer than five locations, with ongoing loss to urban expansion.

Apodolirion bolusii Baker

Status: **DD**

D.A. Snijman & J.E. Victor

e**Distribution:** EC. Valley of Desolation, Graaff-Reinet.

Habitat: Karroid shrubland or in subtropical thicket on shale-derived soils.

Rationale: Known from the type specimen, collected in the Graaff-Reinet area and not recorded since. This species is likely to be extremely rare, it is not known whether it is declining or not.

F **Apodolirion cedarbergense** D.Müll.-Doblies

Status: **Rare**

D.A. Snijman & J.E. Victor

e**Distribution:** WC. Northern Cederberg.

Habitat: On middle slopes in sandstone-derived sand.

Rationale: A range-restricted species (EOO < 500 km^2) protected within the Cederberg Wilderness Area where it is not threatened.

F **Apodolirion macowanii** Baker

Status: **VU** A3c; B1ab(i,ii,iii,iv,v)

A.P. Dold, D.A. Snijman, D. Raimondo & J.E. Victor

e**Distribution:** EC. Fish River to Jeffreys Bay.

Habitat: Heavy clay soils in renosterveld or valley bushveld.

Rationale: Known from widely scattered locations between the Fish River Valley and Jeffreys Bay. Of the six known locations, two have already been lost to urban expansion in Port Elizabeth. Two more subpopulations will be severely affected, with 80% of their individuals and habitat lost because of urban and industrial development, which is planned to take place over the next 10 years at Papiesfontein and Coega. The future loss is estimated to result in a 33% decline.

Boophone Herb.

F **Boophone disticha** (L.f.) Herb.

Status: **Declining**

V.L. Williams, D. Raimondo, V.J. Brueton, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya

Distribution: EC FS G KZN LM MP NC NW WC. Throughout South Africa and up to Uganda.

Habitat: Dry grassland and rocky areas.

Rationale: Species assessed as Declining in South Africa because of habitat loss in KwaZulu-Natal and Gauteng Provinces and because trade volumes suggest unsustainable harvesting, especially because large, reproductive individuals are being removed. The species is, however, long-lived, widely distributed and can recolonise new sites because of its tumbleweed-like inflorescence.

Brunsvigia Heist.

[F] **Brunsvigia elandsmontana** Snijman **Plate 5**

Status: **CR** B1ab(v)

D.A. Snijman & D. Raimondo

[e]**Distribution**: WC. Elandsberg.

Habitat: Pebbly soils on flats.

Rationale: Known from one location on transition soils between sandstone and clay. Most of the similar surrounding habitat has been transformed by wheat cultivation over the past 70 years. It is known from less than 700 plants and is threatened by grazing by game.

Brunsvigia herrei F.M.Leight. ex W.F.Barker

Status: **VU** B1ab(iii,v)

D.A. Snijman & D. Raimondo

Distribution: NC. Southern Namibia to northern Namaqualand.

Habitat: Succulent karoo shrubland, granitic soils on flats and sometimes in deposits of fairly large stones.

Rationale: Known from fewer than 10 locations in South Africa, with continuing degradation of habitat as a result of overgrazing by livestock. A few more locations exist in southern Namibia.

Brunsvigia josephinae (Redouté) Ker Gawl.

Status: **VU** A2c; C2a(i)

D.A. Snijman & D. Raimondo

[e]**Distribution**: EC NC WC. Nieuwoudtville to Baviaanskloof.

Habitat: Heavy clay soils.

Rationale: This long-lived bulb species occurs as widely scattered subpopulations in lowland areas that are subject to continued habitat loss to agriculture (30% of habitat has been lost over the past 70 years). There are 18 recorded subpopulations (based on collections in SANBI herbaria) and we estimate that a further 70 unrecorded subpopulations may exist. All subpopulations consist of less than 50 adult plants and are declining as a result of ongoing collecting for medicinal purposes.

Brunsvigia litoralis R.A.Dyer

Status: **EN** B2ab(iii,v)

D.A. Snijman, W. Berrington & J.E. Victor

[e]**Distribution**: EC WC. Great Brak River to Port Elizabeth.

Habitat: Coastal.

Rationale: Occurs as small, severely fragmented subpopulations and is restricted to coastal flats. The total area of available habitat is < 250 km^2. Continuing decline due to habitat loss for coastal development.

Brunsvigia pulchra (W.F.Barker) D. & U.Müll.-Doblies

Status: **Rare**

D.A. Snijman & J.E. Victor

[e]**Distribution**: NC. Kamiesberg to Steinkopf.

Habitat: Granitic soils in either mountain renosterveld or Namaqualand Broken Veld.

Rationale: A northern Namaqualand endemic known from eight subpopulations and restricted to elevated slopes. Not threatened.

[F] **Brunsvigia radula** (Jacq.) Aiton

Status: **VU** C2a(i)

D.A. Snijman & D. Raimondo

[e]**Distribution**: NC WC. Knersvlakte to the Kamiesberg.

Habitat: Gravel flats and dolomite outcrops.

Rationale: Occurs as small subpopulations (less than 1 000 individuals) and the total population is suspected to be less than 10 000. It has lost habitat to mining of dolomite ridges, and is currently threatened by harvesting for horticultural purposes as well as potentially by future mining activities.

Brunsvigia undulata F.M.Leight.

Status: **Rare**

D.A. Snijman & J.E. Victor

[e]**Distribution**: KZN. Mahwaqa Mountain and south of Estcourt.

Habitat: Grassland near exposed rocks.

Rationale: A sparsely distributed habitat specialist known from six herbarium collecting sites. No known threats.

Clivia Lindl.

Clivia caulescens R.A.Dyer **Plate 6**

Status: **NT** A3d

V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya

Distribution: LM MP. Limpopo Province to Swaziland.

Habitat: Forest patches and forest margins.

Rationale: The population is expected to decline by 25% over the next 90 years (generation length suspected to be 30 years) owing to future threats that include persistent and increased harvesting pressures from both the medicinal plant and horticultural trades.

Clivia gardenii Hook.

Status: **VU** A2abcd; B1ab(ii,iv,v)

V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya

Distribution: KZN. Ngome Forest to KwaZulu-Natal Midlands.

Habitat: Forest undergrowth.

Rationale: EOO 6 900 km^2. Occurring at fewer than 10 locations. It has declined at least 30% over the last 90 years (generation length 30 years) as a result of harvesting for the medicinal plant and horticultural trades as well as some habitat loss to commercial forest plantations, crop cultivation and urban development. The number of mature individuals continues to decline because of harvesting.

Clivia miniata (Lindl.) Regel var. **miniata**

Status: **VU** A2abcd

V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya

Distribution: EC KZN MP. Barberton to Kei Mouth, also in Swaziland.

Habitat: Scarp, mistbelt and coastal riverine forests, in loose rocky habitats in light or partial shade, 100–1 400 m.

Rationale: The population has declined at least 40% over the last 90 years (generation length 30 years) because of harvesting for the medicinal plant and horticultural trades as well as some habitat loss to commercial forest plantations, crop cultivation and urban development.

[F] **Clivia mirabilis** Rourke **Plate 6**

Status: **VU** D2

D.A. Snijman & J.E. Victor

[e]**Distribution**: NC. Nieuwoudtville.

Habitat: Light shade in scrub forest.

Rationale: Known from two locations on the Bokkeveld

plateau. Potentially threatened by illegal harvesting for horticultural purposes and genetic pollution as a result of *Clivia* breeders hybridising plants in the wild.

Clivia nobilis Lindl. **Plate 6**

Status: **VU** A2cd

V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter, A.M. Ngwenya, J.P. Rourke, D.A. Snijman, A.P. Dold & J.E. Victor

[e]**Distribution:** EC. Tootabie Forest Reserve and Bushmans River Mouth to Qora Mouth.

Habitat: Coastal and inland forest patches below 600 m.

Rationale: The population has declined by at least 30% over the last 120 years (generation length 40 years) because of harvesting for the medicinal plant trade, horticultural acquisitions and some habitat destruction caused by coastal development.

[F] **Clivia robusta** B.G.Murray, Ran, De Lange, Hammett, Truter & Swanevelder

Status: **VU** A2cd; B1ab(ii,iii,v)

V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter, A.M. Ngwenya, J.E. Victor & A.P. Dold

[e]**Distribution:** EC KZN. Pondoland, Port St Johns to the Mzimkhulu River north of Oribi Gorge.

Habitat: Afromontane forest, 0–500 m.

Rationale: EOO 3 100 km^2. The number of locations is suspected to be fewer than 10 based on areas accessible to harvesters. There has also been an estimated decline of 30% over the last 90 years (three generations) as a result of harvesting for the medicinal plant trade.

Crinum L.

Crinum acaule Baker

Status: **NT** B1ab(ii,iii,iv,v)

R. Scott-Shaw, D. Raimondo & J.E. Victor

Distribution: KZN. Eastern Maputaland and KwaZulu-Natal north of the Umfolozi River to southern Mozambique.

Habitat: Coastal grassland on arid, sandy flats.

Rationale: Suspected to occur in less than 20 locations in South Africa. This Maputaland endemic has experienced significant habitat loss to cashew nut and forestry plantations.

[F] **Crinum bulbispermum** (Burm.f.) Milne-Redh. & Schweick.

Status: **Declining**

V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter, A.M. Ngwenya, V.J. Brueton & L. Mills

Distribution: FS G KZN MP NC NW. Northern Cape eastwards to Mpumalanga and KwaZulu-Natal.

Habitat: Near rivers, streams, seasonal pans and in damp depressions.

Rationale: Localised declines in subpopulations have been observed for this species. It is a long-lived bulb and is regularly found in medicinal plant markets; harvesting is probably causing a continuing decline. However, it is still common enough to obviate listing as NT.

Crinum campanulatum Herb.

Status: **NT** B1a

A.P. Dold, D.A. Snijman & J.E. Victor

[e]**Distribution:** EC. Albany district, between Alexandria, Grahamstown, Bathurst and East London.

Habitat: Seasonal vleis.

Rationale: It has a restricted range (EOO 4 600 km^2) and is known from 12 small, severely fragmented subpopulations. It is not declining but is potentially threatened by water pollution.

Crinum lineare L.f.

Status: **VU** B1ab(ii,iii,iv,v)

A.P. Dold, W. Berrington, D.A. Snijman, D. Raimondo & J.E. Victor

[e]**Distribution:** EC. Port Elizabeth to Peddie.

Habitat: Coastal forelands.

Rationale: EOO 4 600 km^2. Occurring in small, severely fragmented subpopulations and has lost habitat, subpopulations and individuals because of agricultural expansion and the urban expansion of Port Elizabeth. Ongoing degradation of remaining habitat is taking place as many subpopulations exist only on road verge fragments. Non-remnant locations are overgrazed by livestock.

[F] **Crinum macowanii** Baker

Status: **Declining**

V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter, A.M. Ngwenya & V.J. Brueton

Distribution: EC FS G KZN LM MP NW. Eastern Cape to Limpopo Province and from Zimbabwe to Eritrea.

Habitat: Mountain grassland and stony slopes in hard dry shale, gravelly soil or sandy flats.

Rationale: Declines have been observed for the species. As it is a long-lived bulb and is constantly appearing in the medicinal plant markets, we suspect an overall continuing decline due to harvesting. It is still common enough not to list it as NT.

[F] **Crinum moorei** Hook.f.

Status: **VU** A4de

V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter, A.M. Ngwenya, V.J. Brueton & A.P. Dold

[e]**Distribution:** EC KZN. Wild Coast and coastal KwaZulu-Natal as far north as Ngome.

Habitat: Coastal and riverine forests, scarp forest, in damp or marshy places along watercourses, never in grassland.

Rationale: It has declined by at least 20% over the past 70 years (two generations) and is expected to decline a further 10% over the next 20 years as a result of harvesting for the medicinal plant trade and predation by the amaryllis caterpillar.

[F] **Crinum stuhlmannii** Baker

Status: **Declining**

V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter, A.M. Ngwenya & V.J. Brueton

Distribution: KZN LM MP. KwaZulu-Natal, Mpumalanga, Limpopo, Swaziland and Mozambique.

Habitat: Scattered in grassland, bushveld and on sandy soils at low altitudes, in deep sand in lowveld bushveld.

Rationale: Despite the widespread distribution, some population decline is likely because very big, old bulbs

are being harvested and sold on medicinal plant markets. However, it can still be seen in a number of localities, and current levels of decline are unlikely to exceed 10% of the population.

Cyrtanthus Aiton

[F] **Cyrtanthus aureolinus** Snijman

Status: **Critically Rare**

D.A. Snijman & D. Raimondo

[e]**Distribution:** WC. Swartberg Mountains.

Habitat: Damp habitats on northern foothills, occurs on sandstone-loam interfaces that are permanently waterlogged.

Rationale: A habitat specialist known from one site. Not threatened.

Cyrtanthus brachysiphon Hilliard & B.L.Burtt

Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v)

C.R. Scott-Shaw, L. von Staden & J.E. Victor

[e]**Distribution:** KZN. Louwsburg Plateau.

Habitat: On moist cliffs and ledges along wooded watercourses and waterfalls in semishade, 1 100 m.

Rationale: A highly range-restricted species (EOO < 5 km^2) and known from only two locations. It is threatened by habitat degradation and alteration as a result of invasion by black wattles (*Acacia mearnsii*).

Cyrtanthus carneus Lindl.

Status: **VU** A2c; B1ab(iii,v); C1

D.A. Snijman, C. McMaster & D. Raimondo

[e]**Distribution:** WC. Caledon to mouth of the Breede River.

Habitat: Coastal fynbos on south-facing slopes.

Rationale: EOO 3 000 km^2. Known from nine locations. A long-lived bulb species (generation length 30 years) endemic to the Overberg region. It occurs in small, severely fragmented subpopulations and is declining owing to habitat loss to agriculture, invading alien plants and collecting for the horticultural trade. It has lost 30% of its habitat to agriculture over the past 80 years.

[F] **Cyrtanthus debilis** Snijman

Status: **Rare**

D.A. Snijman, J.H. Vlok & J.E. Victor

[e]**Distribution:** WC. Outeniqua Mountains.

Habitat: Montane fynbos on seasonally moist slopes, sandy soils.

Rationale: A range-restricted species (EOO < 120 km^2) that flowers only after fire and is therefore seldom seen. It is, however, locally common after fire. Most of the population occurs within a protected area and hence it is not considered threatened.

Cyrtanthus erubescens Killick

Status: **Rare**

J.E. Victor & C.R. Scott-Shaw

[e]**Distribution:** KZN. Central KwaZulu-Natal Drakensberg Mountains.

Habitat: Subalpine grassland in moist gullies near boulders, 2 000–2 700 m.

Rationale: A Drakensberg high-altitude endemic, known from four collections. Not threatened.

Cyrtanthus eucallus R.A.Dyer

Status: **VU** D2

M. Lötter, J.E. Burrows & L. von Staden

[e]**Distribution:** MP. Barberton.

Habitat: Wooded kloofs in moist, loose soil.

Rationale: Known from one location. It has lost habitat to afforestation. Potentially threatened by invading alien plants.

Cyrtanthus falcatus R.A.Dyer

Status: **Rare**

J.E. Victor

[e]**Distribution:** KZN. Unzinga River and Loteni River Valleys.

Habitat: Cliffs in mountain grasslands, 1 100–1 900 m.

Rationale: A Drakensberg high-altitude endemic, known from eight collecting sites. Not threatened.

Cyrtanthus flammosus Snijman & Van Jaarsv.

Status: **Critically Rare**

D.A. Snijman & J.E. Victor

[e]**Distribution:** EC. Baviaanskloof.

Habitat: Sheer, south-facing rock faces.

Rationale: Known from one site in the Baviaanskloof. Not threatened owing to the inaccessibility of its habitat.

Cyrtanthus flavus P.E.Barnes

Status: **VU** D2

A.P. Dold & J.E. Victor

[e]**Distribution:** EC. Bathurst, Trappes Valley.

Habitat: Seasonally waterlogged grassland on loose, sandy soils.

Rationale: Known from one location which is a municipal commonage. Potentially threatened by overgrazing by livestock and by invading alien plants.

Cyrtanthus guthrieae L.Bolus

Status: **CR** B1ab(iii,v)+2ab(iii,v); C2a(i)

D.A. Snijman, C. McMaster & D. Raimondo

[e]**Distribution:** WC. Bredasdorp.

Habitat: Well-drained, sandstone mountain slopes.

Rationale: Extremely localised distribution in the Bredasdorp district, known from one location (EOO and AOO < 10 km^2) and known from less than 250 mature individuals. It has lost habitat to ploughing and its habitat continues to be degraded by trampling and grazing by livestock.

Cyrtanthus herrei (F.M.Leight.) R.A.Dyer

Status: **NT** B1ab(v)

D.A. Snijman & J.E. Victor

Distribution: NC. Richtersveld and southern Namibia.

Habitat: Deeply shaded rock ledges on south-facing rocky slopes.

Rationale: Known from a restricted range (EOO 2 000 km^2) and 15 locations. The number of mature individuals continues to decline as a result of illegal collecting for the horticultural trade.

Cyrtanthus junodii P.Beauv.

Status: **VU** D1

P.J.D. Winter & D. Raimondo

[e]**Distribution:** LM. Wolkberg Mountains.

Habitat: Restricted to cliffs or very steep rock faces.

Rationale: Known from one subpopulation where there are less than 1 000 plants.

Cyrtanthus leptosiphon Snijman **Plate 5**

Status: **CR** B1ab(ii,iii,v)+2ab(ii,iii,v); C2a(i)

D.A. Snijman & J.E. Victor

[e]**Distribution:** WC. Buffeljagsrivier east of Swellendam.
Habitat: Marginal fynbos and renosterveld. Pebble-strewn loamy soils along the interface of shale and sandstone of the Table Mountain Group.
Rationale: Known from a very restricted range (EOO < 100 km^2) and three small, isolated subpopulations totalling less than 250 individuals, with no subpopulation having more than 50 individuals. Habitat loss to agriculture is ongoing, compounded by the high likelihood that it has lost its pollinator.

Cyrtanthus leucanthus Schltr. Plate 5

Status: **EN** C2a(i)
D.A. Snijman & D. Raimondo
[e]**Distribution:** WC. Rooiels to Potberg.
Habitat: Coastal fynbos at the base or on the lower parts of sandstone or shale ridges.
Rationale: A coastal species with highly localised subpopulations that have less than 40 individuals per subpopulation. Known from 14 subpopulations but all are threatened by invading alien plants and more than half are also threatened by coastal development.

[F] **Cyrtanthus mackenii** Hook.f. subsp. **cooperi** (Baker) Snijman

Status: **NT** A2c
D.A. Snijman & D. Raimondo
[e]**Distribution:** EC KZN. Below the Amathole Mountains around King William's Town and Stutterheim and near East London.
Habitat: Seasonally damp places in open grasslands.
Rationale: A widespread taxon (EOO 36 000 km^2) occurring in the moist, subalpine grasslands of the Eastern Cape. Around 15% of the grassland within the range of this taxon has been irreversibly transformed to crops and plantations and a further 30% has been severely degraded as a result of overgrazing. As subpopulations occur sparsely within this habitat, we suspect a 22% habitat loss over 60 years (generation length is suspected to be 20 years).

[F] **Cyrtanthus macmasteri** Snijman

Status: **VU** D2
J.E. Victor & C. McMaster
[e]**Distribution:** EC. Kei River Valley.
Habitat: Areas where valley bushveld gives way to sourveld, among sandstone rocks on steep east- and south-facing riverbanks, 640–1 100 m.
Rationale: Known from two locations. Potentially threatened by overgrazing by livestock.

Cyrtanthus nutans R.A.Dyer

Status: **VU** B1ab(iii)
C.R. Scott-Shaw, D.A. Snijman & D. Raimondo
Distribution: KZN. Dundee and western Swaziland.
Habitat: Sour grassland, well-drained, open areas on margins of vleis.
Rationale: Disjunct distribution between KwaZulu-Natal Midlands and Swaziland resulting in an EOO 9 400 km^2, but known from only five locations. There is ongoing habitat loss as a result of commercial forest plantations, invading alien plants and overgrazing by livestock.

[F] **Cyrtanthus obliquus** (L.f.) Aiton

Status: **Declining**
D.A. Snijman & J.E. Victor
[e]**Distribution:** EC KZN. KwaZulu-Natal Midlands and southeastern portion of the Eastern Cape.
Habitat: Exposed rocky outcrops on stony slopes in grassland or grassy fynbos.
Rationale: Widespread but declining as a result of harvesting for traditional medicine, although estimates of the extent of the decline are not available. This species is still common and is not yet regarded as threatened. Monitoring is recommended.

[F] **Cyrtanthus ochroleucus** (Herb.) Burch. ex Steud. Plate 5

Status: **VU** D1
D.A. Snijman & D. Raimondo
[e]**Distribution:** WC. Garcia's Pass in the Langeberg to Corente River near Still Bay.
Habitat: Open, sandy areas on rocky slopes and coastal forelands.
Rationale: Known from less than 1 000 mature individuals from six subpopulations. It has lost habitat to afforestation and agriculture. Potentially threatened by habitat degradation from encroachment by invasive alien plants.

Cyrtanthus odorus Ker Gawl.

Status: **EN** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)
J.H. Vlok, D.A. Snijman & D. Raimondo
[e]**Distribution:** WC. Langeberg near Swellendam.
Habitat: Montane fynbos, lower to middle slopes.
Rationale: EOO and AOO < 250 km^2. Four known locations continue to decline as a result of invading alien plants, afforestation and agriculture.

Cyrtanthus spiralis Burch. ex Ker Gawl.

Status: **EN** B1ab(i,ii,iii)
D.A. Snijman & J.E. Victor
[e]**Distribution:** EC. Uitenhage to Port Elizabeth.
Habitat: Flats and lower slopes in semi-arid areas.
Rationale: It has lost four of eight historical subpopulations (Despatch, Theescomb, Bethelsdorp and Redhouse) to urban expansion over the past 50 years. Loss is ongoing.

Cyrtanthus staadensis Schönland

Status: **NT** B1ab(iii)
W. Berrington, D.A. Snijman & D. Raimondo
[e]**Distribution:** EC. Gamtoos River to Grahamstown.
Habitat: Grassy fynbos on moist, rocky slopes.
Rationale: Occurs on steep slopes of mountains or river gorges. Known from eight locations, but likely to occur at a few additional locations in unexplored areas of the Van Stadens and Groot Winterhoek Mountains. Many of the river gorges that bisect the plain between the Gamtoos and Port Elizabeth are heavily infested by invasive alien plants. Subpopulations occurring within these gorges are declining because of habitat degradation.

Cyrtanthus suaveolens Schönland

Status: **EN** B1ab(i,ii,iii)
D.A. Snijman & J.E. Victor
[e]**Distribution:** EC. Amathole Mountains.
Habitat: Montane grassland.
Rationale: Known from five locations from an EOO 1 200 km^2. There is a continuing decline of habitat quality and area of occupancy as a result of afforestation.

Cyrtanthus wellandii Snijman

Status: **VU** D2
D.A. Snijman & J.E. Victor
[e]**Distribution:** EC. Kabeljous River Valley.

Habitat: Coastal renosterveld, in well-drained, loamy soils.
Rationale: Known from one location. Potentially threatened by illegal collecting for the horticultural trade.

Gethyllis L.

Gethyllis britteniana Baker subsp. **herrei** (L.Bolus) D.Müll.-Doblies

Status: **DD**D
D.A. Snijman & J.E. Victor
eDistribution: NC. Richtersveld.
Habitat: Granitic soils.
Rationale: A poorly known taxon, known only from the type specimen, apparently confined to the Richtersveld portion of the Gariep Centre. The type specimen is not available in South Africa.

Gethyllis ciliaris (Thunb.) Thunb. subsp. **ciliaris**

Status: **NT** A2ac; B1ab(ii,iii,iv,v)
D.A. Snijman & D. Raimondo
eDistribution: WC. Clanwilliam to Cape Peninsula.
Habitat: Sandy soils.
Rationale: EOO 18 800 km^2. Known from 19 locations. About 25% of locations have been lost as a result of agriculture, invading alien plants and coastal development over the past 70 years. This timeframe is less than three generations of this long-lived geophyte, and it continues to decline.

[F] **Gethyllis fimbriatula** D.Müll.-Doblies

Status: **DD**D
D.A. Snijman & J.E. Victor
eDistribution: WC. Matjiesfontein.
Habitat: Unknown.
Rationale: Known only from the type specimens, which are not located in South Africa.

[F] **Gethyllis grandiflora** L.Bolus

Status: **VU** C2a(i)
D.A. Snijman, W.R. Liltved & D. Raimondo
eDistribution: NC. Richtersveld to Komaggas.
Habitat: Sandveld.
Rationale: A northern Namaqualand endemic, suspected to occur in less than 100 subpopulations. Subpopulations are small, typically with less than 20 plants. There are a handful of large subpopulations but they never have more than 1 000 individuals. We suspect that there are less than 10 000 plants in total. There is a continuing decline as a result of harvesting for food and horticultural purposes.

[F] **Gethyllis gregoriana** D.Müll.-Doblies

Status: **Rare**
D.A. Snijman, D. Raimondo & J.E. Victor
eDistribution: NC WC. Nieuwoudtville to Biedouw Valley.
Habitat: Arid clays or sandstone-derived soils on flats.
Rationale: Known from 13 subpopulations scattered over an area of 4 000 km^2. All subpopulations consist of very few individuals. There are no significant threats to this species and only a minor historical loss due to cultivation in Nieuwoudtville.

[F] **Gethyllis hallii** D.Müll.-Doblies

Status: **Rare**
D.A. Snijman & J.E. Victor
eDistribution: NC. Bitterfontein to Nuwerus.
Habitat: Loose granitic sand in low succulent shrublands.
Rationale: Known from two sites from an area of 1 250 km^2, this species is suspected to be under-collected as plants are cryptic and seldom seen. No threats recorded.

[F] **Gethyllis kaapensis** D.Müll.-Doblies

Status: **EN** D
D.A. Snijman & D. Raimondo
eDistribution: WC. Cape Peninsula.
Habitat: Coastal fynbos, seasonally moist flats.
Rationale: A Cape Peninsula endemic, known from three subpopulations, two of which have been lost as a result of urban development. There are less than 250 plants at the remaining subpopulation in the Cape Peninsula National Park.

[F] **Gethyllis lata** L.Bolus subsp. **lata**

Status: **Rare**
D.A. Snijman & J.E. Victor
eDistribution: NC WC. Knersvlakte to Nieuwoudtville.
Habitat: Clay flats in karroid scrub.
Rationale: A rare taxon known from fewer than 10 subpopulations.

Gethyllis latifolia Masson ex Baker

Status: **CR** D
D.A. Snijman, A. Harrower & D. Raimondo
eDistribution: WC. Bitterfontein.
Habitat: Namaqualand Klipkoppe Shrubland on granitic soils.
Rationale: Known from four plants at one site.

[F] **Gethyllis longistyla** Bolus

Status: **Rare**
D.A. Snijman & J.E. Victor
eDistribution: EC. Sneeuberg, Agter Sneeuberg and Nuweveld Mountains.
Habitat: Tops of rocky, dolerite ridges.
Rationale: A rare and cryptic species known from two sites. Not threatened.

Gethyllis namaquensis (Schönland) Oberm.

Status: **VU** C2a(i)
D.A. Snijman, W.R. Liltved & D. Raimondo
Distribution: NC. Augrabies area immediately east of Port Nolloth to the Namus Mountains north of Rosh Pinah and the Aurus Mountains in southern Namibia.
Habitat: High elevations in succulent karoo shrubland.
Rationale: A northern Namaqualand and southern Namibian endemic, suspected to occur in less than 100 sites. Subpopulations are small (typically less than 20 plants). There are a few large subpopulations but they never have more than 1 000 individuals. We suspect that there are less than 10 000 plants in total. There is a continuing decline as a result of harvesting for food and horticultural purposes.

[F] **Gethyllis pectinata** D.Müll.-Doblies

Status: **VU** D2
D.A. Snijman & J.E. Victor
eDistribution: NC. Nieuwoudtville to Calvinia.
Habitat: Clay soils amongst sparse karroid vegetation.
Rationale: One known location is potentially threatened by overgrazing and illegal bulb collecting.

Haemanthus L.

Haemanthus amarylloides Jacq. subsp. **amarylloides**

Status: **NT** B1ab(ii,iii,v)
D.A. Snijman & J.E. Victor

e**Distribution**: NC WC. Garies to Clanwilliam.

Habitat: Granite- or Table Mountain Sandstone-derived soils, usually in seasonally wet depressions or along watercourses.

Rationale: Occurs as localised subpopulations, known from 15 locations. Declining as a result of agriculture, urban expansion and overgrazing and trampling by livestock.

Haemanthus amarylloides Jacq. subsp. **toximontanus** Snijman **Plate 6**

Status: **EN** B1ab(iii,v)
D.A. Snijman & J.E. Victor

e**Distribution**: WC. Gifberg.

Habitat: Dry montane fynbos of the Table Mountain Sandstone Group, restricted to seasonally wet rock ledges.

Rationale: Known from five locations in a restricted area (EOO 625 km^2). Threatened by road-scraping in the past, currently threatened by harvesting for horticultural purposes and altered drainage as a result of surrounding agricultural activities.

Haemanthus canaliculatus Levyns **Plate 6**

Status: **EN** B1ab(iii,v); C2a(i)
D.A. Snijman, D. Raimondo & J.E. Victor

e**Distribution**: WC. Rooiels to Betty's Bay.

Habitat: Marshy coastal lowlands.

Rationale: A range-restricted species (EOO < 50 km^2), known from three locations with less than 1 000 mature individuals in the total population. Declining as a result of coastal housing developments, a deleterious fire regime and harvesting for horticultural purposes.

Haemanthus dasyphyllus Snijman

Status: **Rare**
D.A. Snijman & J.E. Victor

e**Distribution**: NC. Kamiesberg to Loeriesfontein.

Habitat: Rock crevices on shale or granite outcrops.

Rationale: Known from four, highly localised subpopulations. Not threatened because of the inaccessibility of its habitat.

F **Haemanthus deformis** Hook.f.

Status: **NT** B1ab(v)
V.L. Williams & N.R. Crouch

e**Distribution**: EC KZN. Mthatha to Durban.

Habitat: Forest margins, sheltered sites under bushes or on moist rocky banks.

Rationale: EOO of 17 900 km^2. Severely fragmented and never abundant. Species known to occur only in forest patches close to the coast, therefore AOO likely be to restricted. The population is declining as a result of harvesting for the local medicinal plant trade.

Haemanthus graniticus Snijman

Status: **EN** B1ab(i,ii,iii,v)
D.A. Snijman & J.E. Victor

e**Distribution**: NC. Springbok to Kamiesberg.

Habitat: Namaqualand Klipkoppe Shrubland or Namaqualand Granite Renosterveld.

Rationale: Known from three locations within an area of 2 500 km^2, declining because of habitat loss to ploughing for crops and illegal collecting for the horticultural trade.

Haemanthus lanceifolius Jacq.

Status: **VU** A2ac
D.A. Snijman & D. Raimondo

e**Distribution**: NC WC. Vanrhynsdorp to Calvinia.

Habitat: Succulent karoo, in either windblown sand or stony soils thought to be rich in lime, overlying dolomite rocks.

Rationale: Known from four locations from an area of 750 km^2. This species is a long-lived geophyte (generation length 20 years) that has lost a minimum of 30% of its habitat to crop cultivation over the past 60 years.

Haemanthus namaquensis R.A.Dyer

Status: **Rare**
D.A. Snijman & D. Raimondo

Distribution: NC. Southern Namibia to Kharkams in Namaqualand.

Habitat: Sheltered habitats under the protection of low shrubs or wedged between granite rocks.

Rationale: Known from eight subpopulations in Namaqualand, all subpopulations are localised, with few individuals, and are scattered over a relatively wide range, EOO 4 000 km^2.

Haemanthus nortieri Isaac **Plate 6**

Status: **EN** B1ab(ii,iii,v)
D.A. Snijman & J.E. Victor

e**Distribution**: WC. Nardous Mountain.

Habitat: Seasonally waterlogged seepage areas amongst flat sandstone rocks.

Rationale: Known from three locations from a highly restricted area, EOO < 100 km^2. Declining as a result of grazing and trampling by livestock, road construction, harvesting for horticultural purposes, and invading alien plants.

Haemanthus pauculifolius Snijman & A.E.van Wyk

Status: **Rare**
D.A. Snijman & J.E. Victor

Distribution: KZN MP. Middle Pongolo River catchment and Blydepoort to Pigg's Peak.

Habitat: Savanna and cliffs in forested kloofs, on humus-rich ledges.

Rationale: Known from six sites. Not threatened because of the inaccessibility of its habitat.

Haemanthus pubescens L.f. subsp. **arenicola** Snijman

Status: **Rare**
D.A. Snijman & J.E. Victor

Distribution: NC. Southern Namibia to the Groen River in Namaqualand.

Habitat: Succulent Karoo shrubland and West Coast strandveld, in deep, windblown, red coastal sands.

Rationale: Recorded from eight subpopulations, occurs as isolated individuals that are widely scattered within suitable habitat. Not threatened.

Haemanthus pubescens L.f. subsp. **leipoldtii** Snijman **Plate 6**

Status: **VU** D2
D.A. Snijman & J.E. Victor

[e]**Distribution:** WC. Vanrhynsdorp to Klawer.
Habitat: Mixture of sand plain fynbos, succulent karoo and strandveld, in areas with an accumulation of loose, windblown sand.
Rationale: Known from three locations, with partial habitat loss at two of these locations due to crop cultivation and infrastructure development. Although not declining currently, this taxon remains potentially threatened by expanding agricultural activities along the Olifants River, driven by the introduction of irrigation schemes.

Haemanthus pumilio Jacq. Plate 6

Status: **EN** A2ab; C1
D.A. Snijman & J.E. Victor
[e]**Distribution:** WC. Stellenbosch.
Habitat: Renosterveld, in heavy soils on seasonally waterlogged clay flats.
Rationale: 66% of habitat and known subpopulations lost over the past 90 years, with at least 20% of this loss taking place over the past 60 years as a result of crop cultivation and urban development. We suspect that this bulb species is long-lived, with a generation length of 30 years. It is now known from two locations with ± 2 000 mature individuals. It is threatened by harvesting for horticultural purposes, a deleterious fire regime and predation by locusts and rodents.

Haemanthus tristis Snijman

Status: **VU** D1
D.A. Snijman & D. Raimondo
[e]**Distribution:** WC. Southeastern Tanqua Karoo.
Habitat: Flat, seasonal washes in soils derived from Ecca shales.
Rationale: Known from five sites, subpopulations consist of scattered bulbs growing in seasonal washes. Not threatened.

Hessea Herb.

Hessea cinnamomea (L'Hér.) T.Durand & Schinz Plate 7

Status: **EN** A2ac; B1ab(iii)
D.A. Snijman, J.E. Victor & D. Raimondo
[e]**Distribution:** WC. Cape Peninsula, Riverlands and Joostenberg.
Habitat: Fynbos, in seasonally waterlogged, peaty lowlands.
Rationale: EOO 2 400 km^2. Over 50% of available habitat and known subpopulations has been lost to urban expansion on the Cape Flats over the past 140 years. This timeframe is less than three generations of this long-lived bulb species (generation length estimated to be 50 years). Ongoing habitat loss due to urban growth, crop cultivation and invading alien plants continues to threaten the five remaining subpopulations.

Hessea incana Snijman

Status: **VU** D2
D.A. Snijman & D. Raimondo
[e]**Distribution:** NC. Namaqualand, Kamiesberg.
Habitat: Mixture of Kamiesberg Mountains Shrubland and Namaqualand Blomveld, on elevated sandy plains at the base of large granite domes, 1 035 m.
Rationale: A range-restricted species, known from three locations. Potentially threatened by crop cultivation and overgrazing and trampling by livestock.

Hessea mathewsii W.F.Barker Plate 7

Status: **CR** B1ab(i,ii,iii)+2ab(i,ii,iii)
D.A. Snijman & D. Raimondo
[e]**Distribution:** WC. Vredenburg and Langebaanweg.
Habitat: Coastal forelands near granite rocks or limestone outcrops in damp depressions.
Rationale: A highly range-restricted species (EOO 70 km^2), found exclusively in damp depressions (AOO < 5 km^2). Known from three severely fragmented subpopulations. Declining as a result of crop cultivation, grazing by livestock and rapid urban expansion.

Hessea pilosula D. & U.Müll.-Doblies

Status: **Rare**
D.A. Snijman & J.E. Victor
[e]**Distribution:** NC. Steinkopf to Hondeklip Bay.
Habitat: Seasonal washes in deep, loose sand and also recorded on deep, red coastal sands.
Rationale: A habitat specialist with no known threats.

Hessea pulcherrima (D. & U.Müll.-Doblies) Snijman

Status: **Rare**
D.A. Snijman & J.E. Victor
[e]**Distribution:** NC. Bokkeveld Escarpment.
Habitat: Seasonally damp places in heavy clay soils.
Rationale: Known from nine collecting sites. Although it has lost habitat to wheat cultivation, the clay soils on which it occurs are no longer being converted to wheat.

Hessea stenosiphon (Snijman) D. & U.Müll.-Doblies

Status: **Rare**
D.A. Snijman, D. Raimondo & J.E. Victor
[e]**Distribution:** NC. Namaqualand, Kamiesberg.
Habitat: Loamy soils in seasonally moist crevices and gullies on large granite outcrops.
Rationale: Recorded from only five sites. Not threatened because of the inaccessibility of its habitat.

[F] **Hessea tenuipedicellata** Snijman

Status: **VU** D2
D.A. Snijman & J.E. Victor
[e]**Distribution:** WC. Northern Knersvlakte.
Habitat: Soil pockets on granite domes.
Rationale: Known from one location. Potentially threatened by damage from porcupines digging in search of other species.

Hessea undosa Snijman Plate 7

Status: **VU** D2
D.A. Snijman & J.E. Victor
[e]**Distribution:** WC. Gifberg and Matsikamma Mountains.
Habitat: Open, dry montane fynbos, in wet areas around sheets of Table Mountain Sandstone, 600 m.
Rationale: Known from three locations. Its seasonally waterlogged habitat is potentially threatened by drought and ploughing of surrounding areas for rooibos plantations.

Namaquanula U. & D.Müll.-Doblies

Namaquanula bruce-bayeri D. & U.Müll.-Doblies

Status: **VU** B1ab(ii,iii)
D.A. Snijman & J.E. Victor
Distribution: NC. Lüderitz to Richtersveld.

Plate 5



C. Paterson-Jones

Amaryllis paradisicola VU



C. Paterson-Jones

Cyrtanthus leucanthus EN



C. Paterson-Jones

Cyrtanthus leptosiphon CR



C. Paterson-Jones

Brunsvigia elandsmontana CR



C. Paterson-Jones

Cyrtanthus ochroleucus VU



C. Paterson-Jones

Nerine pancratioides VU



M. Lötter

Nerine platypetala VU



C. Paterson-Jones

Nerine huttoniae VU

Plate 6



C. Paterson-Jones

Haemanthus amarylloides subsp. *toximontanus* EN



C. Paterson-Jones

Clivia mirabilis VU



C. Paterson-Jones

Clivia nobilis VU



C. Paterson-Jones

Haemanthus nortieri EN



M. Lötter

Clivia caulescens NT



C. Paterson-Jones

Haemanthus canaliculatus EN



C. Paterson-Jones

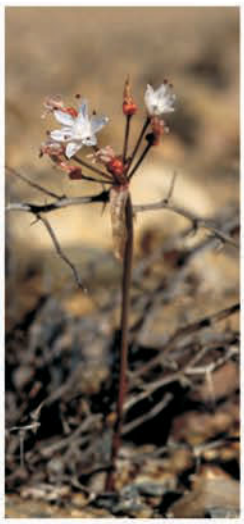
Haemanthus pubescens subsp. *leipoldtii* VU



C. Paterson-Jones

Haemanthus pumilio EN

Plate 7


C. Paterson-Jones

Strumaria bidentata EN


C. Paterson-Jones

Hessea cinnamomea EN


C. Paterson-Jones

Strumaria salteri VU


C. Paterson-Jones

Strumaria leipoldtii CR


C. Paterson-Jones

Hessea mathewsii CR


C. Paterson-Jones

Strumaria unguiculata VU

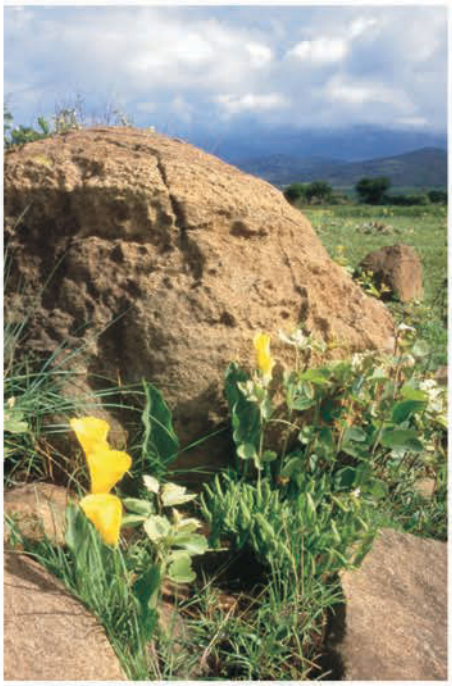

C. Paterson-Jones

Strumaria chaplinii EN


C. Paterson-Jones

Hessea undosa VU

Plate 8



C. Paterson-Jones

Zantedeschia pentlandii (habitat) VU



C. Paterson-Jones

Zantedeschia pentlandii VU



D. Raimondo

Zantedeschia jucunda VU



C. Paterson-Jones

Zantedeschia odorata Rare

Habitat: Sandy and gravelly flats.
Rationale: Known from eight locations in an area of 8 000 km^2. Subpopulations are always small and the total number of mature individuals is estimated to be less than 1 000. Continuing decline of habitat occurs as a result of mining, crop cultivation and overgrazing.

Nerine Herb.

Nerine bowdenii Watson
Status: **Rare**
J.E. Victor & C.R. Scott-Shaw
[e]**Distribution:** EC KZN. Southern Drakensberg Mountains to King William's Town.
Habitat: Subalpine grassland and Drakensberg-Amathole Afromontane Fynbos, in cool moist pockets of cliffs and steep slopes where deep humic soils accumulate.
Rationale: Known from nine subpopulations, all of which have low numbers of individuals. Not threatened because of the inaccessibility of its habitat.

Nerine gibsonii Douglas
Status: **VU** D2
A.P. Dold & J.E. Victor
[e]**Distribution:** EC. Cala and Engcobo.
Habitat: High-altitude grasslands, wedged between rocks.
Rationale: Four known locations are potentially threatened by overgrazing by livestock.

Nerine gracilis R.A.Dyer
Status: **NT** A2ac; B1ab(iii)
J.E. Victor & D. Raimondo
[e]**Distribution:** G MP NW. Belfast and Ermelo to Wolmaransstad.
Habitat: Undulating grasslands in damp areas.
Rationale: Relatively widespread, occurring in an area of 20 000 km^2 and known from 15 locations. It has lost habitat to crop cultivation in the past. It is currently threatened by ongoing degradation and habitat loss due to overgrazing and urban development.

Nerine huttoniae Schönland **Plate 5**
Status: **VU** B1ab(iii,v)
A.P. Dold & J.E. Victor
[e]**Distribution:** EC. Great Fish River Floodplain.
Habitat: Floodplains, in sandy alluvial flats.
Rationale: Known from fewer than 10 locations from an area of under 10 000 km^2. Its habitat is continuously being degraded as a result of conversion to crop plantations, as well as overgrazing by livestock on land used for subsistence farming.

Nerine marincowitzii Snijman
Status: **VU** D1+2
D.A. Snijman, D. Raimondo & J.E. Victor
[e]**Distribution:** WC. Leeu-Gamka.
Habitat: Gamka Karoo, on north-facing slopes in seasonal washes amongst chips of grey slate (shales).
Rationale: Known from one location, where 350 adult plants have been counted. The only known subpopulation is potentially threatened by scouring of its seasonal wash habitat by excessive flooding, damage by baboons, flower-picking and overgrazing and trampling by livestock.

Nerine masoniorum L.Bolus
Status: **CR** B1ab(i,ii,iii)
D.A. Snijman, A.P. Dold, D. Raimondo & J.E. Victor
[e]**Distribution:** EC. Mthatha.
Habitat: Grassland, large, exposed sheets of dolerite that receive mist from coastal plains.
Rationale: A highly localised endemic (EOO 62 km^2), known from two locations, one of which was recently lost as a result of the development of an informal settlement.

Nerine pancratioides Baker **Plate 5**
Status: **VU** B1ab(ii,iii,iv,v)
D.A. Snijman & D. Raimondo
[e]**Distribution:** EC KZN. Giant's Castle to Greytown and Kokstad.
Habitat: Wetlands in high-lying areas.
Rationale: EOO < 7 000 km^2. Occurs in small, highly isolated subpopulations in wetlands and is declining as a result of afforestation, overgrazing and trampling by livestock, and invading alien plants.

Nerine platypetala McNeil **Plate 5**
Status: **VU** B1ab(i,ii,iii,iv,v)
C.R. Scott-Shaw & J.E. Victor
[e]**Distribution:** KZN MP. Wakkerstroom to Groenvlei.
Habitat: Montane grassland, margins of permanently moist vleis and levees of riverbanks.
Rationale: Known from fewer than 10 locations (EOO < 20 000 km^2). There is a continuing decline of habitat as a result of afforestation.

Nerine pudica Hook.f.
Status: **Rare**
D.A. Snijman & J.E. Victor
[e]**Distribution:** WC. Riviersonderend Mountains.
Habitat: Montane fynbos.
Rationale: A range-restricted species known from two sites. It occurs on mountain slopes and is not threatened. This species flowers only after fire and is therefore rarely seen.

[F] **Nerine ridleyi** E.Phillips
Status: **Rare**
D.A. Snijman, D. Raimondo & R.C. Turner
[e]**Distribution:** WC. Kouebokkeveld to Hex River Mountains.
Habitat: Steep, south-facing sandstone ledges.
Rationale: A high-altitude habitat specialist with no known threats.

Strumaria Jacq. ex Willd.

Strumaria aestivalis Snijman
Status: **VU** D2
D.A. Snijman & J.E. Victor
[e]**Distribution:** NC. Loeriesfontein.
Habitat: Namaqualand Klipkoppe Shrubland, in shaded sites on south- to southeast-facing slopes or banks of seasonal streams, 950 m.
Rationale: A range-restricted species (EOO < 625 km^2) known from three locations. Potentially threatened by illegal harvesting for horticultural purposes.

Strumaria barbarae Oberm.

Status: **Rare**

D.A. Snijman & J.E. Victor

Distribution: NC. Aus in Namibia to the northern Richtersveld.

Habitat: Exposed limestone screes.

Rationale: A range-restricted habitat specialist with no known threats.

Strumaria bidentata Schinz Plate 7

Status: **EN** B1ab(iii,v)

D.A. Snijman & J.E. Victor

Distribution: NC. Mouth of the Orange River.

Habitat: Succulent karoo shrubland, in loose sand on gravel plains and sandy flats.

Rationale: Known from a highly restricted area of 225 km^2, from three locations. Severely threatened by diamond mining and overgrazing by livestock.

Strumaria chaplinii (W.F.Barker) Snijman Plate 7

Status: **EN** B1ab(iii)

D.A. Snijman, J.E. Victor & D. Raimondo

[e]**Distribution:** WC. Vredenburg to Langebaan.

Habitat: Moist patches at the base of granite domes.

Rationale: A range-restricted habitat specialist known from three locations. Experiencing continuing declines in habitat quality as a result of invasions of alien grass and eutrophication due to proximity to housing developments. Subpopulations are also potentially threatened by future urban expansion.

Strumaria discifera Marloth ex Snijman subsp. **bulbifera** Snijman

Status: **NT** D2

D.A. Snijman & J.E. Victor

[e]**Distribution:** NC WC. Koebee and Bokkeveld Escarpments.

Habitat: Deep, red, loamy soils derived from Dwyka tillite and dolerite.

Rationale: Known from six locations. Potentially threatened by crop cultivation and invading alien plants.

Strumaria karooica (W.F.Barker) Snijman

Status: **Rare**

D.A. Snijman & J.E. Victor

[e]**Distribution:** NC WC. Middelpos to Sutherland and Matjiesfontein.

Habitat: Shallow clay soils, in seasonally damp depressions.

Rationale: Known from fewer than 10 sites. Subpopulations comprise small, fairly dense aggregations of a few hundred bulbs. No known threats.

Strumaria karoopoortensis (D. & U.Müll.-Doblies) Snijman

Status: **VU** D1

D.A. Snijman & D. Raimondo

[e]**Distribution:** NC WC. Southern Tanqua Karoo to Anysberg.

Habitat: Succulent Karoo, in heavy Dwyka- and Ecca-derived soils on south- and east-facing slopes.

Rationale: Known from two small, disjunct subpopulations that together comprise less than 1 000 mature individuals.

Strumaria leipoldtii (L.Bolus) Snijman Plate 7

Status: **CR** B1ab(iii)+2ab(iii); C2a(ii)

D.A. Snijman & D. Raimondo

[e]**Distribution:** WC. Lambert's Bay.

Habitat: South-facing sandstone ledges along banks of seasonal rivers.

Rationale: Known from one subpopulation with ± 200 mature individuals, there is ongoing loss and degradation of habitat due to quarrying.

Strumaria massoniella (D. & U.Müll.-Doblies) Snijman

Status: **VU** D1

D.A. Snijman & D. Raimondo

[e]**Distribution:** NC. Kamiesberg to Loeriesfontein.

Habitat: Semi-arid flats in deep sand.

Rationale: Known from three subpopulations. This species is sparsely distributed and occurs as small subpopulations totalling less than 500 plants. No known threats.

Strumaria merxmuelleriana (D. & U.Müll.-Doblies) Snijman

Status: **Rare**

D.A. Snijman & J.E. Victor

[e]**Distribution:** NC. Northern Namaqualand, near Springbok and Steinkopf.

Habitat: Seasonal watercourses in sandy, granite-derived soils.

Rationale: This species is sparsely distributed, with no known threats.

Strumaria perryae Snijman

Status: **Critically Rare**

D.A. Snijman & J.E. Victor

[e]**Distribution:** NC. Bokkeveld Escarpment.

Habitat: Clay soils derived from karoo shales under low karroid shrubs.

Rationale: A highly localised species known from a single subpopulation. No known threats.

Strumaria picta W.F.Barker

Status: **Rare**

D.A. Snijman & J.E. Victor

[e]**Distribution:** NC. Bokkeveld Escarpment.

Habitat: Flats and slopes in greyish clay soils derived from Dwyka tillite shales.

Rationale: A range-restricted species (EOO 220 km^2) with no known threats.

[F] **Strumaria prolifera** Snijman

Status: **Critically Rare**

P.A. Manyama

[e]**Distribution:** NC. Namaqualand, Kourkammaberg.

Habitat: Southern slopes near mountain summit, confined to shaded sites.

Rationale: Known from the one subpopulation, this species has no recorded threats.

Strumaria pubescens W.F.Barker

Status: **Rare**

D.A. Snijman & J.E. Victor

[e]**Distribution:** WC. Southern Roggeveld Escarpment.

Habitat: Steep, south-facing slopes in clay soils on rock ledges.

Rationale: Known from two sites. Not threatened because of the inaccessibility of its habitat.

Strumaria pygmaea Snijman

Status: **Rare**

D.A. Snijman & J.E. Victor

[e]**Distribution:** WC. Northern Knersvlakte between Bitterfontein and Nuwerus.

Habitat: In moist patches near rocky quartz outcrops in succulent karoo shrubland.

Rationale: This habitat specialist has no known threats.

Strumaria salteri W.F.Barker **Plate 7**

Status: **VU** B1ab(ii,iii,v)

D.A. Snijman & J.E. Victor

[e]**Distribution:** WC. Nardous Mountain, Olifants River Valley and Cederberg.

Habitat: Confined to seasonally moist sandstone outcrops in humus-rich sandy pockets amongst sandstone rocks.

Rationale: Recorded from seven locations in an area of 1 500 km^2. Threatened primarily by expanding rooibos cultivation, but is also collected illegally.

Strumaria unguiculata (W.F.Barker) Snijman **Plate 7**

Status: **VU** D2

D.A. Snijman & J.E. Victor

[e]**Distribution:** WC. Doring River Valley.

Habitat: Succulent karoo shrubland, in heavy, loamy soil covered with slate chips and rocks on north-facing slopes.

Rationale: Known from one large subpopulation. Potentially threatened by overgrazing, human disturbance and harvesting for horticultural purposes.

Strumaria villosa Snijman

Status: **Rare**

D.A. Snijman & J.E. Victor

[e]**Distribution:** NC. Richtersveld.

Habitat: Quartz pebble patches on exposed, east-facing slopes in succulent karoo shrubland.

Rationale: This Gariep Centre endemic is known from five sites on the southern edge of the Richtersveld, bulbs are locally abundant and this species is not threatened.

Strumaria watermeyeri L.Bolus subsp. **botterkloofensis** (D. & U.Müll.-Doblies) Snijman

Status: **Rare**

D.A. Snijman & J.E. Victor

[e]**Distribution:** NC. Botterkloof Pass.

Habitat: Sandstone sheets in shallow, sandy pans in dry montane fynbos.

Rationale: Known from three subpopulations. Its sandstone pavement habitat is safe from ploughing and hence this taxon is not threatened.

Strumaria watermeyeri L.Bolus subsp. **watermeyeri**

Status: **Rare**

D.A. Snijman & J.E. Victor

[e]**Distribution:** NC. Bokkeveld Escarpment, Vanrhyn's Pass to Koebe Pass.

Habitat: Sandstone sheets in shallow, sandy pans in dry montane fynbos.

Rationale: Known from six subpopulations. Its sandstone pavement habitat is safe from ploughing and hence this taxon is not threatened.

ANTHERICACEAE

Chlorophytum Ker Gawl.

Chlorophytum lewisiae Oberm.

Status: **Rare**

D. Raimondo

[e]**Distribution:** NC WC. Botterkloof Pass and Spektakelberg.

Habitat: Succulent karoo shrubland and mountain renosterveld in rocky areas on granitic soils.

Rationale: Known from two highly disjunct sites, the Botterkloof Pass on the Bokkeveld Escarpment and Spektakelberg in Namaqualand. Although likely to be under-collected, this species remains a rare plant specific to granitic rocky soils.

Chlorophytum monophyllum Oberm.

Status: **DD**

D. Raimondo

[e]**Distribution:** WC. Kouebokkeveld.

Habitat: Sand flats.

Rationale: Known from the type collection made by Adamson in 1954; the site description on the specimen is vague. Its sandy flats habitat has been extensively transformed for agriculture (deciduous fruit orchards) and it is therefore likely to be threatened.

[F] **Chlorophytum pauciphyllum** Oberm.

Status: **Rare**

D.A. Kamundi† & J.E. Victor

[e]**Distribution:** WC. Nardous to Cederberg Mountains.

Habitat: Rocky sandstone slopes.

Rationale: A range-restricted mountain species (EOO < 500 km^2) with no known threats.

[F] **Chlorophytum radula** (Baker) Nordal

Status: **CR** B2ab(iii)

L. von Staden & P.J.D. Winter

[e]**Distribution:** LM. Tzaneen, Woodbush. Collected once in 1880 and rediscovered in 1999.

Habitat: Mistbelt grassland. Grows in crevices on sheetrock of a granite-gneiss outcrop, 1 900 m.

Rationale: First described in the 1880s from a collection from an unspecified location in the Woodbush area. It was not recorded again for almost 100 years until a small population of only 20–30 mature individuals was found in the same area in 1999, on a rock outcrop in grassland between a road and timber plantations. Three other small subpopulations have since been found within an area of ± 170 km^2. Since the 1800s, over 90% of the grasslands in the Woodbush–Tzaneen area have been transformed to forestry plantations. The four subpopulations occur on tiny grassland fragments (AOO estimated < 1 km^2) that are threatened by invading alien plants, poor fire management and ongoing expansion of plantations.

APONOGETONACEAE

Aponogeton L.f.

[F] **Aponogeton angustifolius** Aiton

Status: **VU** A2c; B1ab(iii)

E. Sieben, J.A. Day & D. Raimondo

[e]**Distribution:** WC. Malmesbury to Worcester.

Habitat: Sandy lake shores that dry out in summer, shallow pools or slow-flowing rivers, in water up to 1 m deep. Below 300 m.

Rationale: EOO 9 000 km². Occurring as isolated subpopulations at the edge of lakes (vleis) and in slow-flowing rivers. Habitat is being continually degraded as a result of changes in flow regimes associated with urban expansion and agriculture. At least 30% of its habitat has been lost over the past 40 years, which is less than three generations (generation length 15 years).

[F] **Aponogeton fugax** J.C.Manning & Goldblatt

Status: **VU** D2

D. Raimondo, J.C. Manning & D.A. Snijman

[e] **Distribution:** NC. Nieuwoudtville.

Habitat: Seasonal pools on Bokkeveld sandstone.

Rationale: This recently discovered species is known from two locations (AOO < 2 km²). Although not currently declining, it is potentially threatened by road maintenance activities.

Aponogeton ranunculiflorus Jacot Guill. & Marais

Status: **VU** D2

C.R. Scott-Shaw, L. von Staden & J.E. Victor

Distribution: KZN. Drakensberg Mountains in South Africa and Lesotho, mainly from Sehlabathebe National Park and surrounds.

Habitat: Rock pools, permanently wet tarns and high-altitude mires up to 7 m deep, basalt and sandstone, 2 400–3 300 m.

Rationale: Potentially threatened by climate change and habitat degradation at one location in South Africa.

ARACEAE

Zantedeschia Spreng.

Zantedeschia jucunda Letty Plate 8

Status: **VU** B1ab(v)+2ab(v)

L. von Staden, P.J.D. Winter & D. Raimondo

[e] **Distribution:** LM. Sekhukhuneland, along the summit of the Leolo Mountains.

Habitat: Grassland, norite outcrops and cliffs.

Rationale: EOO and AOO < 380 km². Known from 5–10 locations. Declining as a result of removal of plants for horticultural purposes and is now quite rare in the southern Leolo Mountains, where it was discovered. Potentially threatened by mining and expanding human settlements.

Zantedeschia odorata P.L.Perry Plate 8

Status: **Rare**

J.E. Victor

[e] **Distribution:** NC. Nieuwoudtville.

Habitat: Grows in crevices between dolerite boulders on seasonally waterlogged, red clay soils.

Rationale: A range-restricted species known from a very limited area near Nieuwoudtville (EOO 46 km²), occurring in dolerite outcrops. Not threatened by crop cultivation at present as it is protected by the rocky, inaccessible nature of its habitat.

Zantedeschia pentlandii (R.Whyte ex W.Watson) Wittm. Plate 8

Status: **VU** B1ab(v)

J.E. Victor & S.J. Siebert

[e] **Distribution:** MP. Roossenekal to Dullstroom.

Habitat: Rocky hillsides.

Rationale: EOO 12 000 km². Subpopulations are small and severely fragmented and there is a continuing decline as a result of mining and harvesting for horticultural purposes.

Zantedeschia valida (Letty) Y.Singh

Status: **Rare**

J.E. Victor

[e] **Distribution:** KZN. KwaZulu-Natal Drakensberg Mountains.

Habitat: Montane grasslands in moist sites.

Rationale: Known from fewer than five sites. Not threatened.

ARECACEAE

Jubaeopsis Becc.

Jubaeopsis caffra Becc.

Status: **EN** D

P.J.H. Hurter, L. von Staden, J.E. Victor & A.E. van Wyk

[e] **Distribution:** EC. Mtentu and Msikaba Rivers.

Habitat: Pondoland coastal forest, steep sandstone cliffs above riverbanks, 10–80 m.

Rationale: Known from two small subpopulations, each consisting of less than 50 mature individuals. One subpopulation, which occurs outside a reserve, is potentially threatened by heavy exploitation of the fruits as a food source and harvesting for the horticultural trade. However, there is no evidence of a continuing decline in the number of mature individuals. The population appears to be maintained by vegetative reproduction.

Raphia P.Beauv.

Raphia australis Oberm. & Strey

Status: **VU** D2

C.R. Scott-Shaw, L. von Staden, J.E. Victor & A.E. van Wyk

Distribution: KZN. Kosi Bay and Mozambique.

Habitat: Swamp forest, on seasonally inundated coastal dunes.

Rationale: Known from two locations in South Africa in northern KwaZulu-Natal. Potentially threatened by subsistence agriculture and harvesting for building materials. Individuals reach maturity only at 25–35 years, when they flower once, set seed and then die. If palms are cut down for any reason before they reach maturity, they could potentially undergo a rapid decline to extinction within one generation as there will be no seed from which they could re-establish.

ASPARAGACEAE

Asparagus L.

[F] **Asparagus elephantinus** S.M.Burrows

Status: **Rare**

S.M. Burrows, J.E. Burrows, D. Raimondo & L. von Staden

[e] **Distribution:** LM. Olifants River Valley west of Penge to the Abel Erasmus Pass.

Habitat: Ledges on steep, rocky slopes.

Rationale: A range-restricted species (EOO estimated 1 800 km²). The habitat is inaccessible and not affected by any threats.

[F] **Asparagus exsertus** (Oberm.) Fellingham & N.L.Mey.

Status: **VU** D2

D. Raimondo & D.A. Kamundi†

[e]**Distribution:** WC. Worcester.
Habitat: Transition between fynbos and succulent karoo, on low, moist shale on southeastern mountain slopes.
Rationale: Known from two locations on shale slopes north of Worcester. Potentially threatened by urban expansion.

Asparagus fourei (Oberm.) Fellingham & N.L.Mey. **Plate 9**

Status: **VU** D2
S.M. Burrows, J.E. Burrows, M. Lötter, D. Raimondo & L. von Staden
[e]**Distribution:** LM MP. Sekhukhuneland, Burgersfort to Penge.
Habitat: Mixed bushveld, on rocky, dolomite outcrops.
Rationale: A rare, range-restricted Sekhukhuneland endemic. As it is restricted to dolerite outcrops, it is somewhat protected from mining and the associated expanding human settlements as mining tends to have a more severe impact on mineral-rich norite than on dolerite. There is, however, a potential threat of habitat degradation to some of the subpopulations that occur near human settlements.

[F] **Asparagus fractiflexus** (Oberm.) Fellingham & N.L.Mey. **Plate 9**

Status: **EN** A2c; B1ab(iii)
J.E. Burrows, M. Lötter, S.M. Burrows, D. Raimondo & L. von Staden
[e]**Distribution:** MP. Between Carolina and Badplaas to Wakkerstroom.
Habitat: High-altitude, open grasslands, on rocky outcrops or among boulders.
Rationale: An extremely rare species from southern Mpumalanga, recorded only four times. Around 80% of its habitat in some parts of its range was transformed around the 1940–1950s, which is within the last three generations of this long-lived, resprouter (generation length 50 years). An overall 50% decline across the range is suspected. The open areas between plantations, which served as firebreaks and were important refugia, are now being planted up, causing ongoing loss of habitat.

[F] **Asparagus hirsutus** S.M.Burrows **Plate 9**

Status: **VU** D1+2
S.M. Burrows, J.E. Burrows, D. Raimondo & L. von Staden
[e]**Distribution:** LM. Restricted to a hill above the Atok Platinum Mine at Monametse in Sekhukhuneland.
Habitat: Sekhukhune Mountain Bushveld. Plants grow in full sun on rocky northwest-facing hill slopes.
Rationale: Extremely restricted range (EOO 6 km^2) and known from a single location with 500–1 000 mature individuals. Potentially threatened by mining.

Asparagus sekukuniensis (Oberm.) Fellingham & N.L.Mey. **Plate 9**

Status: **EN** A2c
S.M. Burrows, J.E. Burrows, M. Lötter, D. Raimondo & L. von Staden
[e]**Distribution:** LM MP. Leolo Mountains, Sekhukhuneland.
Habitat: Bushveld, on rocky slopes.
Rationale: The habitat of this long-lived resprouter is extensively transformed and degraded by mining, informal settlements, overgrazing and crop cultivation. It had lost 58% of its habitat by 1996, and recent surveys indicate that the subpopulation at the type locality is extinct. The habitat destruction is irreversible and ongoing, as there is renewed interest in mining in Sekhukhuneland. It is, however, not declining at present, although there is a strong chance that the habitat will decline further in future.

[F] **Asparagus spinescens** Steud. ex Roem. & Schult.

Status: **Rare**
D. Raimondo, F. Cholo & D.A. Kamundi†
[e]**Distribution:** EC. Uitenhage to Queenstown.
Habitat: Mountain slopes and valleys.
Rationale: Known from four widely disjunct collections in the Eastern Cape (EOO 9 400 km^2), but likely to have a few more undiscovered subpopulations. Most collections are from mountain slopes and the species is therefore not threatened.

[F] **Asparagus stipulaceus** Lam. **Plate 9**

Status: **NT** B1ab(ii,iii,iv,v)
D. Raimondo & D.A. Kamundi†
[e]**Distribution:** WC. Cape Peninsula to Witsand near Bredasdorp.
Habitat: Coastal dunes.
Rationale: EOO 2 200 km^2. Known from 12 locations and a few more are likely to exist. Declining as a result of coastal housing development and the spread of invasive alien acacias.

ASPHODELACEAE

Aloe L.

Aloe albida (Stapf) Reynolds **Plate 11**

Status: **NT** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)
M. Lötter, J.E. Burrows & D. Raimondo
Distribution: MP. Barberton to border of northeastern Swaziland.
Habitat: Mistbelt grassland.
Rationale: It has a very small range (EOO < 2 500 km^2), has lost habitat to commercial forestry plantations and is declining because of invasive alien species degrading its habitat. However, there are more than 15 existing locations and subpopulations are not severely fragmented. It therefore nearly qualifies for VU under Criterion B.

Aloe arenicola Reynolds

Status: **NT** B1ab(ii,iii,iv,v)
J.E. Victor & G.F. Smith
[e]**Distribution:** NC WC. Sandveld, Lambert's Bay to the mouth of the Orange River.
Habitat: Grows on deep coastal sands in West Coast strandveld vegetation.
Rationale: EOO 3 300 km^2. There is a continuing decline in habitat, subpopulations, locations and mature individuals due to mining and overgrazing. Subpopulations are not severely fragmented as aloes are wind-dispersed. There are 13 known locations.

Aloe bowiea Schult. & J.H.Schult.

Status: **CR** A4acd; B2ab(i,ii,iii,iv,v)
D. Raimondo, J.E. Victor, G.F. Smith, W. Berrington & A.P. Dold
[e]**Distribution:** EC. Uitenhage, Coega and Kariega.
Habitat: Subtropical transition thicket, in rocky soils on level to southwest-facing slopes.
Rationale: EOO 550 km^2, AOO 5 km^2. Locally extinct at four of seven recorded locations and documented population decline of 60–70% over the past 19 years, as a result of illegal collecting, overgrazing by cattle, low-

income housing expansion and construction of the Coega Industrial Development Zone. Currently this species is extant in three severely fragmented subpopulations. With the planned industrial expansion of Coega, the anticipated influx of people seeking work there could result in massive urban expansion and large increases in cattle stocking rates. This species is predicted to experience a further 20% decline over the next five years.

Aloe brevifolia Mill. var. brevifolia

Status: **VU** A2c; C1+2a(i)

D. Raimondo & N.A. Helme

[e]**Distribution:** WC. Bot River to Riversdale, and around Bredasdorp southwards to Cape Agulhas. Also in Breede River Valley between Swellendam and Ashton.

Habitat: Heavy clay soils in exposed rocky shale slopes and cliffs in Rûens Silcrete Renosterveld.

Rationale: At least 80% of its habitat has been lost to wheat cultivation over the past 80 years. It is restricted to dry slopes within this habitat, and we suspect an overall 40% decline of subpopulations within the past three generations (90 years). Subpopulations are small, typically less than 100 individuals. Decline is ongoing because of invading alien plants, trampling by livestock and collecting for horticultural purposes.

[F] Aloe broomii Schönland var. tarkaensis Reynolds

Status: **Rare**

W. Foden & L. Potter

[e]**Distribution:** EC NC. Tarkastad, Middelburg and Graaff-Reinet districts, possibly also in the Victoria West district.

Habitat: Nama-Karoo, found on low, stony ridges.

Rationale: A range-restricted taxon (EOO 500 km^2) and much rarer than the nominate variety. There are four or five known subpopulations (based on herbarium collections), but there may be others because it occurs in an area that is not intensively collected. Not threatened and not declining.

Aloe buhrii Lavranos

Status: **VU** D2

L. von Staden

[e]**Distribution:** NC. Nieuwoudtville.

Habitat: Grows in succulent karoo shrubland on shale soils, 1 000–1 500 m.

Rationale: A rare, range-restricted species (EOO < 100 km^2) known from fewer than five locations and although not declining at present, it is potentially threatened by changes in land ownership and collecting for horticultural purposes.

[F] Aloe challisii Van Jaarsv. & A.E.van Wyk

Status: **VU** D2

D. Raimondo, J.E. Burrows & M. Lötter

[e]**Distribution:** MP. Steenkampsberg.

Habitat: Afromontane mistbelt grassland, in rock crevices among moss on upper vertical, south to southeast-facing sandstone cliffs, 1 700–1 800 m.

Rationale: Known from a single location, potentially threatened by collecting and invading alien plants.

Aloe chlorantha Lavranos

Status: **VU** D2

J.E. Victor

[e]**Distribution:** NC. Williston and Fraserburg.

Habitat: Nama-Karoo, grows among dolerite boulders at the top of ridges.

Rationale: A rare, range-restricted species known from four locations. Potentially threatened by changes in native species dynamics and poor recruitment. Rock hyrax populations have greatly increased as a result of the decline of predators in many areas where this species occurs, and they are capable of causing extensive damage to vegetation. The impact of rock hyraxes on inflorescences may explain the lack of recruitment.

Aloe chortolirioides A.Berger var. chortolirioides

Plate 11

Status: **VU** A2c

M. Lötter, J.E. Burrows & D. Raimondo

Distribution: LM MP. Mbabane, Barberton to Carolina.

Habitat: Mistbelt grassland, wedged between rocks on slopes and mountain tops.

Rationale: At least a 30% habitat loss over the last three generations (100 years) to commercial forestry plantations. Remaining subpopulations are still declining because of the effects of isolation and fragmentation by forestry plantations, resulting in a deleterious fire regime, loss of pollinators and a lack of recruitment.

[F] Aloe ciliaris Haw. var. redacta S.Carter

Status: **VU** D2

J.E. Victor

[e]**Distribution:** EC. Kentani.

Habitat: Coastal dune forest.

Rationale: Known from one location. Potentially threatened by habitat degradation as a result of expanding rural settlements and subsistence agriculture.

[F] Aloe commixta A.Berger

Plate 10

Status: **VU** D1+2

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Southern Cape Peninsula.

Habitat: Rocky sandstone outcrops, 150–600 m.

Rationale: AOO < 20 km^2. Restricted to a small area on the Cape Peninsula between Fish Hoek, Kommetjie (Slangkop), the Bonteberg and Simon's Town, and known from less than 1 000 mature individuals. Potentially threatened by trampling and harvesting for horticultural purposes. Alien plants were a past threat but this is currently being managed by South African National Parks. They may become a threat in future if management changes.

[F] Aloe cooperi Baker subsp. cooperi

Status: **Declining**

L. von Staden

Distribution: KZN LM MP. Widespread across KwaZulu-Natal, Mpumalanga highveld to Wolkberg Mountains in Limpopo Province. Also in Swaziland.

Habitat: Occupies a wide variety of habitats in grasslands, from marshy areas to dry and well drained, often wedges in shallow pockets among rocks, but also on hillsides in open grasslands.

Rationale: Although there has been widespread habitat loss across the range of this widespread taxon, declines have taken place over a period much longer than three generations. There are continuing declines in many areas, mainly due to overgrazing and invasive alien encroachment, but *A. cooperi* is still too widespread and common to qualify under Criterion B. No population data are available, but it is also unlikely to qualify under Criteria C or D.

[F] Aloe craibii Gideon F.Sm.

Plate 11

Status: **CR** C2a(i)

M. Lötter, J.E. Burrows, L. von Staden & D. Raimondo

[e]**Distribution:** MP. Barberton.

Habitat: Montane grassland, in well-drained, relatively deep soils on serpentine and sandstone substrates, in full sun on mountain summits, but not on rocky outcrops, 1 500–1 800 m.

Rationale: Three subpopulations known, the largest of which consists of 50 mature individuals while the others have less than 20 mature individuals. There is a continuing decline in habitat quality as a result of invasive alien encroachment. Too frequent fires kill newly recruited seedlings and, together with decline in habitat quality, are causing a continuing decline in the population.

Aloe dabenorisana Van Jaarsv.

Status: **Rare**

J.E. Victor & L. von Staden

[e]**Distribution:** NC. Occurs on two mountains along the Orange River Valley.

Habitat: Vertical, southwest-facing upper slopes in crevices of quartz rock, 900–1 000 m.

Rationale: A rare, range-restricted species known from two sites within an EOO of 260 km^2. The inaccessible cliff face habitat in an extremely remote area makes it unlikely to be threatened.

[F] **Aloe dichotoma** Masson **Plate 10**

Status: **VU** A3ce

W. Foden

Distribution: NC WC. From Nieuwoudtville east to Olifantsfontein and north to Brandberg (Namibia).

Habitat: On north-facing rocky slopes (particularly dolomite) in the south of its range. Any slopes and sandy flats in the central and northern parts of range.

Rationale: Climate change models project a 36% decline in range in 100 years, assuming dispersal into newly suitable areas. Patterns of modelled declines have been supported by field and repeat photo studies. However, no colonisation of newly suitable areas has yet happened. Without dispersal, the models predict a 73% decline in 100 years, qualifying the species as EN.

Aloe dominella Reynolds

Status: **NT** B1ab(ii,iii,v)

L. von Staden

[e]**Distribution:** KZN. Western KwaZulu-Natal, from Mooi River to Bergville and northeastwards to Vryheid.

Habitat: In grassland or thornveld, in hilly or gently undulating areas, often in rocky outcrops but can also occur in open grasslands and along road reserves.

Rationale: Restricted range (EOO 12 400 km^2), recorded from 13–15 locations and continuing decline due to severe overgrazing, a threat that is likely to increase in future.

Aloe gerstneri Reynolds

Status: **VU** B1ab(i,ii,iii,v)

J.E. Victor, E. van Wyk & G.F. Smith

[e]**Distribution:** KZN. Babanango district.

Habitat: Thornveld, on rocky slopes and outcrops along streams, on quartz, but favouring granite, 900 m.

Rationale: Restricted range (EOO 111 km^2) and known from seven locations. Declining in extent and habitat quality and in the number of mature individuals as a result of erosion caused by overgrazing and subsistence farming.

Aloe hardyi Glen

Status: **Rare**

H.F. Glen, J.E. Victor & G.F. Smith

[e]**Distribution:** LM MP. Pilgrim's Rest to the Olifants River Valley, possibly also on Mariepskop.

Habitat: Vertical dolomite cliffs in mistbelt.

Rationale: A range-restricted (EOO estimated 490–1 400 km^2) habitat specialist. The vertical cliff habitat is inaccessible and therefore this rare species is not likely to be threatened.

Aloe inconspicua Plowes

Status: **EN** B1ab(iii)+2ab(iii)

L. von Staden

[e]**Distribution:** KZN. Bushmans River Valley, near Estcourt.

Habitat: Transition between grassland and valley bushveld, mostly in short grassland, generally on gently sloping ground beside large hills and in hilly thornveld.

Rationale: A rare, range-restricted species (EOO 200 km^2) that moved rapidly from VU D2 to EN B when potential threats became a reality. Plans in 2002 were to convert most of the range of this species to a private conservancy, but between 2002 and 2007 the area of the proposed conservancy was granted to a local community in a land claim. Subsequently, a newly established informal settlement destroyed part of one subpopulation at one of the only four known locations. Spreading informal settlements and increasing pressures on the land are expected.

Aloe integra Reynolds **Plate 11**

Status: **VU** B1ab(ii,iii,iv,v)

M. Lötter, J.E. Burrows, S. Krynauw & J.E. Victor

Distribution: MP. Mpumalanga, from Vaalhoek north of Pilgrim's Rest southwards to Amsterdam. Also at Mankayane in Swaziland.

Habitat: Dry highveld grassland, on exposed, rocky sites with short grass on north- and northwest-facing slopes.

Rationale: EOO 10 200 km^2. Known from seven locations. At least 40% of its habitat has been lost to pine plantations. The isolation and fragmentation of grasslands by pine plantations have resulted in the loss of pollinators and changed herbivore foraging dynamics that now threaten the survival of this species. A continuing decline due to too frequent fires and expanding timber plantations has been recorded.

[F] **Aloe kniphofioides** Baker **Plate 11**

Status: **VU** A2c

M. Lötter, J.E. Burrows, C. Craib, L. von Staden & D. Raimondo

Distribution: EC KZN MP. High-altitude grasslands of Mpumalanga, KwaZulu-Natal and northeastern Eastern Cape.

Habitat: Montane grassland.

Rationale: A 42% loss of habitat has occurred as a result of afforestation, a deleterious fire regime, loss of pollinators, mining and invading alien plants. It is a long-lived, slow-growing resprouter and the habitat loss has taken place over 50–80 years (one to two generations).

[F] **Aloe kouebokkeveldensis** Van Jaarsv. & A.B.Low

Status: **Rare**

L. von Staden

[e]**Distribution:** WC. Kouebokkeveld Mountains.

Habitat: Montane fynbos, in rock crevices and shallow soils on steep, southwest-facing slopes and cliffs of Table Mountain Sandstone, 600–800 m.

Rationale: A recently discovered species, at present known from a few subpopulations within an area of ± 100 km^2. The habitat, cliff faces on high mountain slopes, is protected and inaccessible.

Aloe krapohliana Marloth

Status: **DD**D

L. von Staden

e**Distribution:** NC WC. Namaqualand, from Vanrhynsdorp to the Orange River.

Habitat: Occurs in the extremely arid northern regions of the Succulent Karoo, on clay, stony (mostly quartzitic) and sandy soils on flats and slopes.

Rationale: A fairly widespread species in the arid northwestern region of South Africa (EOO 68 000 km^2), known from around 20 historical sites. Anecdotal reports indicate significant declines since the 1960s. Renewed interest in mining in Namaqualand poses a significant potential threat. In recent years (2000–2006) at least three subpopulations have been found, but a thorough survey across the extent of its range is lacking. It is probably threatened, but no reliable estimates on population size and rate of decline are available. Indications are that subpopulations are generally very small, but data are insufficient to assign a threat status.

Aloe linearifolia A.Berger

Status: **NT** A2c; B1ab(ii,iii,iv,v)

L. von Staden & C.R. Scott-Shaw

e**Distribution:** EC KZN. Central and southern KwaZulu-Natal and the Pondoland region of the Eastern Cape.

Habitat: High-rainfall mistbelt, Ngongoni and coastal grassland, occurs in short grasslands in hilly areas, often in rocky outcrops.

Rationale: A range-restricted species (EOO 9 700 km^2) occurring in the highly transformed grasslands in southern and central KwaZulu-Natal. More than 56% of its habitat has been lost over the last 150 years to crop cultivation (mainly sugarcane) and forestry, but its generation length is relatively short (10 years) and only 15–25% of habitat loss has occurred within the last three generations. This once common species has disappeared from many areas and is now known from 20–25 locations. Subpopulations continue to decline because of overgrazing by livestock and urban expansion.

Aloe longistyla Baker

Status: **DD**D

L. von Staden

e**Distribution:** EC WC. Calitzdorp eastwards to Grahamstown and northwards to Graaff-Reinet, Cradock and Middelburg.

Habitat: Occurs on gentle slopes and on flat or stony ground in karroid shrubland. Plants are usually scattered and grow under 'nurse' shrubs, particularly *Pteronia* and *Pentzia* species.

Rationale: A widespread species (EOO 81 500 km^2) that was common in the past, but anecdotal reports indicate that it has become very rare as a result of illegal collecting and habitat degradation caused by overgrazing. Hilton-Taylor (1996a) listed this species as vulnerable. Most experts feel that this species is likely to be threatened, but data are insufficient to assign a threat status.

Aloe meyeri Van Jaarsv.

Status: **Rare**

J.E. Victor & G.F. Smith

Distribution: NC. Northeastern Richtersveld and southern Namibia.

Habitat: Steep or vertical, south-facing upper slopes in crevices of quartzite rock. Occurs in succulent karoo shrubland.

Rationale: A rare, range-restricted species (global EOO 130 km^2). The habitat is remote, inaccessible and in South Africa entirely protected within a National Park. This species has no known threats.

Aloe micracantha Haw.

Status: **NT** B1ab(ii,iii,iv,v)

L. von Staden

e**Distribution:** EC WC. Uniondale to the Great Fish River Valley east of Grahamstown, southwards to the coastal plains between Humansdorp and Port Elizabeth.

Habitat: Grassy fynbos, plains and slopes, 0–700 m.

Rationale: EOO 12 508 km^2. Known from more than 10 locations. Declining in the southern parts of the range because of urban expansion, agriculture and invading alien plants.

F **Aloe microstigma** Salm-Dyck subsp. **framesii** (L.Bolus) Glen & D.S.Hardy

Status: **NT** B1ab(ii,iii,iv)

L. von Staden

e**Distribution:** NC WC. Saldanha Bay to Port Nolloth.

Habitat: Flat, sandy areas on coastal lowlands.

Rationale: EOO 17 000–33 000 km^2. Known from 6–10 locations, all of which are highly transformed and/or facing ongoing threats from mining, crop cultivation and coastal development. It is likely that undiscovered subpopulations exist. It is placed on the list as a precautionary measure until more information indicates that it is more common and not threatened.

Aloe modesta Reynolds **Plate 11**

Status: **VU** B2ab(ii,iii,iv,v)

M. Lötter, J.E. Burrows, S. Krynauw & L. von Staden

e**Distribution:** KZN MP. Dullstroom and Wakkerstroom districts in Mpumalanga and also possibly occurs near Vryheid in KwaZulu-Natal.

Habitat: Montane grassland, 1 600–2 000 m.

Rationale: A rare species known from two disjunct areas in Mpumalanga and northern KwaZulu-Natal. Although widespread (EOO 11 000–28 000 km^2), the AOO is low (estimated less than 1 000 km^2) and it is known from eight locations. Surveys of suitable habitat by C. Craib failed to locate more subpopulations. There is a continuing decline as a result of invading alien plants, urban expansion (mainly around Dullstroom), forestry and overgrazing.

Aloe monotropa I.Verd.

Status: **VU** D2

J.E. Victor & G.F. Smith

e**Distribution:** LM. Dublin Mine Kloof, southern Limpopo Province.

Habitat: Occurs on steep, rocky slopes at the margins of closed woodland, 1 000–1 400 m.

Rationale: Known from a single location. Potentially threatened by mining and harvesting for horticultural purposes.

Aloe peglerae Schönland **Plate 10**

Status: **EN** A2d; B1ab(ii,v)+2ab(ii,v)

J.E. Victor & M.F. Pfab

e**Distribution:** G NW. Magaliesberg and Witwatersberg.

Habitat: Grassland, in shallow, gravelly quartzitic soils on rocky, north-facing slopes or summits of ridges.

Rationale: A range-restricted species (EOO 3 445 km^2, AOO 387 km^2) known from three locations. Field observations reported a 50% decline over the past 10 years due to urban expansion and collecting for the specialist succulent horticultural trade.

Aloe pictifolia D.S.Hardy **Plate 11**

Status: **Rare**

J.E. Victor & A.P. Dold

Distribution: EC. Baviaanskloof.

Habitat: Steep rocky cliffs.

Rationale: A range-restricted habitat specialist (EOO 300 km^2), only recently discovered. It occurs in a well-protected wilderness area and has no known threats.

Aloe pillansii L.Guthrie **Plate 10**

Status: **EN** B1ab(iii,v)

E. Swart, W. Foden, J.E. Victor, G. Williamson

Distribution: NC. Richtersveld and southern Namibia.

Habitat: Succulent karoo shrubland on dry, rocky dolomite and gneiss hillsides.

Rationale: A small range (EOO 3 000 km^2), known from one or 2 two. It has a small population and continues to decline. It is likely that climate change-related regional warming will cause long-term declines similar to those of its sister species, *A. dichotoma*.

Aloe prinslooi I.Verd. & D.S.Hardy

Status: **NT** A2e

J.E. Victor & E. van Wyk

Distribution: KZN. Tugela River basin between Ladysmith and Muden.

Habitat: Savanna, in dry, tall grassland and open woodland, and transition communities between savanna woodland and valley bushveld thicket, 800–1 400 m.

Rationale: We suspect that a 20% decline took place during a period of intense illegal harvesting in the 1960s. The generation length of this species is estimated to be 20 years. Although no longer declining as a result of illegal harvesting, this species remains potentially threatened by trampling by livestock and by frequent fires.

Aloe pruinosa Reynolds

Status: **VU** B1ab(ii,iii,v)

J.E. Victor & C.R. Scott-Shaw

Distribution: KZN. Pietermaritzburg to Mapumulo.

Habitat: Savanna, in heavy loam in shaded areas, only in areas of fairly high summer rainfall.

Rationale: A range-restricted species (EOO 1 000 km^2) centred within a rapidly expanding urban area. Known from 10 locations, but subpopulations are not severely fragmented as aloes are wind dispersed. Declining mainly because of urban expansion and harvesting for medicinal purposes.

Aloe ramosissima Pillans **Plate 10**

Status: **EN** B1ab(iii,v)

W. Foden

Distribution: NC. Richtersveld and southern Namibia.

Habitat: Dry, rocky areas, often on hillsides.

Rationale: This species has a small geographic range (EOO 3 600 km^2) and continues to decline. It is likely that climate change-related regional warming will cause long-term declines similar to those of its sister species, *Aloe dichotoma*.

Aloe reitzii Reynolds var. **reitzii**

Status: **NT** B1ab(iii)

S.J. Siebert, J.E. Burrows, M. Lötter & J.E. Victor

Distribution: MP. Roossenekal and Belfast.

Habitat: Granite outcrops and rocky slopes in montane grassland.

Rationale: EOO 7 700 km^2. Known from 12–15 locations. Most subpopulations are confined to a small area. This taxon is declining in the northern parts of its range because of mining. It is also potentially threatened by afforestation.

Aloe reitzii Reynolds var. **vernalis** D.S.Hardy

Status: **CR** B1ab(v)+2ab(v)

J.E. Victor & E. Van Wyk

Distribution: KZN. Vryheid.

Habitat: Stony grassland, in well-drained, humus-rich soil on steep, broken granite slopes, 935 m.

Rationale: Highly range-restricted (EOO and AOO < 1 km^2), known from two subpopulations. Declining as a result of harvesting for medicinal purposes and damage by baboons.

Aloe reynoldsii Letty

Status: **Rare**

L. von Staden, J.E. Victor & G.F. Smith

Distribution: EC. Mbashe River Catchment up to 50 km inland.

Habitat: Grows wedged in rock crevices on exposed sites on steep cliffs above rivers.

Rationale: A range-restricted species (EOO 120–300 km^2) that occurs in a very specialised habitat. Although collecting may still cause sporadic local declines, the population is mostly in inaccessible sites that are unlikely to be targeted, especially since the species has been introduced into cultivation.

Aloe saundersiae (Reynolds) Reynolds

Status: **CR** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

C.R. Scott-Shaw, B. Church, D. Raimondo & L. von Staden

Distribution: KZN. Nkandla.

Habitat: Mistbelt grassland, on cool, shady, south-facing slopes of granite outcrops, often in crevices and pockets of soil with moss.

Rationale: Known from two subpopulations on a single mountain top (EOO < 20 km^2). Subjected to severe ongoing overgrazing and frequent fires.

Aloe simii Pole-Evans

Status: **CR** B2ab(ii,iii,iv,v)

M. Lötter, J.E. Burrows, S. Krynauw & D. Raimondo

Distribution: MP. Sabie southwards to White River and around Nelspruit.

Habitat: Open woodland and grassland, along drainage lines and wetlands, 600–1 100 m.

Rationale: A narrow habitat specialist (AOO 10 km^2) and known from five severely fragmented subpopulations. Declining because of afforestation, drying up of its wetland habitat as a result of adjacent plantations and extraction of water, invading alien plants, urban expansion and rural development.

Aloe soutpansbergensis I.Verd.

Status: **Rare**

L. von Staden, J.E. Victor & G.F. Smith

Distribution: LM. Soutpansberg Mountains.

Habitat: Mistbelt regions on steep, south-facing mountain slopes in extremely thin soils, above 1 500 m.

Rationale: A range-restricted Soutpansberg endemic (EOO 20–240 km^2, AOO < 18 km^2), known from two sites, but locally abundant. It declined as a result of collecting in the past, but this is no longer a serious threat and the population appears to have recovered.

Aloe striata Haw. subsp. **komaggasensis** (Kritzinger & Van Jaarsv.) Glen & D.S.Hardy **Plate 10**

Status: **VU** D2

J.E. Victor, G.F. Smith, E.J. van Jaarsveld & L. von Staden

e**Distribution:** NC. Namaqualand Escarpment to the east of Komaggas.

Habitat: Succulent karoo-renosterveld transitional vegetation. Rocky slopes of quartz koppies.

Rationale: Range-restricted taxon (EOO < 500 km^2), recorded from four locations, potentially threatened by habitat degradation as a result of overgrazing and removal of plants from the wild by succulent collectors.

Aloe thompsoniae Groenew.

Status: **Rare**

J.E. Victor & G.F. Smith

e**Distribution:** LM. Wolkberg Mountains.

Habitat: Montane mistbelt grasslands, rock crevices on steep cliffs, among large boulders, or in seepages or shallow soils at the edges of large exposed rock sheets.

Rationale: Previously listed as EN (Victor 2002). It has a restricted range (EOO < 100 km^2) but is almost entirely protected within a wilderness area. Illegal collecting was previously mentioned to be threat, but this is unlikely to cause the extinction of this taxon because of the extreme inaccessibility and remoteness of its habitat.

Aloe thorncroftii Pole-Evans **Plate 10**

Status: **NT** D2

M. Lötter, E. van Wyk, J.E. Burrows & J.E. Victor

e**Distribution:** MP. Barberton.

Habitat: Steep, rocky slopes in grassland, restricted to serpentine soils.

Rationale: A rare, range-restricted species (EOO 231 km^2, AOO < 36 km^2), known from six locations. Adapted to a rare and very specialised habitat on mineral-rich serpentine soils. Potentially threatened by mining but not declining at present.

F **Aloe thraskii** Baker

Status: **NT** A2c

C.R. Scott-Shaw, B. Church & L. von Staden

e**Distribution:** EC KZN. Amatikulu to Port St Johns.

Habitat: Dense coastal bush on dunes from the beach margin to a few hundred metres inland, but no further than the top of the first sea-facing slope.

Rationale: Experts estimate that 20–30% of the habitat has been lost to urban and coastal development over the last three generations (generation length 20 years). Decline is continuing as a result of habitat loss and illegal collecting for the specialist succulent horticultural trade.

Astroloba Uitewaal

Astroloba herrei Uitewaal

Status: **VU** D2

D. Raimondo

e**Distribution:** WC. Uniondale and Prince Albert.

Habitat: Rocky slopes derived from Bokkeveld shales, Dwyka tillite or Witteberg quartzites.

Rationale: Known from two widely disjunct areas, one in the Little Karoo and the other in the Great Karoo, known from three subpopulations. Potentially threatened by overgrazing by livestock, crop cultivation and collecting for horticultural purposes.

Astroloba rubriflora (L.Bolus) Gideon F.Sm. & J.C.Manning

Status: **VU** B1ab(ii,iii,iv,v)

D. Raimondo & N.A. Helme

e**Distribution:** WC. Robertson, Bonnievale and McGregor.

Habitat: Rocky karroid flats and low hills.

Rationale: EOO 800 km^2. Known from eight locations. There has been a 15% habitat loss over the past 50 years and conversion for crop cultivation is ongoing.

Bulbine Wolf

F **Bulbine cremnophila** Van Jaarsv.

Status: **Rare**

E.J. van Jaarsveld & L. Potter

e**Distribution:** EC. Willowmore district, Baviaanskloof Wilderness Area.

Habitat: Quartzite cliff faces.

Rationale: A rare habitat specialist that is not threatened.

F **Bulbine disimilis** G.Will.

Status: **Rare**

D. Raimondo & J.E. Victor

e**Distribution:** NC. Namaqualand, Springbok to Wallekraal.

Habitat: Rocky slopes or quartz patches.

Rationale: Known from four sites in remote areas of Namaqualand. The only land use, goat herding, is not known to have an impact on this species.

F **Bulbine esterhuyseniae** Baijnath

Status: **Rare**

C. Archer, D. Raimondo & J.E. Victor

e**Distribution:** WC. Cederberg and Warmwatersberg Mountains.

Habitat: In shallow soil on sandstone pavements on mountain plateaus.

Rationale: Known from two sites from the Cederberg and Warmwatersberg. Not threatened.

Bulbine fallax Poelln. **Plate 13**

Status: **Rare**

E.J. van Jaarsveld & L. Potter

e**Distribution:** NC WC. Knersvlakte.

Habitat: Quartzite patches and granitic soils in Namaqualand Klipkoppe Shrubland.

Rationale: Occurs as sparsely distributed individuals on the Knersvlakte and northwards to Garies and the Kamiesberg. Not threatened.

F **Bulbine fragilis** G.Will.

Status: **Rare**

D. Raimondo

e**Distribution:** NC. North of Steinkopf and near Nuwerus.

Habitat: In pebbly, loose soil shaded by overhanging rocks.

Rationale: A habitat specialist recorded from two sites. Rare but not threatened.

Bulbine haworthioides B.Nord.

Status: **VU** D2

C. Archer, D. Raimondo & J.E. Victor

e**Distribution:** WC. Knersvlakte near Lutzville.

Habitat: Quartz gravel on hillocks.

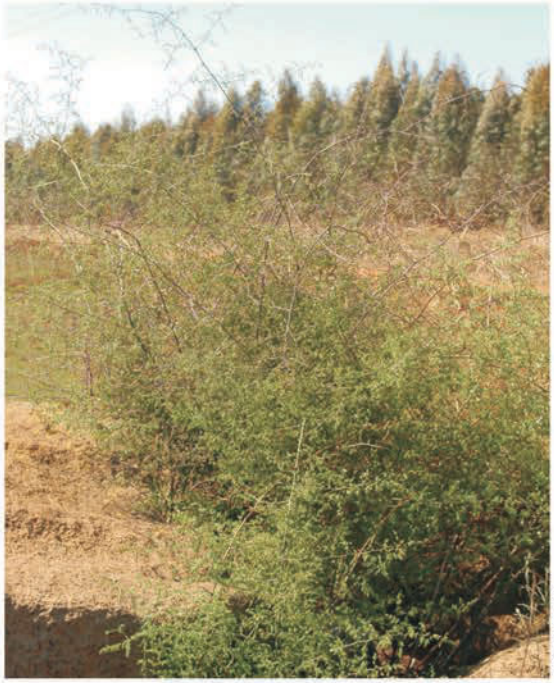
Rationale: Known from one location. Potentially threatened by agriculture, collecting for horticultural purposes and trampling by livestock.

Plate 9



J.E. Burrows

Asparagus stipulaceus NT



J.E. Burrows

Asparagus fractiflexus EN



J.E. Burrows

Asparagus fourei VU



J.E. Burrows

Asparagus hirsutus VU



J.E. Burrows

Asparagus sekukuniensis EN



J.E. Burrows

Asparagus hirsutus (habitat) VU

Plate 10



C. Paterson-Jones

Aloe commixta VU



M. Lötter

Aloe thorncroftii NT



C. Paterson-Jones

Aloe comosa LC



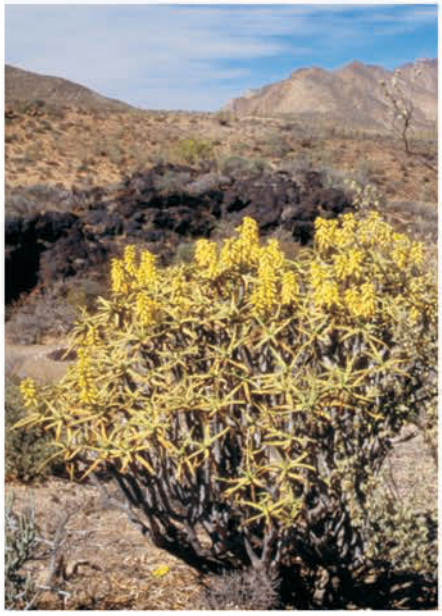
C. Paterson-Jones

Aloe peglerae EN



G. Nicholson

Aloe striata subsp. *komaggasensis* VU



C. Paterson-Jones

Aloe ramosissima EN



C. Paterson-Jones

Aloe dichotoma VU



C. Paterson-Jones

Aloe pillansii EN

Plate 11



P. Hardy

Aloe craibii CR



M. Lötter

Aloe albida NT



M. Lötter

Aloe integra VU



J.E. Burrows

Aloe chortolirioides var. *chortolirioides* VU



M. Lötter

Aloe modesta VU



J.E. Burrows

Aloe kniphofioides VU



E. van Jaarsveld

Aloe pictifolia Rare

Plate 12



E. van Jaarsveld

Gasteria glauca Critically Rare



C. Paterson-Jones

Gasteria rawlinsonii Rare



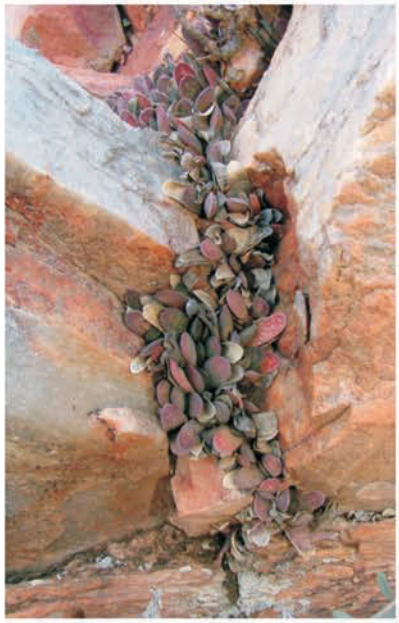
E. van Jaarsveld

Gasteria croucheri VU



E. van Jaarsveld

Gasteria glomerata Critically Rare



E. van Jaarsveld

Gasteria pillansii var. nov. VU



E. van Jaarsveld

Gasteria nitida var. *amstrongii* CR

Plate 13



C. Paterson-Jones

Bulbinella eburniflora VU



C. Paterson-Jones

Bulbine fallax Rare



I. Johnson

Kniphofia acraea Rare



C. Paterson-Jones

Kniphofia evansii Rare



M. Lötter

Kniphofia triangularis subsp. *obtusiloba* Rare



C.Paterson-Jones

Bulbinella latifolia subsp. *doleritica* VU

Plate 14



J.H. Vlok

Haworthia truncata var. *truncata* VU



J.H. Vlok

Haworthia bayeri EN



M. Lötter

Haworthia limifolia VU



J.H. Vlok

Haworthia emelyae var. *emelyae* VU



J.H. Vlok

Haworthia variegata var. *variegata* EN



D. Raimondo

Haworthia marginata VU



J.H. Vlok

Haworthia vlokii Rare

Bulbine louwii L.I.Hall

Status: **Rare**

D. Raimondo

Distribution: WC. Bitterfontein and Platbakkies to southern Knersvlakte.

Habitat: In open patches amongst quartz pebbles.

Rationale: Known from fewer than five sites, a habitat specialist that occurs only in quartz patches. Not threatened.

Bulbine margarethae L.I.Hall

Status: **VU** D2

C. Archer, D. Raimondo & J.E. Victor

Distribution: WC. Knersvlakte.

Habitat: Limestone outcrops.

Rationale: Known from one location and has lost habitat to mining of limestone ridges. Although not currently declining it remains potentially threatened by harvesting for horticultural purposes and future mining activities.

Bulbine monophylla Poelln.

Status: **CR** B1ab(iii)

D. Raimondo & N.A. Helme

Distribution: WC. Porterville and Tulbagh.

Habitat: On the edges of vleis.

Rationale: EOO < 100 km^2. One known location remains after habitat loss to wheat cultivation in the past. It continues to decline because of habitat degradation as a result of alien grass infestation and overgrazing.

F **Bulbine navicularifolia** G.Will.

Status: **Rare**

D. Raimondo

Distribution: WC. Botterkloof Pass to Nieuwoudtville.

Habitat: On gentle slopes, in stony clay.

Rationale: Known from fewer than five sites. Not threatened.

Bulbine pendens G.Will. & Baijnath

Status: **Critically Rare**

D. Raimondo

Distribution: NC. Richtersveld.

Habitat: Vertical quartz cliffs.

Rationale: A range-restricted species (EOO < 10 km^2), known from one site. Not threatened because of the inaccessibility of its habitat.

F **Bulbine quartzicola** G.Will.

Status: **VU** D2

C. Archer & J.E. Victor

Distribution: NC. Southern Richtersveld to Bulletrap Pass and central Knersvlakte.

Habitat: On pebbly, quartzite pavements and ledges.

Rationale: Fewer than five known locations are potentially threatened by grazing and trampling by livestock.

Bulbine rhopalophylla Dinter

Status: **NT*** D2

E.J. van Jaarsveld, J.E. Victor & L. Potter

Distribution: NC. Sperrgebiet (Namibia) and Gariep Valley.

Habitat: On slopes in micaceous schist and on flats in quartz gravel.

Rationale: Recorded from five locations in South Africa. Potentially threatened by mining and grazing and trampling by goats. Down-listed from VU D2 because of application of regional assessment criteria.

Bulbine striata Baijnath & Van Jaarsv.

Status: **Critically Rare**

E.J. van Jaarsveld & L. Potter

Distribution: NC. Pellaberg.

Habitat: Amongst quartz pebbles and rocks in well-drained soil on the upper and middle slopes below sheer rock faces.

Rationale: Known from one site. Not threatened because of the inaccessibility of its habitat.

F **Bulbine torta** N.E.Br.

Status: **Rare**

D. Raimondo, P.A. Manyama & D.A. Kamundi†

Distribution: NC WC. Roggeveld and Matsikamma Mountains.

Habitat: Shallow pans on sandstone slabs, 230–1 000 m.

Rationale: A habitat specialist known from five subpopulations. No known threats.

Bulbine wiesei L.I.Hall

Status: **Rare**

D. Raimondo

Distribution: WC. Kotzesrus and Platbakkies to southern Knersvlakte.

Habitat: Succulent Karoo, amongst white quartz pebbles.

Rationale: Known from five subpopulations in Namaqualand. Even within the correct habitat this species is rare, occurring as widely scattered individuals. No known threats.

Bulbinella Kunth

F **Bulbinella eburniflora** P.L.Perry **Plate 13**

Status: **VU** D2

E. Marinus & D. Raimondo

Distribution: NC. Nieuwoudtville to Clanwilliam.

Habitat: Renosterveld, clay soils in flat, tillite-shale areas.

Rationale: EOO < 150 km^2, AOO 14 km^2. Habitat loss to agriculture since 1940 is $> 80\%$. Plants are very sensitive to disturbance and trampling and grazing by livestock results in death. Populations are all small and fragmented and are potentially threatened by grazing livestock, future ploughing and climate change.

F **Bulbinella latifolia** Kunth subsp. **doleritica** (P.L.Perry) P.L.Perry **Plate 13**

Status: **VU** B1ab(v)+2ab(v)

D. Raimondo & E. Marinus

Distribution: NC. Bokkeveld Escarpment.

Habitat: Heavy red clay on vertisol aprons surrounding dolerite koppies.

Rationale: EOO 63 km^2, AOO < 20 km^2. This taxon is restricted to dolerite vertisol aprons and is known from seven locations. It has lost habitat (12%) to agriculture in the past. At present populations are decreasing for unknown reasons, but we suspect that it is highly sensitive to grazing and climate fluctuations.

F **Bulbinella latifolia** Kunth subsp. **toximontana** P.L.Perry

Status: **VU** D1+2

C. Archer, N.A. Helme & J.E. Victor

Distribution: WC. Gifberg and Matsikamma Mountains.

Habitat: Seasonally wet sands alongside streams.

Rationale: A range-restricted taxon (EOO < 50 km^2) known from two locations, 150 plants have been found in the four known subpopulations. A few more undiscovered subpopulations are likely to exist but we suspect that there are less than 1 000 mature individuals in the population. This taxon is potentially threatened by alterations in drainage patterns due to rooibos tea cultivation.

Bulbinella nana P.L.Perry

Status: **VU** D2

C. Archer & J.E. Victor

e**Distribution:** NC. Namaqualand, Steinkopf and Springbok.

Habitat: Namaqualand Klipkoppe Shrubland, on granitic soils.

Rationale: Known from two locations in northern Namaqualand. Potentially threatened by overgrazing.

F **Bulbinella potbergensis** P.L.Perry

Status: **CR** B1ab(iii)+2ab(iii)

N.A. Helme & D. Raimondo

e**Distribution:** WC. Northern side of the Potberg range.

Habitat: Clay silcrete with stones, shale with sandstone colluvium.

Rationale: EOO 10 km^2. Known from two locations. It has lost habitat to agriculture and habitat quality is declining as a result of invasion by alien plants as well as the recent introduction of ostriches.

Gasteria Duval

Gasteria batesiana G.D.Rowley var. **batesiana**

Status: **NT** A2d; B1ab(v)

E.J. van Jaarsveld & D. Raimondo

Distribution: KZN LM MP. Northern KwaZulu-Natal, Mpumalanga and as far north as the Strydpoort Mountains in Limpopo Province. Also occurs in Swaziland.

Habitat: Dry places on rock outcrops and cliffs, 600–900 m.

Rationale: EOO 19 000 km^2. Known from less than 15 locations. The number of mature individuals is suspected to have declined by 20% over the past three generations (generation length 30–40 years), as a result of consistently high rates of harvesting of adult individuals for the medicinal plant trade.

F **Gasteria batesiana** G.D.Rowley var. **dolomitica** Van Jaarsv. & A.E.van Wyk

Status: **Critically Rare**

E.J. van Jaarsveld & D. Raimondo

e**Distribution:** LM. Penge.

Habitat: Sheer dolomite cliffs.

Rationale: Known from one site, occurs on cliffs and is therefore not threatened.

Gasteria baylissiana Rauh

Status: **Rare**

J.E. Victor, E.J. van Jaarsveld & A.P. Dold

e**Distribution:** EC. Suurberg.

Habitat: Sheer rock faces derived from quartzitic sandstone of the Witteberg Group, usually in light shade.

Rationale: Known from a single gorge in the Suurberg range. Not threatened because of the inaccessibility of its habitat.

Gasteria bicolor Haw. var. **liliputana** (Poelln.) Van Jaarsv.

Status: **Rare**

J.E. Victor, A.P. Dold & E.J. van Jaarsveld

e**Distribution:** EC. Grahamstown district, Pluto's Vale.

Habitat: Sandstone ridges.

Rationale: A range-restricted taxon (EOO < 500 km^2). Not threatened as its habitat is unsuitable for agricultural activities.

F **Gasteria carinata** (Mill.) Duval var. **retusa** Van Jaarsv.

Status: **Rare**

E.J. van Jaarsveld & D. Raimondo

e**Distribution:** WC. Upper Breede River Valley.

Habitat: Steep slopes on shale growing in Breede Shale Renosterveld.

Rationale: Although this taxon has lost some habitat and individuals (less than 5% over the past 10 years) to vineyards, loss is not ongoing and remaining individuals are safe as they occur on steep slopes that are not ploughable.

F **Gasteria carinata** (Mill.) Duval var. **thunbergii** (N.E.Br.) Van Jaarsv.

Status: **Rare**

E.J. van Jaarsveld & D. Raimondo

e**Distribution:** WC. Gourits River.

Habitat: Enon conglomerates on riverbanks in Southern Cape Valley Thicket.

Rationale: A range-restricted taxon (EOO 25 km^2), known from two sites. It occurs on steep riverbanks and is therefore not threatened by agriculture.

Gasteria croucheri (Hook.f.) Baker **Plate 12**

Status: **VU** A2d

E.J. van Jaarsveld & D. Raimondo

e**Distribution:** EC KZN. Mapumulo to Port St Johns.

Habitat: Scarp forest, on sandstone outcrops and cliffs, usually in partial shade in dry areas, 200–600 m.

Rationale: A 30% decline in the number of mature individuals over the past three generations is suspected (generation length 30–40 years). Decline is the result of consistently high rates of harvesting of adult individuals for the medicinal plant trade.

F **Gasteria disticha** (L.) Haw.

Status: **CR** B1ab(ii,iii,v)+2ab(ii,iii,v)

E.J. van Jaarsveld & D. Raimondo

e**Distribution:** WC. Worcester to Robertson.

Habitat: Shale renosterveld, limestone outcrops.

Rationale: Known from one location and less than 300 mature individuals. It has previously lost habitat and continues to decline as a result of limestone quarrying and mining.

F **Gasteria doreeniae** Van Jaarsv. & A.E.van Wyk

Status: **Critically Rare**

E.J. van Jaarsveld & D. Raimondo

e**Distribution:** EC. Riebeek-East district, Swartwaterspoort.

Habitat: Steep, south-facing slopes in shade in Suurberg Quartzite Fynbos.

Rationale: Known from one site. Not threatened.

Gasteria ellaphieae Van Jaarsv.

Status: **Rare**

E.J. van Jaarsveld, A.P. Dold & D. Raimondo

e**Distribution:** EC. Patensie, southern end of the Baviaanskloof.

Habitat: Steep, south-facing slopes in subtropical thicket vegetation, in rock crevices.

Rationale: Known from three collections near Patensie. Not threatened as subpopulations occur within a protected area and are very isolated.

F **Gasteria glauca** Van Jaarsv. Plate 12

Status: **Critically Rare**

E.J. van Jaarsveld & D. Raimondo

e**Distribution:** EC. Joubertina district, Kouga River Valley.

Habitat: Cliff faces in quartzitic sandstone.

Rationale: Known from one site. Despite a number of searches in similar habitat it has not been found elsewhere. Not threatened because of the inaccessibility of its habitat.

Gasteria glomerata Van Jaarsv. Plate 12

Status: **Critically Rare**

E.J. van Jaarsveld & J.E. Victor

e**Distribution:** EC. Patensie, at the southern end of the Baviaanskloof.

Habitat: Sheer, south-facing rock faces in soils derived from quartzitic sandstone.

Rationale: Known from one site. Not threatened because of the inaccessibility of its habitat.

Gasteria nitida (Salm-Dyck) Haw. var. **armstrongii** (Schönland) Van Jaarsv. Plate 12

Status: **CR** A4cd; B1ab(v)

E.J. van Jaarsveld & D. Raimondo

e**Distribution:** EC. Gamtoos Valley.

Habitat: Coastal renosterveld.

Rationale: Known from one location in the Gamtoos River Valley (EOO 8 km^2). This taxon has suffered past losses as a result of coastal development, harvesting for horticultural purposes and quarrying. Currently threatened by agriculture, and ongoing harvesting for horticultural purposes. Also potentially threatened by further coastal development. Past and future habitat loss and expected continuing decline in the number of mature individuals will result in at least an 80% reduction in the total population over less than three generations (generation length 30 years).

F **Gasteria pillansii** Kensit **var. nov.** Plate 12

Voucher: *Van Jaarsveld & Duncan 7912* NBG

Status: **VU** D2

E.J. van Jaarsveld & D. Raimondo

e**Distribution:** NC. Springbok.

Habitat: Succulent shrubland, quartz veins.

Rationale: A taxon that is in the process of being described, known from only one location and potentially threatened by future diamond quartz mining.

F **Gasteria polita** Van Jaarsv.

Status: **Critically Rare**

E.J. van Jaarsveld & D. Raimondo

e**Distribution:** WC. Knysna forests.

Habitat: Semi-exposed shrub forest on upper slopes of steep embankments and outcrops in Afro-temperate forest.

Rationale: Known from one site. Not threatened as it occurs within a protected area.

Gasteria rawlinsonii Oberm. Plate 12

Status: **Rare**

E.J. van Jaarsveld & L. Potter

e**Distribution:** EC. Kouga and Baviaanskloof Mountains.

Habitat: Shady places in sheer, narrow ravines of the Kouga and Baviaanskloof Mountains, in rock crevices.

Rationale: Known from two sites. Not threatened because of the inaccessibility of its habitat.

F **Gasteria tukhelensis** Van Jaarsv.

Status: **Rare**

E.J. van Jaarsveld & D. Raimondo

e**Distribution:** KZN. Tugela River.

Habitat: Cliff faces.

Rationale: A newly described species known from one site. Not threatened as it occurs on cliff faces in a very remote area where it is not easily accessible.

Gasteria vlokii Van Jaarsv.

Status: **Rare**

E.J. van Jaarsveld, J.H. Vlok & D. Raimondo

e**Distribution:** WC. Groot Swartberg Mountains.

Habitat: Rock crevices on high-altitude sandstone slopes.

Rationale: A range-restricted habitat specialist (EOO < 100 km^2), known from fewer than five subpopulations. No known threats.

Haworthia Duval

F **Haworthia aristata** Haw.

Status: **EN** B1ab(i,ii,iii,iv,v)

J.H. Vlok & D. Raimondo

e**Distribution:** EC. Port Elizabeth to Kommadagga.

Habitat: Thicket mosaics.

Rationale: EOO 1 000 km^2. Known from four locations. There is ongoing degradation of habitat throughout its range as a result of grazing by livestock. There is further destruction of habitat due to urban expansion and mining (rock quarrying) in the southern part of the range. Collecting for horticultural purposes poses an additional pressure on mature individuals.

F **Haworthia attenuata** (Haw.) Haw.

Status: **EN** A4acd

V.L. Williams & A.P. Dold

Distribution: EC. Hankey to the Fish River.

Habitat: Bushveld and dry karroid scrub.

Rationale: Estimated to have declined by $> 30\%$ over the past 100 years as a result of medicinal plant harvesting and habitat loss to urban development. A further 20% reduction is predicted over the next 50 years because of urban expansion as well as persistent harvesting of medicinal plants. The plants are very long-lived (generation length 50 years) and their restricted habitat and distribution (EOO 9 400 km^2) is a further threat to their persistence.

F **Haworthia bayeri** J.D.Venter & S.A.Hammer Plate 14

Status: **EN** A2a; B1ab(ii,iii,iv,v)

J.H. Vlok & D. Raimondo

e**Distribution:** WC. Uniondale to south of Oudtshoorn.

Habitat: Gravel apronveld and renosterveld-spekboomveld transitions.

Rationale: EOO 1 500 km². Subpopulations are small and isolated. There has been a 50% decline in the number of individuals at all nine subpopulations over the past 15 years as a result of succulent collecting and habitat degradation from firewood extraction and grazing and trampling by livestock (generation length suspected to be a minimum of 10 years).

[F] **Haworthia blackburniae** W.F.Barker var. **derustensis** M.B.Bayer

Status: **EN** A2ad

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. De Rust.

Habitat: Arid north-facing slopes.

Rationale: Known from one location, with a 50% loss of the population over the past 10 years due to succulent plant collecting.

Haworthia blackburniae W.F.Barker var. **graminifolia** (G.G.Sm.) M.B.Bayer

Status: **CR** B1ab(iii,v)

J.H. Vlok, D. Raimondo & N.A. Helme

[e]**Distribution:** WC. Foothills of the Groot Swartberg Mountains.

Habitat: Succulent karoo and arid fynbos, in rocky crevices on cooler, higher, south-facing, rocky slopes.

Rationale: Extant at only one location in a road reserve, where it is threatened by encroachment from invasive alien grasses. The immediate area in which this taxon occurs is affected by agriculture and infrastructure development for tourism.

Haworthia bruynsii M.B.Bayer

Status: **EN** B1ab(iii)

J.H. Vlok & D. Raimondo

[e]**Distribution:** EC. Steytlerville.

Habitat: Succulent karoo shrubland, hard ground under small bushes on low, stony hills.

Rationale: EOO < 300 km². Known from three locations. It has lost adult individuals as a result of harvesting for horticultural purposes and is currently threatened by grazing by livestock, which is causing continuing decline of its habitat.

[F] **Haworthia chloracantha** Haw. var. **denticulifera** (Poelln.) M.B.Bayer

Status: **EN** B1ab(ii,iii,iv,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Gourits River to Great Brak River.

Habitat: Renosterveld thicket mosaic, in gravelly, clay soil on south-facing slopes.

Rationale: EOO 300 km². Recorded from five locations. All known subpopulations are under threat and there is a continuing decline of individuals as a result of collecting for the specialist horticultural trade, and habitat loss to urban expansion and encroachment of invasive alien plants.

[F] **Haworthia chloracantha** Haw. var. **subglauca** Poelln.

Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v)

N.A. Helme & J.H. Vlok

[e]**Distribution:** WC. Mossel Bay, Great Brak River.

Habitat: Shale and conglomerate.

Rationale: Known from three locations along a 20 km² stretch of the Great Brak River. It continues to decline because of urban expansion, agriculture and invading alien plants.

[F] **Haworthia coarctata** Haw. var. **tenuis** (G.G.Sm.) M.B.Bayer

Status: **Critically Rare**

J.E. Victor

[e]**Distribution:** EC. Alexandria district, near Kenton.

Habitat: Clay soils in Kowie Thicket.

Rationale: Known from one farm on the Bushmans River near Kenton. Not threatened.

[F] **Haworthia cooperi** Baker var. **venusta** (C.L.Scott) M.B.Bayer

Status: **CR** B1ab(iii,v)+2ab(iii,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** EC. Grahamstown to Alexandria.

Habitat: Sour grassland, in shallow, sandy, loamy soil.

Rationale: Known from one location with severe habitat loss due to agriculture and ongoing degradation of remnant habitat as a result of grazing by livestock and invading alien plants.

Haworthia emelyae Poelln. var. **comptoniana** (G.G.Sm.) J.D.Venter & S.A.Hammer

Status: **CR** A2a; B1ab(iii,v)+2ab(iii,v); C2a(ii)

J.H. Vlok, N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Willowmore.

Habitat: Amongst quartz stones.

Rationale: Known from one site with 80% loss of individuals as a result of severe overgrazing and from ongoing collecting for the specialist succulent horticultural trade. Less than 100 mature individuals are known to be extant.

Haworthia emelyae Poelln. var. **emelyae** **Plate 14**

Status: **VU** B1ab(ii,iii,iv,v); C1+2a(i)

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Little Karoo, Avontuur to Springfontein.

Habitat: Mountain tops from a variety of geological formations.

Rationale: EOO 2 000 km². Recorded from fewer than 10 locations and the total number of mature individuals is estimated to be less than 10 000. This taxon has lost habitat to agriculture and the number of mature individuals continues to decline as a result of collecting for the specialist succulent horticultural trade as well as degradation of its habitat due to grazing and trampling by livestock.

Haworthia emelyae Poelln. var. **major** (G.G.Sm.) M.B.Bayer

Status: **VU** D2

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Muiskraal to Sandkraal.

Habitat: Arid fynbos, in sandstone crevices in a variety of geological formations.

Rationale: Known from two locations. Potentially threatened by sporadic collecting of individuals and general habitat degradation due to grazing by livestock.

Haworthia emelyae Poelln. var. **multifolia** M.B.Bayer

Status: **EN** A2a; B1ab(iii,v)+2ab(iii,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Ladismith to Riversdale.

Habitat: Stony shales.

Rationale: EOO 10 km², AOO 4.7 km². Known from two

locations at the base of the Langeberg. Around 50% of individuals lost over the past 20 years as a result of succulent plant collecting and habitat degradation. Decline is ongoing, but moderate.

Haworthia fasciata (Willd.) Haw.

Status: **NT** B1ab(ii,iii,iv,v)

J.E. Victor & G. Marx

e**Distribution:** EC. Gamtoos River Valley to Port Elizabeth.

Habitat: Stony areas in grassy fynbos in acid sandstone-derived soil.

Rationale: Although it has a restricted distribution (EOO 3 400 km^2), it has been recorded from more than 20 locations. Habitat loss is ongoing as a result of ploughing for pasture as well as rapid urban expansion.

Haworthia floribunda Poelln. var. **floribunda**

Status: **CR** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

J.H. Vlok, N.A. Helme & D. Raimondo

e**Distribution:** WC. Heidelberg.

Habitat: Well-shaded areas in shale renosterveld in microhabitats of moss and lichen.

Rationale: EOO 20 km^2, AOO 1 km^2. Known from two highly localised, severely fragmented subpopulations. It is affected by collecting for the specialist succulent horticultural trade, road construction and grazing by livestock.

F **Haworthia floribunda** Poelln. var. **major** M.B.Bayer

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

J.H. Vlok, N.A. Helme & D. Raimondo

e**Distribution:** WC. Swellendam.

Habitat: Amongst stones and moss on shales.

Rationale: EOO < 20 km^2, AOO < 5 km^2. Known from two locations around Swellendam, with a continuing decline due to invading alien plants and urban expansion.

F **Haworthia glabrata** (Salm-Dyck) Baker

Status: **VU** D1+2

N.A. Helme

e**Distribution:** EC. Butterworth.

Habitat: Steep cliffs.

Rationale: Only recently discovered in the wild. There is one confirmed population of around 1 000 plants. Potentially threatened by grazing by livestock and collecting for the specialist succulent horticultural trade.

Haworthia heidelbergensis G.G.Sm. var. **heidelbergensis**

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

J.H. Vlok & D. Raimondo

e**Distribution:** WC. Heidelberg.

Habitat: Deeply embedded in moss and lichen in shaded areas on south-facing slopes.

Rationale: EOO 30 km^2, AOO < 10 km^2. Known from three locations threatened by habitat degradation as a result of grazing by livestock, the spread of informal settlements and harvesting for the specialist succulent horticultural trade.

F **Haworthia heidelbergensis** G.G.Sm. var. **minor** M.B.Bayer

Status: **VU** D2

N.A. Helme

e**Distribution:** WC. Bredasdorp.

Habitat: Shales, rocky veins.

Rationale: Known from one location with a potential threat of herbicide drift spreading from surrounding wheat fields.

F **Haworthia heidelbergensis** G.G.Sm. var. **toonensis** M.B.Bayer

Status: **VU** D2

N.A. Helme

e**Distribution:** WC. Bredasdorp.

Habitat: Shales, in rocky outcrops.

Rationale: Known from one location with a potential threat of herbicide drift spreading from surrounding wheat fields as well as trampling and grazing by livestock.

F **Haworthia herbacea** (Mill.) Stearn var. **flaccida** M.B.Bayer

Status: **CR** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

J.H. Vlok & D. Raimondo

e**Distribution:** WC. Worcester.

Habitat: Succulent karoo shrubland on shales.

Rationale: EOO and AOO < 5 km^2. Known from one location. Declining as a result of agriculture (olive orchards and vineyards), habitat degradation caused by grazing, and a potential threat of collecting for the specialist succulent horticultural trade.

F **Haworthia herbacea** (Mill.) Stearn var. **herbacea**

Status: **VU** B1ab(ii,iii)

D. Raimondo

e**Distribution:** WC. Worcester to Montagu.

Habitat: Shale soils.

Rationale: EOO 1 885 km^2. Recorded from fewer than 10 locations. Declining because of expansion of vineyards. Potentially also threatened by harvesting for medicinal purposes.

F **Haworthia herbacea** (Mill.) Stearn var. **paynei** (Poelln.) M.B.Bayer

Status: **VU** D2

J.H. Vlok & D. Raimondo

e**Distribution:** WC. McGregor.

Habitat: Dry renosterveld and succulent karoo shrubland.

Rationale: EOO 10 km^2. Recorded from three locations. Potentially threatened by collecting for the specialist succulent horticultural trade and urban expansion.

F **Haworthia kemari** M.Hayashi

Status: **Rare**

D. Raimondo

e**Distribution:** EC WC. Jansenville.

Habitat: Rocky karroid vegetation.

Rationale: A range-restricted species (EOO < 50 km^2), known from one site. No known threats.

Haworthia kingiana Poelln.

Status: **CR** A4ac; B1ab(iii,v)

J.H. Vlok & D. Raimondo

e**Distribution:** WC. Mossel Bay.

Habitat: Renosterveld, on slopes of low hills.

Rationale: EOO 45 km^2. Two of the four known subpopulations have been lost over the past 20 years, one to road construction and the second as a result of a landowner digging up the entire subpopulation to sell to the special-

ist succulent horticultural trade. Continuing decline of habitat at the largest remaining subpopulation is taking place as a result of invading alien plants, grazing by livestock and coastal development. A 50% decline has taken place in the past generation (30 years) and another 30% is expected during the next two generations (60 years).

Haworthia koelmaniorum Oberm. & D.S.Hardy var. **koelmaniorum**

Status: **VU** A2acd; C2a(i)

L. von Staden & M. Lötter

[e]**Distribution:** MP. Groblersdal to Loskop Dam.

Habitat: Bushveld, on sandstone outcrops and ridges.

Rationale: The total population of this taxon is estimated to be 2 600 mature individuals. Collecting of plants out of the wild for medicinal and horticultural purposes is the main threat and has resulted in the local extinction at the type locality and drastic reductions at two other sites. Further to this loss from collecting, one subpopulation was lost when the habitat was converted to farmland. We suspect an overall decline of 30% to have taken place over the past three generations (60 years). Overgrazing and trampling by cattle on communally owned lands as well as invading alien plants are additional, but less severe, threats causing continuing declines.

Haworthia koelmaniorum Oberm. & D.S.Hardy var. **mcmurtryi** (C.L.Scott) M.B.Bayer

Status: **EN** B1ab(iii,v)+2ab(iii,v)

M. Lötter, J.E. Burrows, A. Biko'o & J.E. Victor

[e]**Distribution:** MP. Loskop Dam.

Habitat: Grassland.

Rationale: EOO and AOO 4 km^2. Known from two subpopulations. Declining as a result of a deleterious fire regime, herbivory and harvesting for horticultural and medicinal purposes.

[S] **Haworthia limifolia** Marloth **Plate 14**

Status: **VU** A2d

V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya

Distribution: KZN MP. From Hectorspruit, Barberton and Mtubatuba through the Swaziland Lebombo Mountains. Probably Mozambique.

Habitat: Elevated grasslands along the tops of hills and ridges, often camouflaged amongst small stones and clumps of grass.

Rationale: This species is very popular in the medicinal plant trade and remains the preferred *mathithibala* (Zulu for 'standing still', referring to various plants traditionally used for warding off witches, lightning and evil spirits) species, despite the existence of substitute species and being cultivated by healers and traders. The long-term protection of the plants in the wild, even in protected sites, is therefore not assured. Large numbers of mature plants have been removed from the wild and a reduction of more than 30% over the last 60 years is a reasonable estimate of its decline in South Africa. Presence in Mozambique is uncertain, and is possibly highly localised and close to the South African and Swaziland borders. It is heavily harvested in Swaziland, hence we also estimate a 30% decline globally and the national assessment is not downgraded.

Haworthia lockwoodii Archibald

Status: **EN** B1ab(iii,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Laingsburg.

Habitat: Succulent karoo shrubland, on dry, north-facing slopes, usually in Witteberg quartzite.

Rationale: EOO 110 km^2. Recorded from five subpopulations. Declining as a result of collecting for the specialist succulent horticultural trade and overgrazing by livestock. A consignment of plants seized at Laingsburg in 2005 contained over 200 plants of this species.

[F] **Haworthia longiana** Poelln.

Status: **EN** A2bc; B1ab(iii)+2ab(iii)

J.H. Vlok & D. Raimondo

[e]**Distribution:** EC. Sundays and Gamtoos River Valleys.

Habitat: Valley bottoms and lower slopes of hills in rocky, loamy soils.

Rationale: EOO 3 500 km^2, AOO 600 km^2. More than 50% of its habitat has been lost to intense citrus and other irrigated crop cultivation. Habitat loss commenced in the 1960s, which is less than three generations of this long-lived species (generation length 20 years). Degradation of remnant habitat by grazing practices is currently taking place.

[F] **Haworthia magnifica** Poelln. var. **acuminata** (M.B.Bayer) M.B.Bayer

Status: **CR** B1ab(iii,v)+2ab(iii,v); C2a(ii)

J.H. Vlok, D. Raimondo & N.A. Helme

[e]**Distribution:** WC. Lower Gourits River.

Habitat: Transition from limestone to clay.

Rationale: Known from one location (EOO and AOO < 1 km^2), with most of the original population destroyed by road construction. There is a slow, continuing decline due to invading alien plants and collecting for the specialist succulent horticultural trade. The number of mature individuals is estimated to be less than 200.

Haworthia magnifica Poelln. var. **atrofusca** (G.G.Sm.) M.B.Bayer

Status: **VU** B1ab(iii,iv,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Riversdale and Potberg.

Habitat: Renosterveld on shale.

Rationale: EOO 735 km^2. Known from fewer than 10 locations. There has been severe habitat loss due to wheat cultivation, and there is ongoing loss because of invading alien plants and collecting of wild plants for the specialist succulent horticultural trade.

Haworthia magnifica Poelln. var. **dekenahii** (G.G.Sm.) M.B.Bayer

Status: **CR** B1ab(iii,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Northwest of Albertinia.

Habitat: Shales.

Rationale: Known from one location (EOO and AOO < 10 km^2) and declining as a result of collecting for the specialist succulent horticultural trade, invading alien plants and grazing and trampling by ostriches.

[F] **Haworthia magnifica** Poelln. var. **splendens** J.D.Venter & S.A.Hammer

Status: **CR** A2a; B1ab(iii,v); C2a(i)

J.H. Vlok, D. Raimondo & N.A. Helme

[e]**Distribution:** WC. Albertinia.

Habitat: Renosterveld-fynbos transition, loamy soil.

Rationale: EOO 64 km^2. Known from five small, severely fragmented subpopulations. The total number of mature

individuals is estimated to be 150. This taxon has lost over 80% of its habitat to agriculture and severe invasion by alien plants over the past 100 years (generation length 50 years). Continuing decline of habitat and mature individuals is taking place as a result of collecting for the specialist succulent horticultural trade, invading alien plants and overgrazing by livestock.

Haworthia marginata (Lam.) Stearn **Plate 14**

Status: **VU** B1ab(ii,iii,v)+2ab(ii,iii,v)
J.H. Vlok & D. Raimondo

e**Distribution:** WC. Worcester to Ashton to Bredasdorp.
Habitat: On shales, sandstone or gravel.
Rationale: EOO 4 500 km^2. Known from 10 locations. It has lost habitat because of grazing and ploughing for wheat. Declining as a result of collecting for the specialist succulent horticultural trade, invading alien plants, hybridisation with other *Haworthia* species, and overgrazing and trampling by livestock, especially ostriches.

Haworthia marumiana Uitewaal var. **dimorpha** (M.B.Bayer) M.B.Bayer

Status: **VU** D2
N.A. Helme

e**Distribution:** WC. Laingsburg.
Habitat: Fynbos, on Table Mountain Sandstone.
Rationale: Known from the type locality (EOO 20 km^2, AOO 1 km^2). Potential threats include collecting for the specialist succulent horticultural trade and overgrazing by livestock.

Haworthia minima (Aiton) Haw. var. **poellnitziana** (Uitewaal) M.B.Bayer

Status: **VU** D1+2
N.A. Helme

e**Distribution:** WC. Drew to Robertson.
Habitat: Fynbos, on old river gravels.
Rationale: Known from one location (EOO 20 km^2, AOO 1 km^2) where less than 1 000 mature individuals are potentially threatened by agriculture.

Haworthia mirabilis (Haw.) Haw. var. **badia** (Poelln.) M.B.Bayer

Status: **CR** B1ab(ii,iii,v)+2ab(ii,iii,v)
J.H. Vlok, N.A. Helme & D. Raimondo

e**Distribution:** WC. Napier to Caledon.
Habitat: Fynbos, amongst pebbles and low-growing plants in sandstone-derived depauperate clay.
Rationale: Known from one location (EOO < 5 km^2). This taxon lost habitat because of urban expansion, quarrying, plant collecting and invading alien plants. There is an ongoing threat from alien plant infestations and collecting for the specialist succulent horticultural trade.

F **Haworthia mirabilis** (Haw.) Haw. var. **beukmannii** (Poelln.) M.B.Bayer

Status: **CR** B1ab(iii,v)
J.H. Vlok & D. Raimondo

e**Distribution:** WC. Caledon.
Habitat: Succulent Karoo-renosterveld transition, on arid, north-facing slopes in weathered shales.
Rationale: EOO and AOO 1 ha, known from one remnant patch of renosterveld next to a public road. Declining as a result of collecting for the specialist succulent horticultural trade and habitat degradation caused by soil erosion and moderate pressure from grazing livestock.

F **Haworthia mirabilis** (Haw.) Haw. var. **calcarea** M.B.Bayer

Status: **Rare**
N.A. Helme

e**Distribution:** WC. De Hoop to Potberg.
Habitat: Coastal fynbos on limestone.
Rationale: A range-restricted taxon (EOO < 200 km^2) known from five subpopulations. Most of the population is conserved in De Hoop Nature Reserve and it is therefore not threatened.

F **Haworthia mirabilis** (Haw.) Haw. var. **consanguinea** M.B.Bayer

Status: **Rare**
N.A. Helme

e**Distribution:** WC. Greyton.
Habitat: Fynbos on sandstone slopes.
Rationale: A range-restricted taxon (EOO < 100 km^2) known from fewer than five collecting sites. Not threatened.

Haworthia mirabilis (Haw.) Haw. var. **mirabilis**

Status: **CR** B1ab(iii,v)
N.A. Helme, J.H. Vlok & D. Raimondo

e**Distribution:** WC. Bredasdorp.
Habitat: Renosterveld on shale soils.
Rationale: EOO < 5 km^2. Known from one location, where there is a continuing decline due to invading alien plants, grazing by livestock and collecting for the specialist succulent horticultural trade.

Haworthia mirabilis (Haw.) Haw. var. **paradoxa** (Poelln.) M.B.Bayer

Status: **EN** B1ab(ii,iii,v)
J.H. Vlok & D. Raimondo

e**Distribution:** WC. Vermaaklikheid.
Habitat: Limestone in coastal fynbos.
Rationale: EOO < 10 km^2. Recorded from two locations. This taxon is declining because of collecting for the specialist succulent horticultural trade, invading alien plants and coastal development.

F **Haworthia mirabilis** (Haw.) Haw. var. **sublineata** (Poelln.) M.B.Bayer

Status: **CR** B1ab(ii,iii,v)+2ab(ii,iii,v)
J.H. Vlok, N.A. Helme & D. Raimondo

e**Distribution:** WC. Bredasdorp.
Habitat: Arid fynbos on sandstone soils.
Rationale: EOO and AOO < 2 km^2. Known from one subpopulation. A second subpopulation has been lost over the past 15 years to urban expansion, encroachment from invasive aliens and collecting for the specialist succulent horticultural trade. Invasive aliens and collecting are causing a continuing decline of the population.

F **Haworthia monticola** Fourc. var. **asema** M.B.Bayer

Status: **VU** D1+2
N.A. Helme

e**Distribution:** WC. Northeast of Calitzdorp.
Habitat: Conglomerates in succulent karoo shrubland.
Rationale: EOO < 200 km^2. Known from three sites with less than 1 000 mature individuals. Potentially threatened by trampling and habitat degradation by ostriches.

[F] **Haworthia monticola** Fourc. var. **monticola**

Status: **Rare**

J.E. Victor

[e]**Distribution:** EC WC. Uniondale to Herold.

Habitat: Arid fynbos slopes, 740–850 m.

Rationale: EOO < 1 000 km^2. Known from five sites. Not threatened.

Haworthia mutica Haw. var. **mutica**

Status: **VU** A2bc; B1ab(ii,iii,iv,v)

N.A. Helme

[e]**Distribution:** WC. Drew to De Hoop.

Habitat: Rocky shale ridges.

Rationale: EOO < 3 000 km^2. This taxon has lost 35% of its habitat to agriculture over the past 70 years, which is less than three generations (generation length 40 years). In addition, it is known from fewer than 10 locations. A decline as a result of agriculture (wheat and fruit cultivation) is ongoing.

[F] **Haworthia mutica** Haw. var. **nigra** M.B.Bayer

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

J.H. Vlok, N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Heidelberg and Kransriviermond.

Habitat: Shale renosterveld mosaic with thicket.

Rationale: EOO 20 km^2, AOO < 2 km^2. Known from four locations in the Heidelberg area. This taxon is declining because of collecting for the specialist succulent horticultural trade, urban expansion, overgrazing by livestock, and invading alien plants.

[F] **Haworthia outeniquensis** M.B.Bayer

Status: **VU** B1ab(ii,iii,iv,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Robinson Pass to Montagu Pass and inland to Paardepoort.

Habitat: Arid fynbos on rocky sandstone outcrops.

Rationale: EOO 270 km^2. Known from three locations. A few more undiscovered subpopulations and locations are likely to occur. There is continuing decline as a result of dense alien infestations (pines, *Acacia mearnsii* and species of *Hakea*) at all known locations.

Haworthia parksiana Poelln.

Status: **CR** A2acd; B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Great Brak River.

Habitat: Renosterveld with karroid elements, in sandy soil, completely under the protection of small shrubs, well hidden in fallen leaf debris or among moss and lichen.

Rationale: EOO < 30 km^2, AOO < 2 km^2. Known from three small, fragmented subpopulations in the Mossel Bay region. It has suffered extensive loss of subpopulations around Great Brak as a result of urban development, road construction and invasion by alien plants over the past 60 years. There is also a severe, ongoing threat from plant collecting, which has resulted in an overall population decline of over 80% over the past three generations (generation length 20 years).

[F] **Haworthia pubescens** M.B.Bayer var. **livida** M.B.Bayer

Status: **VU** D2

N.A. Helme

[e]**Distribution:** WC. Worcester.

Habitat: Lower north-facing slopes of quartzitic rocky outcrops.

Rationale: Known from one location, which is potentially threatened by succulent collectors, infrastructure development for agriculture and invasive alien infestations (*Acacia saligna*, species of *Hakea* and *Eucalyptus*).

Haworthia pubescens M.B.Bayer var. **pubescens**

Status: **CR** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Worcester.

Habitat: Quartzitic hills or ridges.

Rationale: EOO < 10 km^2, AOO < 1 km^2. Known from one location where there is a continuing decline due to collecting, infrastructure development for agriculture and invading alien plants (*Acacia saligna* and species of *Eucalyptus*).

[F] **Haworthia pulchella** M.B.Bayer var. **globifera** M.B.Bayer

Status: **Rare**

D. Raimondo & F. Cholo

[e]**Distribution:** WC. Southeast of Anysberg.

Habitat: Stony slopes, 500–1 000 m.

Rationale: A range-restricted taxon (EOO < 50 km^2) known from one site. No known threats.

[F] **Haworthia pulchella** M.B.Bayer var. **pulchella**

Status: **Rare**

D. Raimondo & F. Cholo

[e]**Distribution:** WC. Laingsburg.

Habitat: Rock crevices on mountain peak.

Rationale: A range-restricted habitat specialist (EOO < 10 km^2) known from one site. No known threats.

[F] **Haworthia pungens** M.B.Bayer

Status: **VU** D2

D. Raimondo & F. Cholo

[e]**Distribution:** WC. Joubertina.

Habitat: Stony slopes, 500–1 000 m.

Rationale: One known location (EOO < 10 km^2) is potentially threatened by agriculture.

[F] **Haworthia pygmaea** Poelln. var. **argenteo-maculosa** (G.G.Sm.) M.B.Bayer

Status: **CR** A2a; B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

J.H. Vlok, N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Gourits River to Mossel Bay.

Habitat: On rocky quartz outcrops.

Rationale: This taxon has lost two subpopulations and 80% of its habitat because of grazing and plant collecting over the past 70 years (generation length 30 years). The three remaining subpopulations have also been significantly reduced and are now small, isolated from one another and continue to be threatened by coastal development and plant collectors.

Haworthia pygmaea Poelln. var. **pygmaea**

Status: **CR** B1ab(i,ii,iii,iv,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Mossel Bay and Great Brak.

Habitat: Shales in renosterveld.

Rationale: EOO < 100 km^2. Occurring as two severely fragmented subpopulations. It has suffered a severe habitat loss over the past 20 years as a result of coastal development, overgrazing by livestock, invasion by alien plants, quarrying and road construction. Loss from all these threats is continuing.

[FS] **Haworthia retusa** (L.) Duval

Status: **VU** A2a

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Riversdale.

Habitat: Stony, shale soil with very short bushes and a covering of pebbles on the ground.

Rationale: This species occurs in renosterveld fragments around Riversdale. The fragmentation is the result of crop cultivation (wheat cultivation), and at least 30% of the habitat of this long-lived species has been converted since 1940, a time period less than three generations (generation length 30 years).

Haworthia scabra Haw. var. **lateganiae** (Poelln.) M.B.Bayer

Status: **Critically Rare**

N.A. Helme

[e]**Distribution:** WC. De Rust.

Habitat: Sandstones slopes.

Rationale: Known from one site, where it occurs on sandstone mountain slopes and is not known to be threatened.

[F] **Haworthia scabra** Haw. var. **starkiana** (Poelln.) M.B.Bayer

Status: **VU** D2

N.A. Helme & J.H. Vlok

[e]**Distribution:** WC. North of Oudtshoorn.

Habitat: Steep, hot north-facing slopes.

Rationale: EOO < 50 km^2, AOO < 10 km^2. Known from fewer than five locations. Potentially threatened by collecting for the specialist succulent horticultural trade and tourism development.

Haworthia serrata M.B.Bayer

Status: **CR** B1ab(iii,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Heidelberg.

Habitat: Rocky outcrops.

Rationale: EOO < 5 km^2. This species lost a subpopulation to ploughing for wheat cultivation 10 years ago, and the remaining subpopulation is declining as a result of succulent plant collecting and threats associated with wheat cultivation (herbicide drift and grazing of fragments between wheat fields by livestock).

[F] **Haworthia sordida** Haw. var. **lavranii** C.L.Scott

Status: **VU** B1ab(iii,v)

J.H. Vlok, N.A. Helme & D. Raimondo

[e]**Distribution:** EC. Steytlerville to Kleinpoort Station.

Habitat: Low-altitude sandstone slopes.

Rationale: EOO 760 km^2. Currently recorded from four locations but up to six more are likely to exist in poorly explored areas within its range. This taxon is declining in habitat quality and the number of mature individuals as a result of grazing and trampling by livestock.

Haworthia springbokvlakensis C.L.Scott

Status: **EN** B1ab(iii)+2ab(iii)

J.H. Vlok, D. Raimondo & A.P. Dold

[e]**Distribution:** EC. Steytlerville, mainly on the Springbokvlakte, but found from Klipplaat to Kirkwood.

Habitat: Succulent karoo, in a variety of habitats ranging from flat, pan-like areas to very stony areas, but usually in well-drained soils.

Rationale: Recorded from fewer than 10, severely fragmented subpopulations in an area of 200 km^2. The former impact of collecting for the specialist succulent horticultural trade is no longer a threat, but much of its range is currently being heavily grazed by livestock and there is a continuing decline in the quality of habitat.

Haworthia truncata Schönland var. **maughanii** (Poelln.) B.Fearn

Status: **EN** B1ab(iii,v)+2ab(iii,v)

J.H. Vlok, N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Calitzdorp.

Habitat: Gravel apronveld.

Rationale: EOO and AOO 10 km^2. Known from two locations. Declining as a result of succulent collecting, grazing and trampling by ostriches.

Haworthia truncata Schönland var. **truncata** **Plate 14**

Status: **VU** B1ab(i,ii,iii,iv,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Calitzdorp to De Rust.

Habitat: Gravel apronveld.

Rationale: EOO 650 km^2. Recorded from six locations. This taxon occurs as scattered subpopulations specific to conglomerate soils. It continues to be severely affected by collecting for the specialist succulent horticultural trade. There is additional decline due to urban expansion around Calitzdorp and Oudtshoorn and habitat degradation as a result of ostrich farming.

[F] **Haworthia variegata** L.Bolus var. **variegata** **Plate 14**

Status: **EN** B1ab(iii,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Between Riversdale and Still Bay.

Habitat: Limestone outcrops.

Rationale: Three locations are known in a very restricted area on the Riversdale plain (EOO < 100 km^2). There is a decline of habitat quality and number of mature individuals due to invasion by alien plants and overgrazing by livestock.

[F] **Haworthia venosa** (Lam.) Haw. subsp. **granulata** (Marloth) M.B.Bayer

Status: **Rare**

F. Cholo

[e]**Distribution:** NC WC. Roggeveld Mountains at Verlatekloof near Sutherland and in the Ceres Karoo.

Habitat: Rocky karroid vegetation.

Rationale: A range-restricted taxon (EOO 550 km^2), known from three subpopulations. No known threats.

[F] **Haworthia venosa** (Lam.) Haw. subsp. **venosa**

Status: **VU** D1+2

N.A. Helme

[e]**Distribution:** WC. Breede River Valley between Swellendam and Malgas.

Habitat: Renosterveld on shales.

Rationale: Known from less than 1 000 mature individuals occurring in three locations. Potentially threatened by trampling and overgrazing by livestock, crop cultivation (further ploughing for wheat) and road construction.

Haworthia venosa (Lam.) Haw. subsp. **woolleyi** (Poelln.) Halda

Status: **CR** PE

N.A. Helme

[e]**Distribution:** EC. Steytlerville.

Habitat: Stony shales, hidden amongst bushes.
Rationale: This taxon may already be extinct in the wild as the only known population was destroyed between 1980 and 1999 as a result of overgrazing.

[F] **Haworthia vlokii** M.B.Bayer Plate 14

Status: **Rare**
D. Raimondo

[e]**Distribution:** WC. Swartberg Mountains.
Habitat: Rock cracks on sandstone slopes.
Rationale: A range-restricted species (EOO 60 km^2), known from one population. No known threats.

[F] **Haworthia zantneriana** Poelln. var. **minor** M.B.Bayer

Status: **Critically Rare**
D. Raimondo

[e]**Distribution:** EC. Willowmore.
Habitat: Rocky slopes, 500–1 000 m.
Rationale: A range-restricted taxon (EOO < 10 km^2) known from one population. No known threats.

Kniphofia Moench

Kniphofia acraea Codd Plate 13

Status: **Rare**
J.E. Victor & A.P. Dold

[e]**Distribution:** EC. Cradock and Mountain Zebra National Park.
Habitat: Grows in small seepage areas among rocks in grassy montane fynbos.
Rationale: A range-restricted habitat specialist, known from two herbarium collections. Its habitat is not threatened.

Kniphofia coddiana Cufod.

Status: **NT** B1ab(iii)
C.R. Scott-Shaw & J.E. Victor

[e]**Distribution:** EC KZN. Oribi Gorge to Mkambati.
Habitat: Pondoland coastal grassland. Rock outcrops of Msikaba Formation Sandstone, 70–600 m.
Rationale: EOO 4 700 km^2. Known from 13 locations. Degradation of the habitat of this species is ongoing in areas outside provincial conservation areas as a result of communal farming practices such as very regular and often aseasonal fires and overgrazing by cattle.

Kniphofia crassifolia Baker

Status: **CR** PE
P.J.D. Winter & L. von Staden

[e]**Distribution:** LM. Woodbush.
Habitat: Unknown. Quite likely open grassland.
Rationale: Last recorded in 1880. More than 80% of the grasslands in the Woodbush area, where this species presumably grew, has been converted to commercial pine plantations since the type collection. Remnant fragments are severely degraded either as a result of too frequent fires or thick infestations of invasive alien plants. If, like many congeners, this species grew in marshy areas, the possibility of its persistence is particularly poor as pine plantations lower the water table in open grassland fragments. Searches in the area have failed to relocate this species.

Kniphofia drepanophylla Baker

Status: **VU** B1ab(iii)
L. von Staden

[e]**Distribution:** EC KZN. Between the Lupatana and Mtentu Rivers.
Habitat: Pondoland coastal grassland, Msikaba Formation Sandstone, 50–200 m.
Rationale: EOO 100–1 400 km^2. Known from 6–10 locations. Experiencing ongoing habitat degradation due to overgrazing, trampling and a deleterious fire regime. Records from Ngele Mountain in southern KwaZulu-Natal occur at a much higher altitude than specimens from the southern Pondoland coast and are intermediate between this species and *K. baurii*. The taxonomic placement of these records remains uncertain.

Kniphofia ensifolia Baker subsp. **autumnalis** Codd

Status: **EN** A4c; B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)
L. von Staden

[e]**Distribution:** FS. Eastern Free State, Harrismith to Van Reenen.
Habitat: Grassland, occurs in black clay soils on streambanks and low-lying, seasonally moist areas.
Rationale: EOO 400 km^2, estimated AOO < 160 km^2. Known from five locations. The habitat is heavily affected and degraded by agriculture, construction of dams that cause disruption of drainage lines to seasonally moist seeps and wetlands, by urban expansion of Harrismith and invasive alien plants. An estimated 36% habitat loss occurred over the last 10 years, and if this trend continues, this taxon could lose up to 70% of its habitat within 20 years (two generations).

Kniphofia evansii Baker Plate 13

Status: **Rare**
C. Archer & J.E. Victor

[e]**Distribution:** KZN. Drakensberg mountain range.
Habitat: Montane grassland, moist ledges, seepage lines and streambanks, 1 900–2 300 m.
Rationale: Restricted to a limited habitat in the Drakensberg Mountains and recorded from four sites. Not threatened.

Kniphofia flammula Codd

Status: **EN** B1ab(iii)+2ab(iii)
C.R. Scott-Shaw & J.E. Victor

[e]**Distribution:** KZN. Northern KwaZulu-Natal, between Glencoe and Dannhauser.
Habitat: Grassland, on edge of wetlands amongst dense, tall grasses and sedges, not in permanent standing water.
Rationale: EOO 150 km^2. Known from three locations. Experiencing an ongoing degradation of its wetland habitat as a result of a deleterious fire regime, trampling and overgrazing by cattle.

Kniphofia latifolia Codd

Status: **EN** A2ace; B1ab(iii)+2ab(iii)
B. Church, L. von Staden, C.R. Scott-Shaw & J.E. Victor

[e]**Distribution:** KZN. Greytown to Pietermaritzburg and Nkandla.
Habitat: Grassy slopes and riverbanks, usually in moist depressions with grasses and sedges, 800–1 100 m.
Rationale: EOO 700 km^2. Known from six small, severely fragmented subpopulations. Some 67% of its range has been transformed by afforestation and crop cultivation over the last 50 years (generation length 15 years). The disruption of drainage systems by the construction of dams has led to the loss of a number of subpopulations, and is causing continuing declines in habitat quality.

Kniphofia leucocephala Baijnath

Status: **CR** B1ab(iii)+2ab(iii)

B. Church, C.R. Scott-Shaw, I.M. Johnson & L. von Staden

[e]**Distribution:** KZN. Richards Bay.

Habitat: Wetlands in low-lying coastal grassland, in moist, black, sandy clay soil.

Rationale: EOO 0.13 km^2, AOO < 0.1 km^2. Known from one location and endemic to the grasslands between Richards Bay and St Lucia. This area had been extensively transformed by urban development, commercial forestry plantations, commercial sugarcane and subsistence farming over the past 70 years, such that less than 2% of natural grassland remains. A subpopulation was discovered in 1990, and although thorough surveys of remaining grassland patches were conducted, no further subpopulations were located. There was a remarkable recovery after implementation of a conservation plan in 2001 that prescribed regular fire. Survival of this species is uncertain because the surrounding pine plantations have recently been replaced by *Eucalyptus* plantations, which are likely to place ongoing pressures on the wetland habitat in which this species occurs.

Kniphofia littoralis Codd

Status: **NT** B1ab(i,ii,iii,iv,v)

C.R. Scott-Shaw & J.E. Victor

[e]**Distribution:** KZN. St Lucia to Port Shepstone.

Habitat: Coastal grassland. Moist depressions, not usually in permanently waterlogged soils, 5–200 m.

Rationale: Widespread in coastal KwaZulu-Natal (EOO 23 000 km^2), but known from 13 locations. Extensive and ongoing habitat loss to agriculture, forestry and urban expansion.

Kniphofia pauciflora Baker

Status: **CR** D

C.R. Scott-Shaw, I.M. Johnson & L. von Staden

[e]**Distribution:** KZN. Durban.

Habitat: Marshy grassland, 10–200 m.

Rationale: Previously thought to be extinct in the wild. The existence of a small natural population consisting of 18 mature individuals surviving in a grassland fragment amidst the urban expanse of Durban was confirmed recently.

Kniphofia triangularis Kunth subsp. **obtusiloba** (A.Berger) Codd **Plate 13**

Status: **Rare**

C. Archer & J.E. Victor

[e]**Distribution:** KZN MP. Mpumalanga Drakensberg Mountains and Ngome in KwaZulu-Natal.

Habitat: Quartzitic rocky outcrops in montane grasslands, 1 200–2 200 m.

Rationale: Known from 10 sites, mostly from Mpumalanga Drakensberg but with one record from Ngome in KwaZulu-Natal. This taxon occurs at high altitudes on rocky outcrops and is not threatened.

Kniphofia typhoides Codd

Status: **NT** A2ac

L. von Staden & J.E. Victor

[e]**Distribution:** G LM MP NW. Parys to Lydenburg to Paulpietersburg to Newcastle.

Habitat: Low-lying wetlands and seasonally wet areas in climax *Themeda triandra* grasslands on heavy black clay soils, tends to disappear from degraded grasslands.

Rationale: A survey of the range of this species by C. Craib reported extensive declines in the population over the last 30 years as a result of habitat loss to coal mining, overgrazing by cattle, urban expansion (especially in Gauteng), crop cultivation in the eastern North West Province and invasion by alien plants in western Mpumalanga and North West Province. The full extent of the decline is unknown, but it is suspected to be over 25%.

Trachyandra Kunth

Trachyandra aridimontana J.C.Manning

Status: **Rare**

D. Raimondo & R.C. Turner

[e]**Distribution:** NC. Richtersveld.

Habitat: Grows among rocks and on stony west-facing slopes.

Rationale: A range-restricted Richtersveld endemic (EOO < 100 km^2) known from six sites. Populations on mountain summits are safe. At lower altitudes, the habitat of this species is under slight threat from overgrazing by goats. However, members of the genus are generally not highly palatable and this species is therefore considered rare and not threatened or declining.

Trachyandra erythrorrhiza (Conrath) Oberm.

Status: **NT** B1ab(ii,iii,iv,v)

M.F. Pfab & J.E. Victor

[e]**Distribution:** FS G MP. Johannesburg, Pretoria, Wakkerstroom and Sasolburg.

Habitat: Black turf marshes.

Rationale: It has a restricted range (EOO 20 404 km^2) and there is ongoing habitat loss due to urban and agricultural expansion and invasion by alien plants. There are, however, more than 10 locations, and subpopulations are not severely fragmented.

Trachyandra esterhuysenae Oberm.

Status: **Rare**

R.C. Turner & D. Raimondo

[e]**Distribution:** WC. Porterville Mountains to Kogelberg and Riviersonderend Mountains.

Habitat: Shale bands in montane fynbos.

Rationale: A mid- to high-altitude species known from five sites. Not threatened.

Trachyandra gracilenta Oberm.

Status: **Rare**

J.E. Victor & R.C. Turner

[e]**Distribution:** NC. Biedouw Valley to Lokenburg.

Habitat: Rocky sandstone slopes in arid fynbos.

Rationale: Localised distribution, occurring only on the southern part of the Bokkeveld Escarpment. Not threatened as it occurs on rocky slopes that cannot be ploughed.

[F]**Trachyandra montana** J.C.Manning & Goldblatt

Status: **Critically Rare**

P.A. Manyama

[e]**Distribution:** WC. Riviersonderend Mountains, Jonaskop.

Habitat: Stony sandstone in open, rocky ground in montane fynbos.

Rationale: Known from one site, but its mountain slope habitat is not threatened.

Trachyandra prolifera P.L.Perry

Status: **VU** D2

D. Raimondo, C. Archer, J.E. Victor & R.C. Turner

[e]**Distribution:** NC. Nieuwoudtville.

Habitat: Transition soils between dolerite clays and Dwyka tillite.

Rationale: Known from one subpopulation in two locations, less than 5 km apart (EOO < 15 km^2) on the dolerite-tillite transition soil. Habitat loss to wheat cultivation remains a potential threat.

COLCHICACEAE

Colchicum L.

Colchicum cruciatum (U. & D.Müll.-Doblies) J.C.Manning & Vinn.

Status: **VU** D2

C. Archer & J.E. Victor

e**Distribution:** NC. Steinkopf to Springbok.

Habitat: Gravel washes.

Rationale: EOO 220 km^2. Known from three locations. Potentially threatened by habitat degradation as a result of overgrazing by livestock.

Colchicum henssenianum (U. & D.Müll.-Doblies) J.C.Manning & Vinn.

Status: **VU** D2

C. Archer & J.E. Victor

e**Distribution:** NC. Richtersveld, Eksteenfontein.

Habitat: Dry sandy valley.

Rationale: Known from one location (EOO < 10 km^2). Potentially threatened by habitat degradation due to overgrazing and trampling.

F **Colchicum hughocymbion** (U. & D.Müll.-Doblies) J.C.Manning & Vinn.

Status: **VU** D2

D. Raimondo

e**Distribution:** WC. Worcester and Bredasdorp.

Habitat: Stony flats and slopes.

Rationale: Known from two naturally disjunct locations, both of which are potentially threatened by cultivation of wheat and vineyards and trampling by livestock (ostriches and sheep).

F **Colchicum huntleyi** (Pedrola, Membrives, J.M.Monts. & Caujapé) J.C.Manning & Vinn.

Status: **Rare**

C. Archer & J.E. Victor

e**Distribution:** NC. Richtersveld, Anenous flats.

Habitat: Sandy flats.

Rationale: A range-restricted species (EOO < 200 km^2), known from four subpopulations. No known threats.

F **Colchicum kunkelianum** (U. & D.Müll.-Doblies) J.C.Manning & Vinn.

Status: **DD**D

C. Archer & J.E. Victor

e**Distribution:** NC. Sutherland.

Habitat: Unknown.

Rationale: Known only from the type, collected in 1968. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

F **Colchicum swazicum** (U. & D.Müll.-Doblies) J.C.Manning & Vinn.

Status: **DD**D

C. Archer & J.E. Victor

Distribution: MP. Barberton and Swaziland.

Habitat: High-altitude grassland.

Rationale: No specimens lodged in South African herbaria. Not enough is known about the distribution and exact sites where subpopulations occur to assess this species.

F **Colchicum undulatum** (U. & D.Müll.-Doblies) J.C.Manning & Vinn.

Status: **Rare**

D. Raimondo

e**Distribution:** WC. Swartberg Mountains, Seweweekspoort to Tierberg.

Habitat: Rock ledges and crevices, 1 000 m.

Rationale: A range-restricted species (EOO 470 km^2), known from three subpopulations. No known threats.

F **Colchicum vanjaarsveldii** (U. Müll.-Doblies, Hähnl., U.U.Müll.-Doblies & D.Müll.-Doblies) J.C.Manning & Vinn.

Status: **Rare**

D. Raimondo

e**Distribution:** NC. Richtersveld.

Habitat: Rock crevices and quartzite outcrops.

Rationale: A range-restricted species (EOO 91 km^2), known from three subpopulations. No known threats.

Colchicum villosum (U. & D.Müll.-Doblies) J.C.Manning & Vinn.

Status: **Critically Rare**

D. Raimondo

e**Distribution:** NC. Kliprand.

Habitat: Gravel slopes among granite rock ledges.

Rationale: A range-restricted species (EOO < 20 km^2), known from one site. No known threats.

Ornithoglossum Salisb.

Ornithoglossum gracile B.Nord.

Status: **NT** B1ab(ii,iii,iv,v)

D. Raimondo & R.C. Turner

e**Distribution:** NC WC. Vanrhynsdorp, Clanwilliam and Calvinia.

Habitat: Grows on rocky, shale-covered mountain slopes in mountain renosterveld or karroid scrub.

Rationale: Known from five collections but suspected to occur at around 15 locations. It is threatened by slow but ongoing conversion of its habitat for crop cultivation.

Sandersonia Hook.

Sandersonia aurantiaca Hook.

Status: **Declining**

C. Archer & J.E. Victor

Distribution: EC KZN MP. Northern KwaZulu-Natal to East London, also in Swaziland.

Habitat: Cool, moist slopes with minimal herbivory and fire, 200–1 800 m.

Rationale: Widespread (EOO > 40 000 km^2), but rare throughout its range. Declining because of flower-picking, crop cultivation, forestry and overgrazing by livestock.

Wurmbea Thunb.

F **Wurmbea capensis** Thunb.

Status: **VU** D2

D. Raimondo & D.A. Snijman

e**Distribution:** WC. Darling district.

Habitat: Seasonally damp acid sands.
Rationale: Known from three historical collections, but probably extinct at two of them. The remaining location (in Darling) is a private nature reserve that is well managed. Should this land change hands, it is likely that this species would be lost to cultivation.

Wurmbea compacta B.Nord.
Status: **VU** D2
C. Archer & J.E. Victor
e**Distribution:** WC. Montagu.
Habitat: Montagu Shale Renosterveld, in damp soils derived from shales.
Rationale: Restricted to the Montagu area, where it is known from four locations. Potentially threatened by vineyard and deciduous fruit cultivation.

F **Wurmbea hiemalis** B.Nord.
Status: **VU** B1ab(iii,v)
D. Raimondo & N.A. Helme
e**Distribution:** WC. Cape Peninsula.
Habitat: Damp sandy slopes in low-altitude fynbos.
Rationale: A Cape Peninsula endemic (EOO 540 km^2) now restricted to 5–10 subpopulations. A number of historical locations have been lost to urban expansion of the city of Cape Town. Remaining subpopulations are concentrated on the southern Cape Peninsula and are threatened by invading alien plants.

F **Wurmbea inusta** (Baker) B.Nord.
Status: **VU** B1ab(ii,iii,v)
N.A. Helme & D. Raimondo
e**Distribution:** WC. Tulbagh to Bredasdorp including the Cape Peninsula.
Habitat: Damp clay flats in lowland renosterveld.
Rationale: A habitat specialist (EOO 12 600 km^2) that has lost a minimum of 40% of locations as a result of urban and agricultural expansion. Degradation of habitat is ongoing as a result of eutrophication from surrounding wheat fields, alien grass invasions, and overgrazing and trampling by livestock. Habitat loss, from urban expansion especially, in the northern suburbs of Cape Town and in the Gordon's Bay, is also ongoing.

F **Wurmbea robusta** B.Nord.
Status: **CR** PE
D. Raimondo & N.A. Helme
e**Distribution:** WC. Moorreesburg to Malmesbury.
Habitat: Clays flats in renosterveld.
Rationale: Restricted to clay flats between Malmesbury and Moorreesburg. Over 94% of its habitat has been converted to wheat cultivation over the past 70 years. The only two historical sites are 97% transformed and there is little chance that the species still occurs on these properties. It has not been collected for 114 years and is therefore possibly extinct, although it is small and easily overlooked. Targeted searches are required to determine if any extant subpopulations still exist.

COMMELINACEAE

Aneilema R.Br.

F **Aneilema longirrhizum** Faden
Status: **NT** B1ab(iii)
L. von Staden, P.J.D. Winter & D. Raimondo
e**Distribution:** LM. Sekhukhuneland, northern Leolo Mountains and Olifants River Valley.
Habitat: Sekhukhune Plains Bushveld, on well-drained, gravel slopes and along dry riverbeds.
Rationale: A range-restricted species (EOO estimated 320–1 900 km^2) that is still fairly common and is likely to occur at more than 10 locations. There is extensive, ongoing habitat degradation and habitat loss due to mining, expanding human settlements and overgrazing. These threats are likely to increase in future. Not protected in any reserves.

Commelina L.

F **Commelina rogersii** Burtt Davy
Status: **VU** B1ab(i,ii,iii,iv,v)
L. von Staden & P.J.D. Winter
e**Distribution:** LM. Polokwane to Louis Trichardt.
Habitat: Grassland and open woodland.
Rationale: EOO estimated at 3 800 km^2. Known from fewer than 10 locations. On the northern and southern ends of its range it is declining because of urban expansion and habitat degradation from overgrazing by livestock.

CYPERACEAE

Carex L.

F **Carex acocksii** C.Archer
Status: **VU** D2
C. Archer & J.E. Victor
e**Distribution:** NC. Hantamsberg Mountain.
Habitat: Doleritic soils on arid mountain summits.
Rationale: One known location is potentially threatened by overgrazing by livestock.

F **Carex subinflata** Nelmes
Status: **VU** B2ab(iii)
C. Archer & E. Sieben
Distribution: EC KZN. Drakensberg mountain range in KwaZulu-Natal, Lesotho and Eastern Cape.
Habitat: Bogs, seeps or along rivers at high altitudes, usually in full sun.
Rationale: Restricted to high-altitude marshes in the Drakensberg, a scarce habitat (AOO $<$ 2 000 km^2). Recorded from fewer than 10 locations. Subpopulations in Lesotho and Maclear are declining as a result of overgrazing. Subpopulations near Naude's Nek and Ongeluksnek are secure.

Carpha R.Br.

Carpha schlechteri C.B.Clarke
Status: **DD**
N.A. Helme & D. Raimondo
e**Distribution:** WC. Skurweberg and Kouebokkeveld.
Habitat: Unknown.
Rationale: Known from two collections, both made before 1950. Habitat, locations and status of subpopulations are too poorly known to allocate it to a threat category.

Cyperus L.

F **Cyperus sensilis** Baijnath
Status: **NT** B1ab(i,ii,iii,iv,v)
L. von Staden
e**Distribution:** KZN. KwaZulu-Natal coast, from Umdoni Park to St Lucia.
Habitat: Coastal grasslands and dunes, associated with seasonal pans, forms a conspicuous zone around the water's edge, 5–50 m.

Rationale: Restricted to the highly transformed KwaZulu-Natal coast (EOO 5 300 km^2). Known from seven highly disjunct locations, although it cannot necessarily be assumed that the species does not occur elsewhere, as suitable habitat exists in the intermediate areas. These potential locations are highly transformed by commercial sugarcane and ongoing coastal development. We estimate that there are 10–15 locations. This species is declining throughout its range as a result of coastal development, forestry plantations, urban expansion and commercial sugarcane. The only populations that are still healthy are in the St Lucia region, where there are also stresses due to development, subsistence agriculture and interference with the hydrology of the system.

Ficinia Schrad.

[F] **Ficinia anceps** Nees

Status: **Rare**

N.A. Helme & M. Muasya

[e]**Distribution:** WC. Cape Peninsula.

Habitat: Rocky cliffs.

Rationale: A range-restricted species (EOO 230 km^2), known from 11 subpopulations scattered across the Cape Peninsula. Not threatened.

[F] **Ficinia anysbergensis** Muasya

Status: **Rare**

M. Muasya & D. Raimondo

[e]**Distribution:** WC. Anysberg and Rooiberg Mountains.

Habitat: Base of large boulders where water accumulates.

Rationale: A range-restricted species (EOO < 800 km^2), known from two sites, occurs on arid mountain slopes. Not threatened.

[F] **Ficinia cedarbergensis** T.H.Arnold & Gordon-Gray

Status: **Rare**

M. Muasya & D. Raimondo

[e]**Distribution:** WC. Cederberg.

Habitat: Fynbos, rocky sandstone slopes, 960–1 200 m.

Rationale: A Cederberg endemic from high-altitude slopes known from six herbarium sites. Not threatened.

[F] **Ficinia distans** C.B.Clarke

Status: **VU** D2

M. Muasya & D. Raimondo

[e]**Distribution:** WC. Kogelberg and Kleinrivier Mountains.

Habitat: Seepages in fynbos.

Rationale: Known from four locations potentially threatened by invading alien plants and coastal development.

[F] **Ficinia dura** Turrill

Status: **EN** B1ab(ii,iii,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Stanford to Bredasdorp.

Habitat: Lowland fynbos, deep sandy flats and lower slopes below 100 m.

Rationale: Known from four locations on the Agulhas Plain (EOO 683 km^2). It is threatened by infestations of invasive alien plants and habitat loss to crop cultivation.

[F] **Ficinia elatior** Levyns

Status: **VU** B1ab(ii,iii)

N.A. Helme & M. Muasya

[e]**Distribution:** WC. Cape Peninsula to Bredasdorp.

Habitat: Flats near streams and pools below 100 m.

Rationale: Known from 12 severely fragmented subpopulations (EOO 7 300 km^2). It is being threatened by modified water flow as a result of crop cultivation, coastal development and invasion by alien plants.

[F] **Ficinia fastigiata** (Thunb.) Nees

Status: **VU** D2

M. Muasya & D. Raimondo

[e]**Distribution:** WC. Cape Peninsula.

Habitat: Base of shaded rocks.

Rationale: Known from two locations on the Cape Peninsula. Potentially threatened by too frequent fires affecting its shaded woody habitat.

[F] **Ficinia grandiflora** T.H.Arnold & Gordon-Gray

Status: **Rare**

M. Muasya & D. Raimondo

[e]**Distribution:** WC. Du Toit's Kloof to Hottentots Holland Mountains.

Habitat: Granite slopes below 800 m in fynbos.

Rationale: A narrow habitat specialist known from four sites. Not threatened.

[F] **Ficinia latifolia** T.H.Arnold & Gordon-Gray

Status: **EN** B1ab(ii,iii,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Agulhas Plain.

Habitat: Edge of pans, in open, flat, sandy areas (sand over coastal limestone) below 100 m.

Rationale: Known from fewer than five locations on the Agulhas Plain (EOO 95 km^2), and threatened by invading alien plants, coastal development and crop cultivation.

Ficinia micrantha C.B.Clarke

Status: **EN** B1ab(iii,v)

M. Muasya & D. Raimondo

[e]**Distribution:** WC. Table Mountain and Kogelberg.

Habitat: Seepage areas on low sandstone slopes.

Rationale: EOO 270 km^2. Known from three locations, of which the two from Table Mountain have not been collected since 1933. This may indicate sensitivity to human hiking damage. All three recorded locations are vulnerable to ongoing degradation of habitat.

[F] **Ficinia minutiflora** C.B.Clarke

Status: **Rare**

M. Muasya & D. Raimondo

[e]**Distribution:** WC. Hottentots Holland Mountains and Kogelberg.

Habitat: Seepage habitats on moist fynbos slopes.

Rationale: Known from 10 sites and occurring as localised subpopulations. Not threatened.

[F] **Ficinia petrophila** T.H.Arnold & Gordon-Gray

Status: **Rare**

N.A. Helme & M. Muasya

[e]**Distribution:** WC. Anysberg, Touwsberg and Klein Swartberg Mountains.

Habitat: At the base of granite boulders, a seasonally moist habitat, on mountain slopes above 700 m.

Rationale: Known from fewer than five sites. Not threatened.

[F] **Ficinia pinguior** C.B.Clarke

Status: **VU** B1ab(ii,iii,v)

M. Muasya & D. Raimondo

[e]**Distribution:** WC. Cape Peninsula to Kleinmond.

Habitat: Flats and slopes below 700 m in fynbos.
Rationale: EOO 1 250 km^2. Known from 10 locations. Experiencing an ongoing loss of habitat due to coastal development and associated lack of fire and invasion by alien plants.

Ficinia pygmaea Boeck.

Status: **NT** B1ab(ii,iii,iv,v)
M. Muasya & D. Raimondo
eDistribution: WC. Lambert's Bay to Bredasdorp.
Habitat: Seasonally wet coastal pans.
Rationale: Although relatively widespread (EOO 36 000 km^2) and known from 10 locations, it is suspected to occur at a few more as it is a small, inconspicuous sedge that is likely to be under-collected. It continues to decline because of ongoing loss of its restricted, specialised habitat to crop cultivation, urban expansion and invasion by alien plants.

F **Ficinia rigida** Levyns

Status: **VU** B1ab(ii,iii,iv,v)
N.A. Helme & M. Muasya
eDistribution: WC. Cape Peninsula to Kleinmond.
Habitat: Sandy coastal slopes in fynbos.
Rationale: EOO 1 008 km^2. Known from fewer than 10 locations. Occurs on low sandstone slopes where there is ongoing habitat loss to coastal and urban development.

F **Ficinia sp. nov.**

Voucher: *Drège 290a* Paris
Status: **Rare**
N.A. Helme
eDistribution: WC. Hex River Mountains to Du Toit's Kloof.
Habitat: Upper sandstone slopes.
Rationale: Known from three sites on high-altitude slopes on the Hex River, Slanghoek and Du Toit's Kloof Mountains.

Fimbristylis Vahl

F **Fimbristylis aphylla** Steud.

Status: **VU** B1ab(iii)
C. Archer, L. von Staden & E. Sieben
Distribution: KZN. KwaZulu-Natal coast to tropical West Africa and tropical Asia.
Habitat: Permanently wet vleis, open places and swamps, often in water. Usually near the sea.
Rationale: It has a restricted coastal distribution in KwaZulu-Natal (EOO 12 600 km^2) and is known from five collections. However, it is possibly under-collected, and since it is fairly widely distributed, it is estimated that there could be up to 10 locations, especially since it does not appear to be very habitat specific. There is a continuing decline in habitat across the range as a result of subsistence farming, urban expansion and coastal development.

Isolepis R.Br.

Isolepis bulbifera (Boeck.) Muasya

Status: **EX**
M. Muasya & D. Raimondo
eDistribution: WC. Cape Flats.
Habitat: Shallow soil at the edge of a vleis.
Rationale: Endemic to wetlands on the Cape Flats, known from two herbarium records. Last collected before 1950 at Kenilworth Racecourse, and despite four thorough searches in the correct habitat it has not been relocated; it is therefore considered extinct. It went extinct because of the impact of urban expansion and invading alien plants.

Isolepis inconspicua (Levyns) J.Raynal

Status: **EN** B1ab(ii,iii,iv,v)
M. Muasya & D. Raimondo
eDistribution: WC. Cape Peninsula to Malmesbury.
Habitat: Seasonally flooded areas on shallow soils.
Rationale: EOO 580 km^2. Three known locations continue to decline as a result of ongoing habitat loss to urban expansion, agriculture (wheat and pasture cultivation) and invasion by alien plants.

F **Isolepis leucoloma** (Nees) C.Archer

Status: **VU** D2
M. Muasya & D. Raimondo
eDistribution: WC. Cederberg Mountains to Cape Peninsula.
Habitat: Damp depressions in shallow soils.
Rationale: Known from three locations, a rare species potentially threatened by invading alien plants.

F **Isolepis minuta** (Turrill) J.Raynal

Status: **DD**
M. Muasya & D. Raimondo
eDistribution: WC. Ceres.
Habitat: Sandstone slopes.
Rationale: Known from the 1908 type specimen by Pearson and Stephens collected in the mountains near Ceres.

F **Isolepis pellocolea** B.L.Burtt

Status: **Rare**
M. Muasya & D. Raimondo
Distribution: KZN. Drakensberg mountain range.
Habitat: Marshy ground at streamsides.
Rationale: Known from three sites and restricted to alpine bogs. Potentially threatened by overgrazing in Lesotho.

F **Isolepis pusilla** Kunth

Status: **DD**
M. Muasya & D. Raimondo
eDistribution: WC. Cape Flats to Bokkeveld Escarpment.
Habitat: Shallow seasonal pans both natural and as a result of roadside disturbance.
Rationale: This species was known from old collections from the Cape Peninsula and was assumed to be extinct. Since 2002, three new subpopulations have been discovered. One is in natural habitat (Riverlands) but two are very disjunct and in roadside depressions. More fieldwork is required to determine the distribution, dispersal ability and habitat of this species.

F **Isolepis venustula** Kunth

Status: **VU** B1ab(iii,v)
M. Muasya & D. Raimondo
eDistribution: WC. Yzerfontein to Hermanus.
Habitat: Edges of brackish, seasonal coastal pans.
Rationale: EOO 5 800 km^2. Known from four locations and a very specialised habitat. This habitat is being affected by coastal development and invading alien plants, causing continuing decline of habitat quality and numbers of mature individuals.

Tetraria P.Beauv.

Tetraria brachyphylla Levyns

Status: **NT** B1ab(ii,iii,iv,v)
G.A. Verboom & D. Raimondo

e**Distribution:** WC. Cape Peninsula to Plettenberg Bay.
Habitat: Coastal dunes and limestones.
Rationale: Widespread on dunes along the Cape south-east coast (EOO < 10 000 km^2), recorded from 10–15 locations, but threatened throughout its range by invasive alien plants and coastal development.

F **Tetraria graminifolia** Levyns

Status: **VU** D2
N.A. Helme, G.A. Verboom, D. Raimondo & R.C. Turner

e**Distribution:** WC. Cape Peninsula.
Habitat: Granite loams on slopes.
Rationale: Known from one location. Potentially threatened by invading alien plants.

Tetraria paludosa Levyns

Status: **CR** PE
G.A. Verboom & D. Raimondo

e**Distribution:** WC. Cape Peninsula, Camps Bay.
Habitat: Marshy lower slopes below 500 m.
Rationale: Not collected for over 50 years and its two recorded sites are highly transformed by urban expansion and invading alien plants. Thorough searches are required before this species can be declared extinct.

Trianoptiles Fenzl

Trianoptiles solitaria (C.B.Clarke) Levyns

Status: **CR** B1ab(iii)+2ab(iii)
C. von Witt, M. Muasya & D. Raimondo

e**Distribution:** WC. Cape Peninsula, Rondebosch Common and Kenilworth Racecourse.
Habitat: Damp depressions in acid sands.
Rationale: Restricted to the Cape Flats, this species had not been collected since 1950 and was thought to be extinct. It was fortunately rediscovered in 2008 and is now known only from a small fragment where it is threatened by alien grass invasions and eutrophication from surrounding urban areas.

DIOSCOREACEAE

Dioscorea L.

Dioscorea brownii Schinz

Status: **VU** D2
L. von Staden, A.E. van Wyk, A.T.D. Abbott & J.E. Victor

e**Distribution:** EC KZN. Currently at Ngele Mountain, but has been collected elsewhere in southern KwaZulu-Natal in the past. Possibly also in the Eastern Cape.
Habitat: Tall mistbelt and montane grassland, on high ground along forest margins, in rich, red, dolerite soils.
Rationale: Known from a number of old collections from southern KwaZulu-Natal and the KwaZulu-Natal Midlands. However, there is only one extant subpopulation, in the Ngele Nature Reserve. Habitat in the areas of most of the older collections has been extensively transformed for commercial forestry plantations and crop cultivation and the species is probably locally extinct. One collection from 1896 indicates that this species may also be found in the Eastern Cape near Mthatha. Remaining subpopulations are potentially threatened by harvesting for medicinal purposes.

Dioscorea elephantipes (L'Hér.) Engl.

Status: **Declining**
J.E. Victor & A.P. Dold

e**Distribution:** EC FS NC WC. Springbok to Clanwilliam to Grahamstown.
Habitat: Rocky (quartzite and shales) east-facing hillsides.
Rationale: Although a widespread and in places a fairly common geophyte, this species is declining in some areas because of harvesting for the local medicinal trade as well as being eaten and sometimes destroyed by Angora goats.

F **Dioscorea mundii** Baker

Status: **NT** B1ab(ii,iii,iv,v)
N.A. Helme & D. Raimondo

e**Distribution:** WC. Nature's Valley to George.
Habitat: Coastal forest on fixed dunes and edges of afromontane forest.
Rationale: EOO < 1 000 km^2. Fewer than 10 known locations continue to decline as a result of coastal development, agriculture (pasture plantations) and invasion by alien plants.

F **Dioscorea sp. nov.**
Voucher: *Hurter 106* GLOW, PRU

Status: **CR** B1ab(v)+2ab(v); C1
L. von Staden, J.E. Victor, D. Raimondo & P.J.H. Hurter

e**Distribution:** MP. Oshoek.
Habitat: Exposed, open grassland, in serpentine soils on steep, southeast-facing slopes, 1 100 m.
Rationale: Recently discovered, known from one location and less than 250 mature individuals. The tubers of this species are used as medicine by the Ebutsini tribe, on whose tribal land the only known subpopulation occurs. Medicinal harvesting is causing a continuing decline in the of number of mature individuals. It appears to be a very slow-growing species (generation length estimated to be 50 years). There has been at least a 25% decline in the number of mature individuals over the past 150 years as a result of medicinal harvesting.

FS **Dioscorea sylvatica** Eckl.

Status: **VU** A2cd
V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya
Distribution: EC FS G KZN LM MP WC. Also in Swaziland, Zimbabwe and Zambia.
Habitat: Wooded and relatively mesic places, such as the moister bushveld areas, coastal bush and wooded mountain kloofs.
Rationale: There was a huge population decline from 1955–1960 as a result of indiscriminate commercial harvesting for diosgenin, a substance that was used to manufacture cortisone and other steroid hormones. Exploitation of tubers for the local medicinal plant trade is ongoing and is preventing recovery. The overall decline is estimated to be > 30% over the past 90 years (generation length estimated to be 30 years).

DRACAENACEAE

Dracaena L.

F **Dracaena transvaalensis** Baker

Status: **Rare**
L. von Staden, J.E. Burrows & S. Burns

e**Distribution:** LM MP. Dublin Mine to Penge.
Habitat: Quartzite or dolomite lithosols, sometimes in

deep rock cracks, hot and dry exposed slopes covered in deciduous woodland, occasionally in light shade in tall evergreen woodland on mountain slopes, 750–1 000 m.
Rationale: Known from seven sites, this habitat specialist is not threatened.

Sansevieria Thunb.

[F] **Sansevieria metallica** Gérôme & Labroy
Status: **Critically Rare**
P.F. Matlamela & D.A. Kamundi†
[e]**Distribution:** KZN. Northern KwaZulu-Natal, Tembe Elephant Park.
Habitat: Savanna in deep sand, usually in shade of trees, 20–100 m.
Rationale: Currently known from only one site. Not threatened as it occurs within a nature reserve.

ERIOSPERMACEAE

Eriospermum Jacq. ex Willd.

Eriospermum aequilibre Poelln. Plate 15
Status: **VU** D2
C. Archer & J.E. Victor
[e]**Distribution:** WC. Uniondale district.
Habitat: Uniondale Shale Renosterveld.
Rationale: Known from two locations from the eastern Little Karoo. Potentially threatened by wheat cultivation.

Eriospermum algiferum A.V.Duthie
Status: **DD**D
D. Raimondo
[e]**Distribution:** WC. Southern Tanqua Karoo.
Habitat: Quartzitic hill.
Rationale: Known only from the 1919 type collection by Marloth in the Tanqua Karoo.

Eriospermum appendiculatum A.V.Duthie
Status: **VU** D2
D. Raimondo & N.A. Helme
[e]**Distribution:** WC. Steytlerville district.
Habitat: Succulent karoo shrubland, quartzite colluvium on river terraces.
Rationale: Known from two locations in the Steytlerville Karoo. Potentially threatened by habitat degradation as a result of livestock farming.

Eriospermum arachnoideum P.L.Perry Plate 15
Status: **CR** B1ab(ii,iii,v)+2ab(ii,iii,v)
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Knersvlakte.
Habitat: Succulent karoo shrubland, in rock crevices of limestone outcrops.
Rationale: Known from one location in the Knersvlakte and threatened by ongoing limestone and marble quarrying.

Eriospermum arenosum P.L.Perry
Status: **VU** B1ab(iii,v)+2ab(iii,v)
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Velddrif to Wallekraal.
Habitat: West Coast strandveld or succulent karoo shrubland, either white or red sandy aeolian soils, under small karroid bushes.
Rationale: EOO 12 000 km^2. Known from five collections although a few more undiscovered subpopulations are likely, fewer than 10 locations are suspected. Habitat is declining as a result of agricultural expansion and heavy-mineral sand mining along the coast.

Eriospermum aribesense P.L.Perry
Status: **VU** D2
C. Archer & J.E. Victor
[e]**Distribution:** NC. Namaqualand, north of Steinkopf.
Habitat: Namaqualand Shale Shrubland, in well-drained stony, yellow-brown, sandy loam on moderate slopes.
Rationale: Known from one location near Steinkopf. Potentially threatened by mining and grazing by goats.

Eriospermum armianum P.L.Perry
Status: **Rare**
N.A. Helme, C. Archer & J.E. Victor
[e]**Distribution:** NC. Springbok to Kliprand.
Habitat: Talus on a granite cliff edge, partially shaded by shrubs.
Rationale: This habitat specialist is known from four naturally disjunct subpopulations in Namaqualand. Not threatened.

Eriospermum attenuatum P.L.Perry
Status: **DD**D
D. Raimondo
[e]**Distribution:** WC. Kamiesberg to Knersvlakte.
Habitat: Granitic soils in Namaqualand Klipkoppe Shrubland or on quartz-covered saline soils in Vanrhynsdorp Gannabosveld.
Rationale: Last collected in 1950, despite much searching in the region. As there are five collections between 1933 and 1950, this may indicate a decline due to overgrazing by livestock.

[F] **Eriospermum bowieanum** Baker
Status: **VU** B1ab(ii,iii,iv,v)
N.A. Helme
[e]**Distribution:** WC. Worcester to Ashton.
Habitat: Clay soils, amongst low karroid bushes.
Rationale: A Worcester Karoo endemic that occurs on clay soils (EOO < 2 500 km^2). There are probably fewer than 10 locations although only four are known. It is severely threatened by wheat and vineyard expansion.

Eriospermum bracteatum Archibald
Status: **VU** D2
N.A. Helme & D. Raimondo
[e]**Distribution:** EC. Grahamstown district.
Habitat: Semi-arid scrub in hard, clay soil formed from dolerite and shale in open karroid communities between bush clumps.
Rationale: Known from two locations and potentially threatened by harvesting for medicinal use, invasive alien plants and crop cultivation.

Eriospermum bruynsii P.L.Perry
Status: **VU** D2
C. Archer & J.E. Victor
[e]**Distribution:** WC. Calitzdorp.
Habitat: Eastern Little Karoo, in clay soils derived from shales.
Rationale: Known from one location near Calitzdorp. Potentially threatened by agriculture (vineyard cultivation) and urban expansion.

Eriospermum calcareum P.L.Perry

Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v)

N.A. Helme

Distribution: WC. Knersvlakte.

Habitat: Red sands and limestone outcrops.

Rationale: Known from two locations in a restricted range (EOO 20 km^2), threatened by vineyard and tomato cultivation, and by quarrying (marble and limestone).

Eriospermum capense (L.) Thunb. subsp. **stoloniferum** (Marloth) P.L.Perry

Status: **VU** B1ab(ii,iii,v)

N.A. Helme

Distribution: WC. Malmesbury to Cape Town, Worcester and Caledon.

Habitat: Clay soils.

Rationale: EOO < 5 000 km^2. Known from fewer than 10 locations. This taxon has lost significant amounts of habitat to urban expansion and agriculture (vines and wheat). The loss of habitat to these threats is ongoing.

Eriospermum coactum P.L.Perry

Status: **VU** D2

C. Archer & J.E. Victor

Distribution: NC. Springbok district.

Habitat: Namaqualand Shale Shrubland on granitic soils.

Rationale: Known from four locations and potentially threatened by grazing livestock (goats).

Eriospermum crispum P.L.Perry **Plate 15**

Status: **VU** A2c; C1

J.H. Vlok & D. Raimondo

Distribution: WC. Calitzdorp.

Habitat: Eastern Little Karoo on clay soils derived from shales.

Rationale: Restricted to the Calitzdorp area, where there is ongoing degradation and fragmentation of its habitat as a result of ostrich farming. There are less than 10 000 plants as subpopulations consist of very few plants each. There has been an estimated 10% decline in the population over the past 100 years (generation length suspected to be 50 years for this very slow-growing geophyte).

Eriospermum erinum P.L.Perry

Status: **EN** A2c

D. Raimondo, S. Todd & E. Marinus

Distribution: WC. Nieuwoudtville district.

Habitat: Dwarf karoo shrubland on hill slopes (in soils derived from the dolerite outcrops) and on flats (in clay soils derived from Dwyka tillite).

Rationale: A Bokkeveld Escarpment endemic known from an area of 800 km^2. It has experienced habitat loss to wheat cultivation (over 73% of its habitat was transformed over 60 years). Eriospermums are long-lived (generation length is suspected to be a minimum of 30 years).

Eriospermum eriophorum P.L.Perry

Status: **CR** B1ab(iii)

D. Raimondo

Distribution: WC. Vanrhynsdorp district.

Habitat: Sparse succulent karoo, clay soils on dry, rocky hills.

Rationale: Known from one location south of Vanrhynsdorp where it is being heavily affected by overgrazing, which is causing continuing decline in habitat quality.

Eriospermum ernstii P.L.Perry

Status: **Rare**

E.J. van Jaarsveld & L. Potter

Distribution: NC. Bushmanland, Dabenoris and Pellaberg Mountains.

Habitat: Lower, south-facing mountain slopes, amongst hard quartzitic rocks.

Rationale: Known from two areas in Bushmanland, no significant threats are known to affect this species.

Eriospermum exigium P.L.Perry

Status: **Rare**

R. Klopper, N.A. Helme & D. Raimondo

Distribution: WC. Bokkeveld Escarpment between Vanrhyn's Pass and Gifberg.

Habitat: Shallow soils in rock pockets on sandstone pavements.

Rationale: Known from two collections but because of its tiny size, it is likely to be overlooked. The Bokkeveld Escarpment and Gifberg are currently threatened by rooibos tea cultivation and sandstone quarrying, but this species mostly occurs on sandstone pavements, so most of its habitat is out of danger.

Eriospermum exile P.L.Perry

Status: **Rare**

C. Archer, D. Raimondo & J.E. Victor

Distribution: WC. Little Karoo, western Great Karoo and Ceres Karoo.

Habitat: Grows on steep, shady, southeast-facing slopes in damp pockets amongst quartzitic rocks and also on Beaufort shales.

Rationale: When this species was described it was known from a few scattered plants growing at two widely separated sites, in the southern Tanqua Karoo and western Great Karoo. Recent collections indicate, however, that it occurs more widely in the western parts of the Great Karoo and there is also a collection from southern Namaqualand, which greatly extends its range. However, it is still known from a few plants at widely scattered sites and hence it qualifies as a rare species owing to low density of individuals.

Eriospermum filicaule P.L.Perry

Status: **Rare**

C. Archer, J.E. Victor & D. Raimondo

Distribution: NC. Steinkopf to Alexander Bay.

Habitat: Grows in flat stony ground among karroid bushes.

Rationale: A naturally rare species found only in a limited area around Steinkopf in northern Namaqualand in the southern Gariep Centre. There is also a collection from an unknown site within the Richtersveld, indicating that the species may be more common than generally thought.

Eriospermum flavum P.L.Perry

Status: **Rare**

D. Raimondo

Distribution: WC. Cederberg.

Habitat: Sandy pockets amongst rocks of Table Mountain Group-derived sandstone.

Rationale: Cederberg endemic, said to be locally common after fire, known from three sites but a few more likely within unexplored areas of its range.

Eriospermum fragile P.L.Perry

Status: **Rare**

D. Raimondo

[e]**Distribution:** WC. Vanrhynsdorp to Springbok.

Habitat: Flats in very hard clay soil.

Rationale: Known from three disjunct sites in Namaqualand. Low density of individuals suspected, otherwise this species would have been more regularly collected. A naturally rare species that is not threatened.

Eriospermum glaciale P.L.Perry

Status: **EN** A2c

D. Raimondo & N.A. Helme

[e]**Distribution:** NC. Nieuwoudtville.

Habitat: Dwyka tillite clays.

Rationale: This geophyte has a very limited distribution, EOO 800 km^2. Over 75% of its habitat has been lost to ploughing for wheat over the past 70 years. This loss has taken place over less than three generations of this slow-growing species (generation length estimated to be 30 years).

[F] **Eriospermum laxiracemosum** P.L.Perry

Status: **VU** B1ab(ii,iii)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Vanrhynsdorp to Clanwilliam.

Habitat: Sandy flats or slight slopes on sandstone-derived soils.

Rationale: EOO < 550 km^2. Known from fewer than 10 locations. Its particular habitat is currently being targeted for rooibos tea cultivation, resulting in continuing loss of habitat.

[F] **Eriospermum macgregoriorum** P.L.Perry

Status: **Rare**

N.A. Helme & D. Raimondo

[e]**Distribution:** NC. Nieuwoudtville to Calvinia.

Habitat: Dolerite-derived clays.

Rationale: EOO < 200 km^2. Known from four sites but a few more likely. Not threatened as the soils on which it grows are not suitable for ploughing.

Eriospermum minutipustulatum P.L.Perry

Status: **VU** D2

C. Archer & J.E. Victor

[e]**Distribution:** WC. Koebee Escarpment.

Habitat: Mountain renosterveld on clay soils.

Rationale: Known from one location, and potentially threatened by overgrazing by livestock, especially goats.

Eriospermum occultum Archibald

Status: **Critically Rare**

D. Raimondo

[e]**Distribution:** EC. Suurberg near Somerset East.

Habitat: Moist, black, sandy soils formed from Witteberg quartzite, amongst clumps of tussock grass.

Rationale: Known from one site on the southern slopes of the Suurberg, no significant threats are known.

Eriospermum papilliferum A.V.Duthie

Status: **DDD**

D. Raimondo

[e]**Distribution:** NC. Namaqualand, near Steinkopf.

Habitat: Probably occurs in granitic soils in succulent karoo shrubland.

Rationale: A poorly known species recorded only from the type, collected in 1930 near Steinkopf in northern Namaqualand.

Eriospermum parvulum P.L.Perry

Status: **VU** D2

C. Archer & J.E. Victor

[e]**Distribution:** NC. Richtersveld.

Habitat: Goariep Mountain Succulent Shrubland, in coarse sand amongst granite rocks.

Rationale: A rare species from a remote area in the Richtersveld. Potentially threatened by grazing goats.

Eriospermum patentiflorum Schltr.

Status: **VU** B1ab(ii,iii,v)

N.A. Helme

[e]**Distribution:** WC. Clanwilliam and Vanrhynsdorp.

Habitat: Arid fynbos, in sandy soils.

Rationale: EOO < 1 000 km^2. Known from fewer than 10 locations. Declining as a result of agriculture (vineyards, tomatoes and onions) and mining.

Eriospermum pusillum P.L.Perry

Status: **Rare**

D. Raimondo

[e]**Distribution:** NC. Springbok to Aggeneys.

Habitat: Steep, shaded areas amongst rocks.

Rationale: Northern Namaqualand endemic confined to steep rocky areas. Known from three sites but as this species is very small, it is likely to have been overlooked and possibly occurs at a few more sites.

Eriospermum ramosum P.L.Perry

Status: **Rare**

N.A. Helme & D. Raimondo

[e]**Distribution:** NC. Namaqualand, west of Kamiesberg to Riethuis.

Habitat: Sandy soils probably derived from granite.

Rationale: A poorly known species recorded from four widely separated sites in Namaqualand. Occurs as small subpopulations at low densities.

Eriospermum ratelpoortianum P.L.Perry

Status: **Rare**

N.A. Helme

[e]**Distribution:** NC. Namaqualand, Ratelpoort between Springbok and Steinkopf.

Habitat: Dry, rocky, quartzitic, northwest-facing slope.

Rationale: A range-restricted species (EOO < 400 km^2). Not threatened.

Eriospermum rhizomatum P.L.Perry

Status: **VU** C1

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Oudtshoorn and Calitzdorp.

Habitat: Succulent karoo transitional to renosterveld, amongst leafy humus under karroid bushes on rocky outcrops.

Rationale: A Little Karoo endemic from the Oudtshoorn and Calitzdorp districts. Less than 10 000 plants are likely to occur as all subpopulations are very small (fewer than 10 plants). Ostrich farming is the predominant threat in the area and plants suffer from trampling and grazing. More than 10% of the population has been lost over the past 50 years and this threat is ongoing.

Eriospermum sabulosum P.L.Perry

Status: **VU** D2

C. Archer & J.E. Victor

Distribution: NC. Namaqualand, southwest of Kamieskroon.

Habitat: Namaqualand Klipkoppe Shrubland, on flats in coarse granitic sand near granite outcrops.

Rationale: Known from the type locality on the edge of the Kamiesberg. Potentially threatened by ploughing for cereal crops.

F **Eriospermum spirale** Schult.

Status: **VU** B1ab(i,ii,iii,iv,v)

N.A. Helme & D. Raimondo

Distribution: WC. Cape Flats to Vanrhynsdorp.

Habitat: Sandy or clay flats.

Rationale: EOO 12 000 km^2. Known from fewer than 10 locations. Occurs only on clay or sand flats, and is known from widely disjunct locations between Stellenbosch and Vanrhynsdorp. It is highly threatened throughout its range by agriculture and urban expansion. Over 50% of historical locations have been lost to urban development and crop cultivation over the past 120 years, loss is continuing.

F **Eriospermum subincanum** P.L.Perry

Status: **EN** A4ac; B1ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

Distribution: WC. Vanrhynsdorp to Biedouw.

Habitat: Sandy flats.

Rationale: It has a highly restricted range (EOO 1 850 km^2), and is confined to the exact habitat where rooibos tea grows well. The rooibos tea industry is currently expanding rapidly and ploughing of new lands is predicted to continue at least for the next 20 years. Known from four locations, but recent rooibos cultivation has had a heavy impact on the Sandkraal type locality. There has been a minimum of 20% habitat loss over the past 10 years and we suspect that a further 30% of habitat will be lost over the next 20 years (generation length is estimated to be 25 years).

Eriospermum subtile P.L.Perry

Status: **Rare**

N.A. Helme & D. Raimondo

Distribution: NC WC. Bokkeveld and Roggeveld Escarpments.

Habitat: Shale slopes.

Rationale: Known from three sites but it is likely that a few more undiscovered subpopulations exist. Subpopulations are small and widely scattered.

Eriospermum titanopsoides P.L.Perry

Status: **VU** D2

N.A. Helme, C. Archer & J.E. Victor

Distribution: WC. Vredendal to Bitterfontein.

Habitat: Quartz patches on shales.

Rationale: Restricted to quartz patches on the Knersvlakte, where it has been recorded at four locations. Potentially threatened by overgrazing and mining.

Eriospermum tuberculatum P.L.Perry

Status: **VU** D2

N.A. Helme, C. Archer & J.E. Victor

Distribution: NC. Kharkams.

Habitat: Granite slopes.

Rationale: One known location is potentially threatened by habitat loss to cereal crops.

Eriospermum undulatum P.L.Perry

Status: **VU** D2

N.A. Helme & D. Raimondo

Distribution: NC. Kharkams to Steinkopf.

Habitat: Granite flats and slopes.

Rationale: Known from four locations in northern Namaqualand. Occurs mostly in communal areas where heavy grazing pressure from goats poses a potential threat.

Eriospermum vermiforme P.L.Perry

Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v)

N.A. Helme

Distribution: WC. Gourits River to Great Brak River.

Habitat: Lower slopes or flats, in sandy soil amongst low bushes.

Rationale: EOO < 2 500 km^2. Known from four locations in the Mossel Bay area, declining as a result of agriculture, coastal development, quarrying and invasion by alien plants.

Eriospermum viscosum P.L.Perry

Status: **VU** D2

N.A. Helme, C. Archer & J.E. Victor

Distribution: NC. Vioolsdrif to Steinkopf.

Habitat: Arid shales.

Rationale: Known from four collections in the Steinkopf vicinity. Occurs as small, sparse subpopulations, in communally owned areas where grazing pressure from livestock is a potential threat. There is also a slight potential threat from mining.

HAEMODORACEAE

Wachendorfia Burm.

F **Wachendorfia brachyandra** W.F.Barker

Status: **VU** B1ab(ii,iii,iv,v)

D. Raimondo, R.C. Turner & N.A. Helme

Distribution: WC. Hermon to the Cape Peninsula and Franschhoek.

Habitat: Damp sandstone or granites.

Rationale: EOO 5 200 km^2. Known from 10 locations. Since 1940, 40% of recorded locations have gone extinct. There is a continuing decline due to invasion by alien plants, crop cultivation and urban expansion.

HEMEROCALLIDACEAE

Caesia R.Br.

F **Caesia capensis** (Bolus) Oberm.

Status: **Rare**

N.A. Helme & D. Raimondo

Distribution: WC. Groot Winterhoek Mountains and Du Toit's Peak to Seweweekspoort.

Habitat: Sandstone, high alpine peaks, over 1 600 m.

Rationale: Only from the highest peaks in the Cape Fold Mountains. Not threatened.

F **Caesia sp. nov.**

Voucher: *Manning 1023* NBG

Status: **VU** B1ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

Distribution: WC. Redelinghuys to Blouberg.

Habitat: Deep sandy flats.

Plate 15



J.H. Vlok

Eriospermum crispum (leaves) VU



C. Paterson-Jones

Eriospermum arachnoideum (leaves) CR, with a flower of *Ixia acaulis*



J.H. Vlok

Eriospermum aequilibre VU



J.H. Vlok

Eriospermum crispum (flower) VU

Plate 16



C. Paterson-Jones

Daubenya stylosa VU



C. Paterson-Jones

Albuca clanwilliamigloria EN



C. Paterson-Jones

Daubenya zeyheri EN



C. Paterson-Jones

Daubenya aurea VU



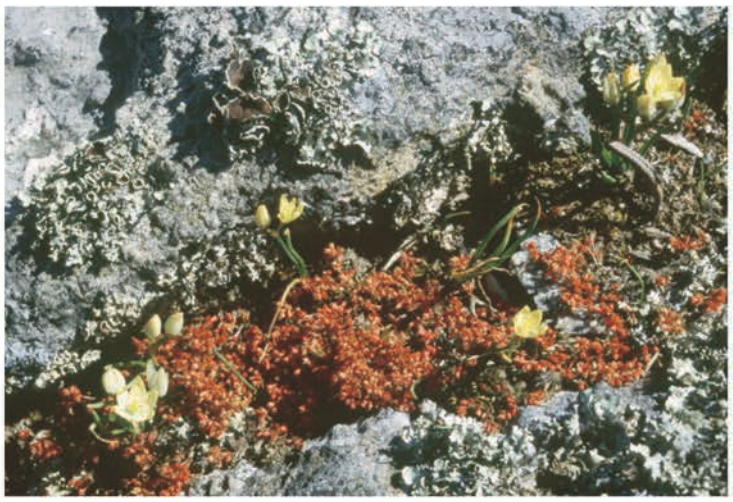
M. Lötter

Eucomis autumnalis Declining



N.A. Helme

Daubenya zeyheri (habitat) EN



C. Paterson-Jones

Ornithogalum rupestre LC



M. Lötter

Eucomis vandermerwei VU

Rationale: EOO 2 200 km². Known from fewer than 10 locations. Threatened throughout its range by potato cultivation, coastal development and invasion by alien plants.

HYACINTHACEAE

Albuca L.

F **Albuca clanwilliamigloria** U.Müll.-Doblies **Plate 16**

Status: **EN** B1ab(ii,iii,v)

N.A. Helme & D. Raimondo

e**Distribution:** WC. Redelinghuys to Olifants River Valley.

Habitat: Deep acid sands.

Rationale: EOO 1 500 km². Known from three locations. It has lost habitat to citrus cultivation and is experiencing an ongoing habitat loss to onion, potato and vineyard expansion. The main population north of Clanwilliam has lost 40% of its subpopulation and habitat since 2000, and new fields continue to be ploughed.

F **Albuca crudenii** Archibald

Status: **VU** D2

J.E. Victor, A.P. Dold & R. Klopper

e**Distribution:** EC. Grahamstown to Alicedale.

Habitat: Thornveld.

Rationale: Known from two locations. Invasive alien plants have infested much of the Dassieklip area (one of the locations) in the past, but recent clearing is reversing this trend. Invasive aliens remain a potential threat.

F **Albuca thermarum** Van Jaarsv.

Status: **Critically Rare**

D. Raimondo

e**Distribution:** WC. Calitzdorp.

Habitat: Wedged in rock crevices or pockets on sheer cliff faces.

Rationale: Occurs at a single site and is not threatened because of the inaccessibility of its habitat.

Bowiea Harv. ex Hook.f.

Bowiea volubilis Harv. ex Hook.f. subsp. **volubilis**

Status: **VU** A2ad

D. Raimondo, J.E. Victor, C.R. Scott-Shaw, M. Lötter, A.P. Dold, M.F. Pfab & J.E. Burrows

Distribution: EC G KZN LM MP. Eastern Cape to Limpopo Province. Widespread elsewhere in southern and eastern Africa.

Habitat: Low and medium altitudes, usually along mountain ranges and in thickly vegetated river valleys, often under bush clumps and in boulder screes, sometimes scrambling at the margins of karroid, succulent bush in the Eastern Cape. Occurs in bushy kloofs at the coast and inland in KwaZulu-Natal. In Gauteng, Mpumalanga and North West Province it is often found in open woodland or on steep rocky hills, usually in well-shaded situations. Tolerates wet and dry conditions, growing predominantly in summer-rainfall areas with an annual rainfall of 200–800 mm.

Rationale: This taxon is under severe pressure from medicinal plant harvesting over most of its range in South Africa. Provincial authorities estimate a minimum decline of 30% nationally. This decline has taken place over the past 30 years. The estimated decline is based on observed declines at known sites and subpopulations as well as on changes in the size of individual bulbs available on the muthi markets. Generation length is estimated to be 10 years.

Daubenya Lindl.

F **Daubenya alba** A.M.van der Merwe

Status: **Rare**

P.A. Manyama

Distribution: NC. Middelpos.

Habitat: Seasonally waterlogged dolerite clay, on low hills or at the foot of rocky dolerite outcrops, 1 000–1 500 m.

Rationale: A range-restricted habitat specialist from the Roggeveld Escarpment, known from fewer than five sites. No significant threats.

Daubenya aurea Lindl. **Plate 16**

Status: **VU** B1ab(ii,iii,iv,v)

G.D. Duncan & J.E. Victor

e**Distribution:** NC. Roggeveld Mountains.

Habitat: Karoo shrubland on stony, heavy red clay soil.

Rationale: EOO < 3 000 km². Known from nine locations. It has lost habitat to overgrazing and agriculture and is declining because of soil disturbance by porcupines and crop cultivation.

Daubenya capensis (Schltr.) A.M.van der Merwe & J.C.Manning

Status: **NT** D2

D. Raimondo

e**Distribution:** WC. Bokkeveld Escarpment and Western Karoo.

Habitat: Dolerite clays.

Rationale: A range-restricted species (EOO 49 km²), known from eight locations. In the 1950s, 13% of its dolerite vertisol clay habitat was ploughed for wheat. This habitat is not currently targeted for agriculture but the species remains potentially threatened by future crop cultivation and overgrazing by livestock.

Daubenya stylosa (Barker) A.M.van der Merwe & J.C.Manning **Plate 16**

Status: **VU** D2

E. Marinus & D. Raimondo

e**Distribution:** NC. Bokkeveld Escarpment.

Habitat: Dolerite clay soils.

Rationale: Known from three locations in a very restricted range (EOO 165 km²). Potentially threatened by agriculture and grazing by livestock.

F **Daubenya zeyheri** (Kunth) J.C.Manning & A.M.van der Merwe **Plate 16**

Status: **EN** B1ab(ii,iii,v)

N.A. Helme & D. Raimondo

e**Distribution:** WC. Paternoster to Langebaan.

Habitat: Coastal granite boulders and occasionally on adjacent sands and calcretes.

Rationale: EOO < 100 km². Known from three locations. Experiencing habitat loss due to coastal development.

Drimia Jacq. ex Willd.

F **Drimia albiflora** (B.Nord.) J.C.Manning & Goldblatt

Status: **VU** D2

D. Raimondo

e**Distribution:** WC. Montagu to Stormsvlei.

Habitat: Low-altitude slopes.

Rationale: Known from one location. Potentially threatened by agriculture (deciduous fruit and wheat cultivation).

[F] **Drimia altissima** (L.f.) Ker Gawl.

Status: **Declining**

V.L. Williams, D. Raimondo, N.R. Crouch, V.J. Brueton, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya

Distribution: EC FS G KZN LM MP NW WC. Western Cape to Limpopo Province and Swaziland, and through southern Africa northwards to Angola and the Congo.

Habitat: Hot, dry bushveld and thicket.

Rationale: Considered to be Declining because medium to large volumes of bulbs are evident on the medicinal markets, but the species appears to be widespread in southern Africa. It has experienced some decline in the past, but the extent and time frame are unknown; declines are not suspected to have exceeded 10% of the population.

Drimia arenicola (B.Nord.) J.C.Manning & Goldblatt

Status: **VU** D2

J.E. Victor & R.C. Turner

[e]**Distribution:** NC WC. Namaqualand and western Karoo to Clanwilliam.

Habitat: Sandy habitats.

Rationale: Known from five locations. Potentially threatened by bulb collecting for the horticultural trade.

[F] **Drimia barkerae** Oberm. ex J.C.Manning & Goldblatt

Status: **EN** B1ab(ii,iii,iv,v)

R.C. Turner

[e]**Distribution:** WC. Eendekuil.

Habitat: Shale slopes and shallow, loamy soils fringing fine clays and quartzite pebble fields.

Rationale: Endemic to the flats surrounding Piketberg, between the foot of Piekenierskloof Pass and Redelinghuys (EOO 450 km^2). It is known from fewer than five locations and continues to decline as a result of wheat and vineyard expansion and grazing by livestock. Much of the habitat has been irreversibly transformed and this loss is ongoing.

[F] **Drimia chalumnensis** A.P.Dold & E.Brink

Status: **VU** D2

A.P. Dold, J.E. Victor & R.C. Turner

[e]**Distribution:** EC. Chalumna River.

Habitat: Buffels Thicket.

Rationale: Known from two locations. Potentially threatened by informal housing development.

[F] **Drimia cooperi** (Baker) Baker

Status: **VU** A2ad; C2a(i)

V.L. Williams & N.R. Crouch

[e]**Distribution:** EC KZN. King William's Town to Pietermaritzburg.

Habitat: Grassy hills.

Rationale: Estimated to have experienced over 30% decline over last 30 years because of habitat loss and some muthi collecting. The subpopulations are fragmented and suspected to occur in fewer than 10 locations. The population size is estimated to be less than 10 000 mature individuals, and the number of mature individuals that have been recorded in a subpopulation is less than 100. Generation length is suspected to be 20 years.

[F] **Drimia cyanelloides** (Baker) J.C.Manning & Goldblatt

Status: **DD**

J.E. Victor & D. Raimondo

[e]**Distribution:** EC. Komga to Maclear and eastwards to the coast.

Habitat: Unknown.

Rationale: The only literature on this species (Nordenstam 1970) indicates that it is known only from the type, collected in the Komga district, but there have been a number of collections made in the Transkei and Maclear area since 1970. This genus requires a taxonomic revision to clarify the exact range and habitat of this taxon.

[F] **Drimia flagellaris** T.J.Edwards, D.Styles & N.R.Crouch

Status: **Rare**

C.R. Scott-Shaw & J.E. Victor

[e]**Distribution:** KZN. Pinetown.

Habitat: Cliff faces, southern or southeastern aspects, in dry or permanently moist conditions and in shady as well as exposed situations.

Rationale: A range-restricted species (EOO 30 km^2). Grows on cliff faces where it is protected from serious threats.

[F] **Drimia hyacinthoides** Baker

Status: **Rare**

J.E. Victor & A.P. Dold

[e]**Distribution:** EC. Albany district.

Habitat: Thornveld.

Rationale: EOO 2 900 km^2. Known from five sites but likely to be under-collected. Not threatened.

[F] **Drimia involuta** (J.C.Manning & Snijman) J.C.Manning & Goldblatt

Status: **VU** D2

D. Raimondo, R.C. Turner & D.A. Snijman

[e]**Distribution:** NC. Bokkeveld Mountains.

Habitat: Loamy soil on exposed sandstone pavements.

Rationale: EOO and AOO $<$ 2 km^2. Known from the type locality that occurs on sandstone pavements. Although its habitat cannot be ploughed, there is ongoing loss of surrounding natural vegetation to rooibos tea cultivation. This is likely to result in isolation of the only known subpopulation, with a potential threat of loss of pollinators.

[F] **Drimia montana** A.P.Dold & E.Brink

Status: **Rare**

P.A. Manyama

[e]**Distribution:** EC. Groot Winterberg and Stomberg Mountains.

Habitat: Arid montane grassland on flat, exposed sandstone rock slabs.

Rationale: A range-restricted species known from two mountain peaks (EOO $<$ 100 km^2). It probably occurs elsewhere on these peaks. Its inaccessible habitat is under no immediate threat.

Drimia nana (Snijman) J.C.Manning & Goldblatt

Status: **VU** D1

D. Raimondo & R.C. Turner

[e]**Distribution:** NC. Kourkammaberge, Kamiesberg and Spektakel Pass.

Habitat: Granite rock crevices, 600–1 600 m.

Rationale: This rare Kamiesberg endemic is known from three sites and is possibly under-collected, but subpopulation numbers are low, with all three known subpopulations having less than 100 plants each. We suspect the population is smaller than 1 000 individuals.

[F] **Drimia sanguinea** (Schinz) Jessop

Status: **NT** A2d

V.L. Williams, D. Raimondo, N.R. Crouch, V.J. Brueton, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya

Distribution: G LM MP NC NW. Northern Cape and diagonally across to Limpopo and Mpumalanga Provinces, Namibia, Botswana and Zimbabwe.

Habitat: Open veld and scrubby woodland in a variety of soil types.

Rationale: The population has declined by 20–25% over the last three generations (generation length 20 years) as a result of harvesting for the medicinal plant trade, especially for the Gauteng trade. Declines are expected to continue and the species should be re-evaluated in the future.

Drimia uranthera (R.A.Dyer) J.C.Manning & Goldblatt

Status: **VU** D2

R.C. Turner

[e]**Distribution:** WC. Little Karoo, Ladismith.

Habitat: Stony slopes.

Rationale: Known from three locations potentially threatened by habitat degradation as a result of overgrazing and trampling by livestock (sheep, goats and ostriches).

Drimiopsis Lindl. & Paxton

[F] **Drimiopsis burkei** Baker subsp. **stolonissima** U. & D.Müll.-Doblies

Status: **Critically Rare**

J.E. Victor & A.J. Hankey

[e]**Distribution:** LM. Strydom Tunnel.

Habitat: Grows on steep rocky slopes, 800–900 m.

Rationale: Known from a single site. Occurs on steep inaccessible cliffs and is therefore unlikely to be threatened.

[F] **Drimiopsis davidsoniae** U. & D.Müll.-Doblies

Status: **VU** D2

M. Lötter, J.E. Burrows, D. McMurtry, S. Burns & L. von Staden

[e]**Distribution:** MP. Blyde River Canyon Nature Reserve.

Habitat: Rocky slopes.

Rationale: Known from three locations. Potentially threatened by mining and development.

Eucomis L'Hér.

[S] **Eucomis autumnalis** (Mill.) Chitt. **Plate 16**

Status: **Declining**

V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya

Distribution: EC FS G KZN LM MP NC NW WC. South Africa, Swaziland, Lesotho, Botswana, Zimbabwe and Malawi.

Habitat: Damp, open grassland and sheltered places from the coast to 2 450 m.

Rationale: Has experienced large population declines and is a very popular medicinal plant. Because of its very widespread distribution, however, it was felt that the decline was not sufficient to qualify as NT. This should be re-assessed in the future, especially given its popularity in the market place, the large numbers harvested and the decrease in the average bulb size sold on the markets.

[F] **Eucomis bicolor** Baker

Status: **NT** A2d

V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter, A.M. Ngwenya & L. von Staden

Distribution: FS KZN. KwaZulu-Natal, Free State and Lesotho.

Habitat: Well-drained, grassy mountain slopes, sometimes in forests, along watercourses and on rocky cliffs, generally at higher altitudes up to 2 800 m.

Rationale: Collected for the traditional medicinal trade, but most populations are well protected within inaccessible areas in the high Drakensberg along the KwaZulu-Natal–Lesotho border. Believed to have declined by 20% over the last 75 years.

[FS] **Eucomis comosa** (Houtt.) Wehrh.

Status: **Declining**

V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya

[e]**Distribution:** EC KZN. Eastern Cape and KwaZulu-Natal.

Habitat: Damp, grassy hillsides.

Rationale: Some decline has probably occurred given its prevalence on the Eastern Cape markets, but the extent of decline and time frames are not known.

Eucomis montana Compton

Status: **Declining**

V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter, A.M. Ngwenya & J.E. Victor

Distribution: MP. Mpumalanga and Swaziland.

Habitat: Mountains, rocky grasslands.

Rationale: Widespread (EOO 30 000 km^2). Expert opinion is that it is likely to be affected by medicinal harvesting given the popularity of the other species of *Eucomis* on the markets. The extent of decline is not known.

[F] **Eucomis pallidiflora** Baker subsp. **pole-evansii** (N.E.Br.) Reyneke ex J.C.Manning

Status: **NT** B2ab(v)

M. Lötter, J.E. Burrows & L. von Staden

Distribution: MP. Pilgrim's Rest and Lydenburg to Swaziland to southern Mpumalanga.

Habitat: Wetlands in grassland, often in standing water up to 300 mm deep.

Rationale: AOO < 1 000 km^2. Known from 18 locations. Declining as a result of harvesting for medicinal purposes, urban expansion, degradation by grazing cattle and drainage of wetlands for conversion to crop fields.

Eucomis vandermerwei I.Verd. **Plate 16**

Status: **VU** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

M. Lötter, J.E. Burrows & L. von Staden

[e]**Distribution:** MP. Dullstroom to Steenkampsberg and Middelburg.

Habitat: Short, sour montane grassland on sandy, low-pH soils derived from quartzitic rocky outcrops. In rock crevices or under overhanging rocks, confined to outcrops on slopes and plateaus of higher peaks, predominantly on north-facing slopes, 2 200–2 500 m.

Rationale: EOO 7 210 km^2. Known from 6–8 locations. It has lost habitat to afforestation and is declining as a

result of overgrazing and trampling by livestock, harvesting for medicinal purposes, a deleterious fire regime and invasion by alien plants. It is also potentially threatened by coal mining.

Lachenalia J.Jacq. ex Murray

[F] **Lachenalia alba** W.F.Barker ex G.D.Duncan

Status: **VU** D2

G.D. Duncan & D. Raimondo

[e]**Distribution:** NC. Bokkeveld Escarpment.

Habitat: Heavy clay soils in renosterveld.

Rationale: It has lost ± 25% of its habitat to ploughing for wheat cultivation and the habitat that remains is smaller than 20 km^2. Potentially threatened by trampling by livestock and digging by porcupines.

Lachenalia ameliae W.F.Barker

Status: **NT** B1ab(ii,iii,iv,v)

J.H. Vlok, G.D. Duncan & D. Raimondo

[e]**Distribution:** WC. Ceres to Montagu and Touwsrivier.

Habitat: Clay flats.

Rationale: EOO 3 500 km^2. Known from less than 20 locations. There is ongoing habitat loss and local extinctions due to crop cultivation and overgrazing and trampling by sheep and ostriches.

Lachenalia angelica W.F.Barker

Status: **VU** D2

J.E. Victor, G.D. Duncan & D. Raimondo

[e]**Distribution:** NC. Hondeklip Bay.

Habitat: Strandveld with strong affinities to adjacent succulent karoo, in shallow soils on flat, sloping rock slabs.

Rationale: Known from two or three locations. Potentially threatened by mining.

[F] **Lachenalia arbuthnotiae** W.F.Barker

Status: **CR** B2ab(ii,iii,iv,v)

D. Raimondo, J.E. Victor & G.D. Duncan

[e]**Distribution:** WC. Cape Flats.

Habitat: Marshy flats.

Rationale: AOO < 10 km^2. Known from two severely fragmented subpopulations where there are less than 130 mature plants. It has lost 98% of its habitat to urban expansion on the Cape Flats over the past 70 years. Both remaining locations are severely threatened by eutrophication as a result of runoff from surrounding industrial areas, and by invading alien plants.

[F] **Lachenalia bachmannii** Baker

Status: **EN** B1ab(ii,iii,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Piketberg to Stellenbosch.

Habitat: Edges of vernal pools on clays.

Rationale: EOO 1 300 km^2. Known from six severely fragmented subpopulations in the Swartland. There is a continuing decline of occupancy and habitat quality as a result of overgrazing, fertiliser runoff and infilling of wetlands.

Lachenalia barkeriana U.Müll.-Doblies, B.Nord. & D.Müll.-Doblies

Status: **Rare**

J.E. Victor & G.D. Duncan

[e]**Distribution:** NC WC. Vanrhynsdorp to Kliprand to Loeriesfontein.

Habitat: Deep sand in Namaqualand Broken Veld.

Rationale: Known from three small, disjunct subpopulations. Less than 30 plants occur within each subpopulation. Not threatened.

Lachenalia buchubergensis Dinter

Status: **Rare**

J.E. Victor & G.D. Duncan

Distribution: NC. Richtersveld.

Habitat: Rocky outcrops (granite and gneiss).

Rationale: A naturally rare dwarf species endemic to the Gariep Centre. Not threatened.

[F] **Lachenalia capensis** W.F.Barker

Status: **VU** B1ab(ii,iii,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Cape Peninsula.

Habitat: Sandstone slopes.

Rationale: EOO 80 km^2. Historically known from six locations in the southern part of the Cape Peninsula. It has experienced habitat loss and local extinction as a result of urban development. The loss to urban expansion is ongoing in the Simon's Town and Hout Bay areas and there are declines due to invasion by alien plants around Smitswinkel Bay and Red Hill.

Lachenalia concordiana Schltr. ex W.F.Barker

Status: **Rare**

J.E. Victor

[e]**Distribution:** NC. Springbok to Calvinia.

Habitat: Succulent karoo shrubland on granitic soils.

Rationale: A poorly known, naturally rare species recorded from six scattered sites in Namaqualand and Bushmanland. Occurs as small subpopulations. Not threatened.

Lachenalia congesta W.F.Barker

Status: **Rare**

J.E. Victor

[e]**Distribution:** NC. Sutherland and Calvinia.

Habitat: Shale in karroid scrub.

Rationale: Known from two disjunct subpopulations, both with small localised subpopulations of less than 35 mature individuals. Not threatened.

[F] **Lachenalia contaminata** Aiton

Status: **NT** B1ab(i,ii,iii,iv,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Lambert's Bay to De Hoop.

Habitat: Seasonally wet flats.

Rationale: Known from a relatively large range (EOO 22 000 km^2), and we estimate that more than 20 locations remain. Subpopulations are severely fragmented and are experiencing continuing declines as a result of agricultural expansion, overgrazing and encroachment from invasive alien grass species.

Lachenalia convallarioides Baker

Status: **CR** D

J.E. Victor & A.P. Dold

[e]**Distribution:** EC. Grahamstown.

Habitat: Rocky quartzite outcrops, 17–1 800 m.

Rationale: Known from one site and 50 mature individuals. Potentially threatened by invading alien plants.

Lachenalia corymbosa (L.) J.C.Manning & Goldblatt

Status: **VU** B1ab(i,ii,iii,iv,v)
D. Raimondo & R.C. Turner

e**Distribution:** WC. Citrusdal to Gordon's Bay.
Habitat: Seasonally inundated clay flats.
Rationale: Seven of 14 subpopulations have been lost to crop cultivation and urban expansion over the past 100 years, and over 90% of its EOO has been transformed. The remaining seven subpopulations are severely fragmented across a large range (EOO 15 000 km^2).

Lachenalia dehoopensis W.F.Barker

Status: **VU** D2
D. Raimondo & G.D. Duncan

e**Distribution:** WC. De Hoop Nature Reserve.
Habitat: Sandy flats.
Rationale: EOO < 100 km^2, AOO 10 km^2. Known from two locations. It lost habitat to crop cultivation in the past, and although not currently declining, it remains potentially threatened by invading alien plants.

F **Lachenalia doleritica** G.D.Duncan

Status: **VU** D2
J.E. Victor & G.D. Duncan

e**Distribution:** NC. Nieuwoudtville, Calvinia and Williston.
Habitat: Heavy doleritic clay soil in full sun.
Rationale: Known from two locations. Potentially threatened by road widening.

Lachenalia duncanii W.F.Barker

Status: **VU** D2
J.E. Victor & G.D. Duncan

e**Distribution:** NC. Kliprand.
Habitat: Namaqualand Klipkoppe Shrubland on sandy granitic soils.
Rationale: This recently described species is known from one population at Kliprand in southwestern Bushmanland. Potentially threatened by road works.

Lachenalia esterhuysenae W.F.Barker

Status: **Rare**
J.E. Victor & G.D. Duncan

e**Distribution:** WC. Cederberg.
Habitat: Stony slopes on shale bands.
Rationale: A Cederberg endemic restricted to a specific habitat of shale bands. Not threatened.

F **Lachenalia gillettii** W.F.Barker

Status: **EN** B1ab(ii,iii,v)
N.A. Helme

e**Distribution:** WC. Citrusdal to Koringberg.
Habitat: Renosterveld on shale flats.
Rationale: This northern Swartland endemic (EOO < 585 km^2) is known from six severely fragmented subpopulations. There were severe past declines because of wheat cultivation and there is a continuing decline due to overgrazing and trampling by livestock, and slow but ongoing habitat loss to further crop cultivation.

Lachenalia haarlemensis Fourc.

Status: **VU** B1ab(ii,iii,iv,v); C1
J.H. Vlok & D. Raimondo

e**Distribution:** WC. Kammanassie Mountains to Langkloof.
Habitat: Deep loam soils.
Rationale: EOO 3 000 km^2. Known from fewer than 10 locations. Declining as a result of crop cultivation taking place on the deep loam soils on which this species occurs. Subpopulations are small and the total number of individuals is not more than 10 000. There has been a 10% decline in the population over the past 10 years owing to crop cultivation.

Lachenalia kliprandensis W.F.Barker

Status: **Rare**
J.E. Victor & G.D. Duncan

e**Distribution:** NC. Kliprand.
Habitat: Deep red sands.
Rationale: A naturally rare species, known from the type locality near Kliprand in southwestern Bushmanland. Not threatened.

F **Lachenalia lactosa** G.D.Duncan

Status: **EN** B1ab(ii,iii,iv,v)
J.E. Victor, G.D. Duncan & D. Raimondo

e**Distribution:** WC. Kleinmond and Bot River to Elim.
Habitat: Lowland fynbos in full sun situations on sandy coastal flats or gentle slopes.
Rationale: EOO < 1 200 km^2. Known from three or four locations. Declining as a result of coastal development and invasion by alien plants.

F **Lachenalia leipoldtii** G.D.Duncan

Status: **VU** D2
A. Harrower & D. Raimondo

e**Distribution:** WC. De Doorns Valley.
Habitat: Sandy flats and gentle slopes at the foot of mountains.
Rationale: Known from one location, it has lost habitat to vineyard expansion in the past. Further ploughing for vineyards and trampling by livestock are potential threats.

F **Lachenalia leomontana** W.F.Barker

Status: **Critically Rare**
N.A. Helme

e**Distribution:** WC. Langeberg Mountains.
Habitat: Rocky outcrops in kloofs in montane fynbos.
Rationale: Known from one area on the slopes of Leeurivier Mountain in the Langeberg. Not threatened because of the inaccessibility of its habitat.

F **Lachenalia liliflora** Jacq. **Plate 18**

Status: **EN** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v); C1
D. Raimondo, R. Koopman, J.E. Victor & G.D. Duncan

e**Distribution:** WC. Tygerberg to Paarl.
Habitat: Renosterveld on shale.
Rationale: EOO 45 km^2, AOO 1 km^2. Extant at four locations. It has lost extensive amounts of habitat to urban and vineyard expansion over the past 130 years. Decline is continuing because of eutrophication, invasive alien grasses and infrastructure maintenance.

F **Lachenalia longibracteata** E.Phillips

Status: **Declining**
N.A. Helme & D. Raimondo

e**Distribution:** WC. Piketberg to Malmesbury.
Habitat: Shale flats and lower slopes.
Rationale: EOO 11 000 km^2. It has lost a minimum of 50% of its habitat over the past 70 years, mainly to wheat cultivation. Loss due to urban expansion and crop cultivation is ongoing but this species is still present in more than 50 fragments, where it is locally common.

[F] **Lachenalia lutzeyeri** G.D.Duncan

Status: **VU** D2

P.A. Manyama

[e]**Distribution:** WC. Grootbos Private Nature Reserve.

Habitat: Full sun in open areas or between sandstone boulders on southwest-facing moderate slopes, 390 m.

Rationale: Known from the type locality on the Witkransberg in the Grootbos Private Nature Reserve northwest of Gansbaai. Potentially threatened by a deleterious fire regime.

Lachenalia macgregoriorum W.F.Barker

Status: **VU** D2

J.E. Victor & G.D. Duncan

[e]**Distribution:** NC. Nieuwoudtville.

Habitat: Karoo shrubland on red clay soils in dolerite rock cracks.

Rationale: Known from one location. Potentially threatened by grazing and trampling by livestock.

Lachenalia margaretae W.F.Barker

Status: **VU** D1

N.A. Helme, D. Raimondo & G.D. Duncan

[e]**Distribution:** WC. Cederberg.

Habitat: Rock ledges, in partial shade.

Rationale: Known from four sites, occurring as small subpopulations (fewer than 10 plants) and we estimate that there are less than 1 000 mature individuals.

Lachenalia martinae W.F.Barker

Status: **VU** D2

G.D. Duncan & D. Raimondo

[e]**Distribution:** WC. Olifants River Valley and mountains.

Habitat: Karoo Broken Veld on heavy clay soils in rocky habitats and on sandstone outcrops.

Rationale: Known from four or five locations. It has lost habitat to citrus cultivation. Potentially threatened by future road widening, further crop cultivation and future urban development.

Lachenalia mathewsii W.F.Barker

Status: **CR** B1ab(ii,iii,v)+2ab(ii,iii,v)

G.D. Duncan, I. Ebrahim & D. Raimondo

[e]**Distribution:** WC. Vredenburg.

Habitat: Sandy soils in seasonally wet areas.

Rationale: Thought to occur only at the type locality and feared extinct when repeated searches between 2004 and 2006 failed to find any plants. The type locality has been severely degraded by overgrazing and this has probably led to the loss of this subpopulation. A new subpopulation of over 10 000 plants was found within 15 km of the location of the type collection in 2007. Most of its habitat has been lost to crop and pasture cultivation over the past 70 years, loss is ongoing.

Lachenalia maximiliani Schltr. ex W.F.Barker

Status: **Rare**

D. Raimondo & G.D. Duncan

[e]**Distribution:** WC. Cederberg.

Habitat: Steep, rocky mountain slopes in dry montane fynbos, succulent karoo and the transitional area between these two vegetation types.

Rationale: A range-restricted species (EOO < 240 km^2) known from fewer than five sites. Not declining.

[F] **Lachenalia mediana** Jacq. var. **mediana**

Status: **VU** B1ab(ii,iii,iv,v)

D. Raimondo & N.A. Helme

[e]**Distribution:** WC. Vredenburg and Porterville to Gordon's Bay.

Habitat: Renosterveld on clay flats.

Rationale: EOO 8 400 km^2. A lowland species that occurs on flat loams and clays. More than 80% of its habitat has been transformed over the past 80 years. Remaining subpopulations are severely fragmented, occurring on small remnants of renosterveld isolated from one another by intervening wheat and vineyard agricultural lands and by suburbs in the greater Cape Town area. Loss to urban development, crop cultivation and invasive alien plants is continuing.

[F] **Lachenalia mediana** Jacq. var. **rogersii** (Baker) W.F.Barker

Status: **EN** B1ab(ii,iii,v)

D. Raimondo & N.A. Helme

[e]**Distribution:** WC. Durbanville to Porterville.

Habitat: Renosterveld on clay flats.

Rationale: EOO 1 700 km^2. Known from four locations. Severely threatened by wheat cultivation, overgrazing by livestock and invasion by alien annual grasses.

Lachenalia minima W.F.Barker **Plate 18**

Status: **VU** D2

J.E. Victor & G.D. Duncan

[e]**Distribution:** WC. Bitterfontein.

Habitat: Succulent karoo shrubland on moist clay flats.

Rationale: Known from four locations. Subpopulations occur adjacent to major roads which, if widened, would result in the extinction of this species in the wild.

Lachenalia moniliformis W.F.Barker **Plate 18**

Status: **CR** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v); C2a(ii)

J.E. Victor & G.D. Duncan

[e]**Distribution:** WC. Worcester.

Habitat: Karroid scrub in open sandy areas.

Rationale: Known from Lemoenpoort near Worcester from 50 mature individuals. It has lost habitat to urban development and is currently threatened by vineyard expansion and erosion due to overgrazing.

Lachenalia muirii W.F.Barker **Plate 18**

Status: **VU** B1ab(ii,iii,iv,v)

D. Raimondo

[e]**Distribution:** WC. Arniston to Still Bay.

Habitat: Limestone hills and flats.

Rationale: EOO 2 400 km^2. Known from fewer than 10 locations. Threatened by invading alien plants throughout its range and by coastal development and crop cultivation at a number of subpopulations outside the De Hoop Nature Reserve.

[F] **Lachenalia neilii** W.F.Barker ex G.D.Duncan

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

G.D. Duncan & D. Raimondo

[e]**Distribution:** NC. Nieuwoudtville.

Habitat: Heavy red dolerite clays.

Rationale: EOO < 200 km^2, AOO < 10 km^2. Severely fragmented subpopulations at five known locations continue to decline owing to ongoing habitat loss and degradation as a result of infrastructure development and overgrazing by livestock.

[F] **Lachenalia nervosa** Ker Gawl.

Status: **EN** B1ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Swellendam to George.

Habitat: Coastal grasslands.

Rationale: EOO 2 900 km^2. Known from clay flats and low slopes. Possibly still extant at four of its known historical locations. There is a continuing decline due to invasion by alien plants and cultivation for pasture and wheat.

Lachenalia nordenstamii W.F.Barker

Status: **Rare**

J.E. Victor & G.D. Duncan

Distribution: NC. Richtersveld.

Habitat: Sheltered rock cracks.

Rationale: A range-restricted species occurring only in a specialised habitat, known from three sites. Not threatened.

[F] **Lachenalia orthopetala** Jacq.

Status: **VU** B1ab(ii,iii,iv,v)

D. Raimondo & G.D. Duncan

[e]**Distribution:** WC. Durbanville to Piketberg.

Habitat: Clay soils in renosterveld.

Rationale: EOO 4 000 km^2. Known from fewer than 10 locations. It has lost over 90% of its clay habitat to wheat cultivation over the past 80 years. Declining as a result of urban expansion, invasion by alien plants, clearing of roadsides and is potentially threatened by road widening.

[F] **Lachenalia pallida** Aiton

Status: **Declining**

D. Raimondo & N.A. Helme

[e]**Distribution:** WC. Piketberg to Stellenbosch.

Habitat: Clay flats in renosterveld.

Rationale: Although 80% of its habitat has been lost (mainly as a result of wheat cultivation), this species is very common in Swartland renosterveld and there are still over 40 sites (renosterveld fragments) where it occurs in large numbers. The generation length of 5–10 years is too short for this species to qualify under Criterion A.

[F] **Lachenalia paucifolia** (W.F.Barker) J.C.Manning & Goldblatt

Status: **EN** B1ab(ii,iii,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Paternoster to Langebaan.

Habitat: Amongst granite rocks and also on calcretes.

Rationale: EOO < 200 km^2. Known from seven small fragmented locations. Declining as a result of urban coastal development and industrial expansion.

[F] **Lachenalia peersii** Marloth ex W.F.Barker

Status: **VU** B1ab(ii,iii,iv,v)

G.D. Duncan & D. Raimondo

[e]**Distribution:** WC. Cape Hangklip to Hermanus.

Habitat: Full sun situations in fynbos amongst rocks or on forest verges a few metres from the high-water mark, in acid sandy soil on acid sandstone.

Rationale: EOO < 100 km^2. Known from six locations. This species is still quite common in the vicinity of Hermanus, but its habitat is rapidly being lost throughout its range as a result of expansion of coastal housing developments.

Lachenalia physocaulos W.F.Barker

Status: **EN** B1ab(ii,iii,iv,v)

D. Raimondo & G.D. Duncan

[e]**Distribution:** WC. Robertson to Swellendam.

Habitat: Transition between succulent karoo and renosterveld on sandy flats and slopes.

Rationale: EOO < 300 km^2. Known from two locations. This species is losing habitat as a result of vineyard expansion in the Robertson–McGregor area.

Lachenalia polyphylla Baker **Plate 18**

Status: **EN** B1ab(ii,iii,iv,v)

D. Raimondo & I. Ebrahim

[e]**Distribution:** WC. Piketberg to Tulbagh.

Habitat: Moist, open, clay gravel flats.

Rationale: EOO 600 km^2. Known from fewer than 10 severely fragmented subpopulations. It has lost habitat to wheat cultivation and is declining as a result of further crop cultivation, expansion of low-cost housing and invasion by alien plants.

Lachenalia polypodantha Schltr. ex W.F.Barker

Status: **Rare**

J.E. Victor & G.D. Duncan

[e]**Distribution:** NC. Springbok and Vioolsdrif.

Habitat: Sandy areas in succulent karoo shrubland.

Rationale: A naturally rare dwarf species, for a long time known from only two collections made near Springbok in Namaqualand. The species was later also discovered near Vioolsdrif further to the north. Not threatened.

Lachenalia purpureo-caerulea Jacq.

Status: **CR** B1ab(iii)+2ab(iii)

D. Raimondo & G.D. Duncan

[e]**Distribution:** WC. Darling and Mamre.

Habitat: Gravel flats.

Rationale: EOO < 20 km^2, AOO < 1 km^2. Confirmed from two subpopulations but possibly occurring at a third, all severely fragmented. Most of its habitat has been lost to wheat and pasture cultivation over the past 100 years. It is currently threatened by encroachment from invasive alien annual grasses, grazing by livestock and eutrophication. There are less than 250 mature individuals of this species known.

[F] **Lachenalia pustulata** Jacq.

Status: **NT** B1ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. St Helena Bay to Cape Peninsula.

Habitat: Flats and rocky outcrops in nutrient-rich soils.

Rationale: EOO 6 800 km^2. Known from less than 20 locations. Declining because of urban expansion and invasive alien grass encroachment. Over 60% of its habitat has been lost over the past 70 years as a result of crop cultivation and urban development.

[F] **Lachenalia reflexa** Thunb. **Plate 18**

Status: **VU** B1ab(ii,iii,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Malmesbury to the Cape Peninsula.

Habitat: Lowland sand plain fynbos or renosterveld on seasonally inundated sandy flats.

Rationale: Restricted to seasonally wet lowland soils (EOO < 1 700 km^2), known from fewer than 10 locations. There is a continuing decline as a result of urban expansion, crop cultivation, trampling by livestock and invasion by alien plants.

[F] **Lachenalia salteri** W.F.Barker

Status: **EN** B1ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Cape Peninsula to Bredasdorp.

Habitat: Seasonally wet flats near the coast.

Rationale: This summer-flowering species (EOO 1 164 km^2) is known from four locations and is threatened by coastal development, especially in the Hermanus and Betty's Bay areas.

Lachenalia sargeantii W.F.Barker **Plate 18**

Status: **VU** D2

D. Raimondo & G.D. Duncan

[e]**Distribution:** WC. Bredasdorp Mountain.

Habitat: Rocky sandstone outcrops.

Rationale: AOO < 4 km^2. Known from one location. This postfire-flowering species occurs as scattered subpopulations all over Bredasdorp Mountain. Potentially threatened by invading alien plants.

Lachenalia schelpei W.F.Barker

Status: **VU** D2

J.E. Victor & G.D. Duncan

[e]**Distribution:** NC. Hantamsberg Mountain.

Habitat: Karoo shrubland on heavy, moist/damp loam or clay soils on sandstone.

Rationale: Known from one location. Not currently declining but potentially threatened by crop cultivation and overgrazing by goats.

[F] **Lachenalia stayneri** W.F.Barker

Status: **EN** B1ab(ii,iii,iv,v)

N.A. Helme, G.D. Duncan & D. Raimondo

[e]**Distribution:** WC. Worcester to Robertson.

Habitat: Karroid flats.

Rationale: EOO 432 km^2. Known from fewer than five locations. Severely threatened by vineyard expansion.

Lachenalia thomasiae W.F.Barker ex G.D.Duncan

Status: **VU** D2

J.E. Victor & D. Raimondo

[e]**Distribution:** WC. Clanwilliam.

Habitat: Shade of bushes and sandstone rocks.

Rationale: Known from one location close to the N7 highway. Potentially threatened by infrastructure development.

[F] **Lachenalia valeriae** G.D.Duncan

Status: **Rare**

P.A. Manyama

[e]**Distribution:** NC. Kleinsee to Komaggas.

Habitat: Shallow or deep brownish red sand on east- and west-facing slopes of granite outcrops.

Rationale: Occurring in a restricted range (EOO 500 km^2), known from three sites. Not threatened.

Lachenalia verticillata W.F.Barker

Status: **Rare**

J.E. Victor & G.D. Duncan

[e]**Distribution:** NC. Namaqualand and southwestern Bushmanland.

Habitat: Red loamy soils.

Rationale: Known from three collections. Not threatened or declining.

Lachenalia viridiflora W.F.Barker **Plate 18**

Status: **CR** B1ab(ii,iii,v)+2ab(ii,iii,v)

J.E. Victor & G.D. Duncan

[e]**Distribution:** WC. St Helena Bay.

Habitat: Granite slopes, in moist depressions where large quantities of humic soil have accumulated.

Rationale: EOO < 100 km^2. Known from three severely fragmented subpopulations. Threatened by collecting for the horticultural trade and coastal housing developments.

Ledebouria Roth

[F] **Ledebouria mokobulanensis** A.J.Hankey & T.J.Edwards **Plate 17**

Status: **VU** D2

A.J. Hankey, L. von Staden & M. Lötter

[e]**Distribution:** MP. Long Tom Pass to Buffelskloof.

Habitat: Montane grassland above 2 000 m.

Rationale: This range-restricted endemic is known from three locations along the highest peaks of the Mpumalanga Escarpment, amidst extensive forestry plantations. Potentially threatened at all three locations by mining, expanding forestry plantations and too frequent fires.

[F] **Ledebouria cremnophila** S.Venter & Van Jaarsv.

Status: **Rare**

L. von Staden & M. Lötter

[e]**Distribution:** MP. Barberton.

Habitat: Grows in humus-filled cracks on high, shady, south-facing cliffs of quartzite rocks.

Rationale: A recently described species known from the type locality northeast of Barberton. There appears to be no serious threats to this species as a result of its inaccessible habitat. Plants collected in the Stegi district of northern Swaziland may also be this species, but this awaits confirmation and this site is not considered in this assessment.

[F] **Ledebouria atrobrunnea** S.Venter

Status: **VU** D2

D. Raimondo & A.J. Hankey

[e]**Distribution:** NW. Beestekraal, Kroondal and Northam.

Habitat: Foothills of the Magaliesberg, on quartzite.

Rationale: Known from three locations. Occurs in a densely populated part of South Africa. Potentially threatened by agriculture, and by habitat degradation through overgrazing by livestock.

Ledebouria crispa S.Venter **Plate 17**

Status: **EN** B1ab(iii)

L. von Staden & P.J.D. Winter

[e]**Distribution:** LM. Hills south and east of Polokwane.

Habitat: Hills in Polokwane Plateau Bushveld.

Rationale: EOO 300 km^2. Known from 2–5 locations. There is ongoing habitat loss due to expansion of urban and rural settlements, quarrying and overgrazing by livestock.

[F] **Ledebouria dolomiticola** S.Venter **Plate 17**

Status: **VU** D1

J.E. Victor & A.J. Hankey

[e]**Distribution:** LM. Strydpoort Mountains.

Habitat: Steep dolomite slopes and cliffs.

Rationale: Known from a single site in the Strydpoort Mountains where there are less than 1 000 mature individuals. There are no recorded threats.

Plate 17



M. Lötter

Ledebouria mokobulanensis VU



S.L. Turner

Ledebouria dolomiticola VU



A.J. Hankey

Ledebouria lepida Rare



S.L. Turner

Ledebouria crispa EN



M. Lötter

Ledebouria galpinii EN

Plate 18


A. Harrower

Lachenalia minima VU


A. Harrower

Lachenalia viridiflora CR


A. Harrower

Lachenalia sargeantii VU


C. Paterson-Jones

Lachenalia muirii VU


C. Paterson-Jones

Lachenalia reflexa VU


A. Harrower

Lachenalia liliflora EN


C. Burgers

Lachenalia polyphylla EN


A. Harrower

Lachenalia moniliformis CR

[F] **Ledebouria galpinii** (Baker) S.Venter **Plate 17**

Status: **EN** B1ab(iii)+2ab(iii)

A.J. Hankey, M. Lötter, J.E. Burrows & L. von Staden

[e]**Distribution:** MP. Kaapsehoop.

Habitat: Short, damp, montane mistbelt grassland on sandy, humus-rich black reef quartzite soil, 1 700 m.

Rationale: EOO 15 km^2, AOO < 5 km^2. Known from three locations around the town of Kaapsehoop. Various factors have led to the species now occupying only rocky refugia, which is not its preferred habitat. Likely to have lost habitat to afforestation and road and housing development. Experiencing an ongoing degradation of its habitat due to a deleterious fire regime, invading alien plants and trampling by wild horses.

[F] **Ledebouria lepida** (N.E.Br.) S.Venter **Plate 17**

Status: **Rare**

J.E. Victor & A.J. Hankey

[e]**Distribution:** LM. Palala district, eastern Waterberg.

Habitat: Waterberg Mountain Bushveld.

Rationale: Known from three sites (EOO < 150 km^2). There are no known threats.

Ledebouria parvifolia S.Venter

Status: **DD**

J.E. Victor & A.J. Hankey

[e]**Distribution:** MP. Graskop district.

Habitat: Dolomite of the Malmani Formation in the Chuniespoort Group.

Rationale: Unknown type location, but if it occurs near Pilgrim's Rest it is probably threatened by invading alien plants.

Merwilla Speta

Merwilla plumbea (Lindl.) Speta

Status: **NT** A2bd

V.L. Williams, A.B. Cunningham & D. Raimondo

Distribution: KZN MP. Widespread in eastern half of South Africa. Also in Swaziland and Lesotho.

Habitat: Montane mistbelt and Ngongoni grassland, rocky areas on steep, well-drained slopes, 300–2 500 m.

Rationale: A highly sought after species that has been exploited over most of its range for medicinal use. Individuals are long-lived, the average age of mature individuals is suspected to be 25 years. A minimum of a 25% decline over the past three generations (75 years) is suspected, based on a number of studies that document very high volumes of plants traded on muthi markets, an overall decrease in the average size of bulbs traded, and anecdotal harvester reports that plants are becoming difficult to find.

Neopatersonia Schönland

Neopatersonia namaquensis G.J.Lewis

Status: **VU** D2

J.E. Victor & G.D. Duncan

[e]**Distribution:** NC. Namaqualand, Kamiesberg.

Habitat: Namaqualand Klipkoppe Shrubland or mountain renosterveld on stony slopes in soils derived from granite.

Rationale: Known from fewer than five locations in the Kamiesberg area. Potentially threatened by crop cultivation, infrastructure expansion and overgrazing and trampling by livestock.

Ornithogalum L.

[F] **Ornithogalum britteniae** F.M.Leight.

Status: **VU** D2

J.E. Victor, A.P. Dold & R.C. Turner

[e]**Distribution:** EC. Grahamstown.

Habitat: Eastern Cape Thornveld.

Rationale: Known from one location on Table Farm near Grahamstown. Potentially threatened by trampling by livestock.

Ornithogalum esterhuyseniae Oberm.

Status: **Rare**

R.C. Turner

[e]**Distribution:** WC. Ceres to Grabouw.

Habitat: Upper mountain slopes in wet places.

Rationale: EOO 2 250 km^2. Known from nine sites. A high-alpine species from the Hex River to Hottentots Holland Mountains. Infrequently collected and extremely localised. Not threatened.

Ornithogalum hallii Oberm.

Status: **CR** PE

D. Raimondo & R.C. Turner

[e]**Distribution:** WC. Vredendal.

Habitat: Undisturbed strandveld in full sun on hard, red soils.

Rationale: Extinct at the 1976 type locality in the Vredendal district. A second site was alleged to exist nearby, but was never collected or recorded. Given that this area and the habitat of this species (red sands) have been significantly transformed over the past 20 years for agriculture, it is probably extinct at this additional site.

Ornithogalum inclusum F.M.Leight.

Status: **CR** B1ab(ii,iii,v)

D. Raimondo & R.C. Turner

[e]**Distribution:** WC. Northeast of Clanwilliam.

Habitat: Karoo shrubland on sandy soils.

Rationale: EOO 32 km^2. Known from one historical location in the Botterkloof Valley. It occurs in an area that is heavily transformed by crop cultivation and degraded by grazing by livestock. The current threat of rooibos tea cultivation is causing ongoing destruction of its habitat.

[F] **Ornithogalum juncifolium** Jacq. var. **emsii** Van Jaarsv. & A.E.van Wyk

Status: **Critically Rare**

P.A. Manyama

[e]**Distribution:** EC. Koonap Reserve near the Great Fish River.

Habitat: Vertical, south-facing shale cliffs.

Rationale: Known only from the type locality. Not threatened.

[F] **Ornithogalum kirstenii** J.C.Manning & Goldblatt

Status: **Rare**

D. Raimondo & P.A. Manyama

[e]**Distribution:** WC. Malgas and De Hoop.

Habitat: Shale cliffs along gullies and rivers.

Rationale: EOO 150 km^2. Known from two sites. Not threatened as it occurs on very steep cliffs that are not invaded by alien plants.

Ornithogalum naviculum W.F.Barker

Status: **VU** D2

D. Raimondo & R.C. Turner

e**Distribution:** WC. Knersvlakte, Hol River.

Habitat: Succulent karoo on white quartz patches.

Rationale: An extremely localised species (EOO < 75 km^2) known from one location. It has lost habitat for a railway line construction and faces a potential threat from gypsum mining and crop cultivation.

F **Ornithogalum perdurans** A.P.Dold & S.A.Hammer

Status: **VU** D2

J.E. Victor & R.C. Turner

e**Distribution:** EC. Grahamstown and Kommadagga.

Habitat: Silcrete remnants overlying kaolinised bedrock or on shales, siltstones and sandstones.

Rationale: Known from a small area close to Grahamstown, from two locations. Potentially threatened by agricultural activities, especially grazing by and trampling livestock.

Ornithogalum pullatum F.M.Leight.

Status: **Rare**

D. Raimondo & R.C. Turner

e**Distribution:** NC. Calvinia to Nieuwoudtville.

Habitat: Dolerite vertisol soils.

Rationale: EOO < 7 200 km^2. A habitat specialist known from six naturally disjunct sites, no significant threats recorded.

Ornithogalum sardienii Van Jaarsv.

Status: **Critically Rare**

E.J. van Jaarsveld, L. Potter & R.C. Turner

e**Distribution:** WC. Wynandsrivier near Oudtshoorn.

Habitat: Enon Conglomerate hillsides.

Rationale: Known only from the type locality (EOO < 10 km^2) near Calitzdorp where it was collected by Van Jaarsveld in 1990. Not threatened.

Ornithogalum unifoliatum (G.D.Rowley) Oberm.

Status: **Critically Rare**

J.E. Victor & R.C. Turner

e**Distribution:** NC. Steinkopf.

Habitat: Quartzite patches.

Rationale: Although it has a highly restricted distribution (EOO < 20 km^2) and is known only from one location, it is very common where it occurs and has no known threats.

Ornithogalum zebrinum (Baker) Oberm.

Status: **Rare**

D. Raimondo & R.C. Turner

e**Distribution:** NC. Namaqualand from Eksteenfontein in the Richtersveld to Platbakkies east of the Kamiesberg.

Habitat: Rocky succulent karoo shrubland.

Rationale: Known from nine sites, with subpopulations often small (fewer than 10 plants). Not threatened.

Spetaea Wetschnig & Pfosser

F **Spetaea lachenaliiflora** Wetschnig & Pfosser

Status: **Rare**

D. Raimondo & F. Cholo

e**Distribution:** WC. Du Toit's Kloof and Bain's Kloof.

Habitat: Rocky places on sandstone slopes.

Rationale: A range-restricted species (EOO 70 km^2), known from two subpopulations. No known threats.

Urginea Steinh.

F **Urginea lydenburgensis** R.A.Dyer

Status: **NT** B1ab(v)

V.L. Williams, D. Raimondo, N.R. Crouch, V.J. Brueton, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya

Distribution: MP. Mpumalanga and Swaziland.

Habitat: Rocky ledges, rock fissures and shallow depressions.

Rationale: EOO 15 800 km^2. A medicinal plant species. Some decline has occurred, but the extent and time frame are unknown. It is not heavily harvested but its constant presence on markets suggests a continuing decline in mature individuals. Subpopulations are severely fragmented, and this species may become threatened in the future if further harvesting leads to significant declines in population size.

HYPOXIDACEAE

Empodium Salisb.

F **Empodium veratrifolium** (Willd.) M.F.Thomps. **Plate 19**

Status: **EN** B1ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

e**Distribution:** WC. Lambert's Bay to Saldanha Bay.

Habitat: Granite boulders, but occasionally also on calcrete, usually in coastal areas.

Rationale: EOO < 500 km^2. Known from less than 15 small, severely fragmented subpopulations. Experiencing severe, continuing decline as a result of coastal development.

Hypoxis L.

F **Hypoxis hemerocallidea** Fisch., C.A.Mey. & Avé-Lall.

Status: **Declining**

V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya

Distribution: EC FS G KZN LM MP NW. Widespread in the eastern part of southern Africa from the Eastern Cape to Botswana and Mozambique.

Habitat: Occurs in a wide range of habitats, including sandy hills on the margins of dune forests, open, rocky grassland, dry, stony, grassy slopes, mountain slopes and plateaus. Appears to be drought and fire tolerant.

Rationale: Extensive commercial exploitation since 1997 has caused declines in some subpopulations, especially in Gauteng where it is additionally threatened by habitat loss and degradation. This species is, however, naturally abundant and widespread.

F **Hypoxis patula** Nel

Status: **VU** D2

Y. Singh, D. Raimondo & J.E. Victor

e**Distribution:** MP. Barberton.

Habitat: Montane grassland.

Rationale: Known from one location. It has lost habitat to afforestation. Potentially threatened by overgrazing and further afforestation.

F **Hypoxis uniflorata** Markötter

Status: **VU** D2

Y. Singh & J.E. Victor

e**Distribution:** KZN. Newcastle.

Habitat: Moist grassland.

Rationale: Known from one location. Potentially threatened by harvesting for medicinal use, commercial crop cultivation and subsistence farming.

Pauridia Harv.

Pauridia longituba M.F.Thomps. Plate 19

Status: **EN** B1ab(i,ii,iii,iv,v)

C. Boucher, N.A. Helme, D.A. Snijman & D. Raimondo

e**Distribution:** WC. St Helena Bay to Saldanha.

Habitat: Base of granite domes and boulders.

Rationale: EOO < 120 km^2. Known from five severely fragmented subpopulations. Declining as a result of urban expansion around Vredenburg.

F **Pauridia minuta** (L.f.) T.Durand & Schinz

Status: **NT** B1ab(i,ii,iii,iv,v)

N.A. Helme & D. Raimondo

e**Distribution:** WC. Langebaan to Riversdale.

Habitat: Damp clay flats throughout its range and on limestone on the West Coast.

Rationale: EOO 22 500 km^2. Known from less than 20 locations. It has lost at least 40% of subpopulations and over 70% of its habitat to urban development, crop cultivation and invasion by alien plants over the past 100 years. It cannot be listed under Criterion A because it is a tiny, short-lived species. The above threats are causing a continuing decline.

Rhodohypoxis Nel

F **Rhodohypoxis incompta** Hilliard & B.L.Burtt

Status: **Rare**

Y. Singh & J.E. Victor

Distribution: KZN. Sehlabathebe to Sani Pass.

Habitat: Subalpine grassland, wet, gravelly silt draining off rocks or wet grass tussocks near rock sheets, 2 300–2 900 m.

Rationale: Southern KwaZulu-Natal Drakensberg endemic restricted to a specialised habitat. Not threatened.

Rhodohypoxis thodiana (Nel) Hilliard & B.L.Burtt

Status: **Rare**

Y. Singh & J.E. Victor

Distribution: KZN. Bushmans River to Giant's Castle.

Habitat: Subalpine grassland and Drakensberg alpine tundra. Damp turf surfaces on or just below basalt summit plateaus, 2 600–3 050 m.

Rationale: KwaZulu-Natal Drakensberg endemic that is localised in wet areas at high altitudes. Not threatened.

Saniella Hilliard & B.L.Burtt

Saniella occidentalis (Nel) B.L.Burtt Plate 19

Status: **Rare**

D.A. Snijman & J.E. Victor

e**Distribution:** NC WC. Calvinia, Sutherland and Ceres Mountains.

Habitat: In damp depressions in heavy soils at high altitudes.

Rationale: A narrow habitat specialist occurring as disjunct subpopulations over an area of 3 600 km^2. Known from 10 sites. Not threatened.

Spiloxene Salisb.

F **Spiloxene alba** (Thunb.) Fourc.

Status: **VU** B1ab(ii,iii,iv,v)

D.A. Snijman & D. Raimondo

e**Distribution:** WC. Koue Bokkeveld to Hermanus and Breede River Valley.

Habitat: Seasonally damp sites mostly in heavy clay soils in remnant patches of renosterveld.

Rationale: EOO 8 500 km^2. Of the 26 subpopulations recorded, 13 have been lost to urban development of Cape Town and Stellenbosch, and crop cultivation around Malmesbury and Wellington. Remaining subpopulations are severely fragmented and loss to urban development, crop cultivation and encroachment from invasive alien grasses is continuing.

F **Spiloxene canaliculata** Garside Plate 19

Status: **EN** B1ab(ii,iii)

D.A. Snijman & D. Raimondo

e**Distribution:** WC. Cape Town to Darling.

Habitat: Coastal fynbos, seasonally damp depressions.

Rationale: EOO 70 km^2. Known from five locations. Declining as a result of crop cultivation, urban expansion and alien grass invasions.

Spiloxene linearis (Andrews) Garside Plate 19

Status: **VU** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

D.A. Snijman & D. Raimondo

e**Distribution:** WC. Jacobsbaai to Mamre.

Habitat: Limestone and granite soils.

Rationale: EOO 1 500 km^2, AOO < 1 500 km^2. Fewer than 10 remaining locations continue to decline because of urban expansion around Langebaan, Danger Bay, Yzerfontein and Mamre. It is also threatened by invading alien plants and agriculture around Mamre and Darling respectively.

Spiloxene maximiliani (Schltr.) Garside Plate 19

Status: **EN** B1ab(ii,iii,iv,v)

D.A. Snijman & D. Raimondo

e**Distribution:** WC. Olifants River Valley.

Habitat: Cool, shaded, moist habitats in rock crevices on steep slopes.

Rationale: EOO 40 km^2. Known from two locations. It has lost much habitat to citrus cultivation in the past. As irrigation techniques improve, more of the Olifants River Valley is being transformed. Crop cultivation remains a severe, ongoing threat to this species. In addition, a substantial portion of a subpopulation was recently lost to road widening. Future infrastructure development is likely to cause further declines.

Spiloxene minuta (L.) Fourc. Plate 19

Status: **EN** B1ab(iii,v)

D.A. Snijman & D. Raimondo

e**Distribution:** WC. Pakhuis Pass to Cape Peninsula and Strand.

Habitat: Lowland renosterveld, in damp sites.

Rationale: EOO < 1 800 km^2. Formerly widespread in the Swartland in wet clay habitats. Now restricted to three or four small, severely fragmented habitat remnants due to urban development and wheat and vineyard expansion. It is currently threatened by ongoing invasion of alien grasses.

[F] **Spiloxene nana** Snijman

Status: **Rare**
D.A. Snijman & D. Raimondo

[e]**Distribution:** NC. Bokkeveld Escarpment.
Habitat: Shallow soil under damp, shaded rock ledges on southwest-facing slopes.
Rationale: A range-restricted species (EOO 450 km^2), known from 10 sites. Not threatened because of its habitat not being suitable for rooibos tea cultivation.

[F] **Spiloxene pusilla** Snijman

Status: **Rare**
D.A. Snijman & D. Raimondo

[e]**Distribution:** WC. Gifberg, Matsikamma Mountain and Pakhuis Pass.
Habitat: Sandstone pavements, but only under south-facing, overhanging rocks in shallow, sandy soil.
Rationale: A habitat specialist restricted to the sandstone massifs of the northern Cederberg and Matsikamma–Gifberg complex. Not threatened.

Spiloxene umbraticola (Schltr.) Garside

Status: **DD**D
D.A. Snijman & J.E. Victor

[e]**Distribution:** WC. Olifants River Valley.
Habitat: Unknown.
Rationale: Not collected since 1964, the exact altitude and substrate where this species grows is unknown so it is difficult to tell how much of its habitat has been lost to crop cultivation.

IRIDACEAE

Aristea Aiton

Aristea biflora Weim. **Plate 20**

Status: **EN** B1ab(iii,v)+2ab(iii,v)
D. Raimondo & D. Pillay

[e]**Distribution:** WC. Caledon to Drayton.
Habitat: Renosterveld on loamy/gravelly clay.
Rationale: EOO 465 km^2, AOO < 30 km^2. Over 80% of its habitat has been lost to wheat cultivation. It now occurs as severely fragmented subpopulations and is declining because of invading alien plants, incorrect fire regimes and urban expansion around the towns of Caledon and Middleton.

[F] **Aristea cantharophila** Goldblatt & J.C.Manning

Status: **VU** B1ab(ii,iii,v)
D. Raimondo, N.A. Helme & P. Goldblatt

[e]**Distribution:** WC. Kuilsrivier to Bot River.
Habitat: Fynbos or renosterveld, on clay and granite slopes.
Rationale: EOO < 2 200 km^2. Known from eight locations. Much of its habitat has been lost to commercial forestry plantations, urban expansion and vineyard, orchard and buchu cultivation. Habitat loss to crop cultivation and encroachment from invasive alien acacias is ongoing, especially in the Elgin Valley.

[F] **Aristea cistiflora** J.C.Manning & Goldblatt

Status: **VU** D2
P.A. Manyama

[e]**Distribution:** WC. Langeberg Mountains.
Habitat: Lower southern slopes in peaty sandstone soil.
Rationale: A recently described species known from one location. It flowers only after fire and is potentially threatened by invading alien plants.

Aristea elliptica Goldblatt & A.P.Dold

Status: **NT** B1ab(ii,iii)
P.A. Manyama & D. Raimondo

[e]**Distribution:** EC. Eastern Cape, Suurberg Mountain to mouth of the Fish River.
Habitat: Fynbos or grassy fynbos on sandstone slopes and often on rock outcrops.
Rationale: EOO 2 600 km^2. Known from less than 15 locations with continuing to decline as a result of coastal development, agricultural expansion, afforestation and overgrazing.

[F] **Aristea fimbriata** Goldblatt & J.C.Manning

Status: **Critically Rare**
P. Goldblatt & L. von Staden

[e]**Distribution:** WC. Piketberg.
Habitat: Rocky sandstone slopes in fynbos.
Rationale: Known from one site in the Piketberg, occurs on rocky sandstone slopes that are not suitable for ploughing.

[F] **Aristea inaequalis** Goldblatt & J.C.Manning

Status: **Rare**
P. Goldblatt & D. Raimondo

[e]**Distribution:** NC WC. Bokkeveld Escarpment, Gifberg, and Nardous Mountain.
Habitat: Sandstone rocks, occurs in crevices in sandstone pavements.
Rationale: A habitat specialist that occurs in a limited range (EOO 1 750 km^2) and has widely scattered subpopulations. Six sites are currently known but it is likely that there are a few more in the remote, unexplored areas of the southern Bokkeveld and Koebee Mountains. Not threatened.

[F] **Aristea latifolia** G.J.Lewis

Status: **Rare**
P. Goldblatt, D. Raimondo & K. Naidoo

[e]**Distribution:** WC. Bain's Kloof and Franschhoek.
Habitat: Sandy kloofs and gullies, 500–1 500 m.
Rationale: A range-restricted species (EOO < 500 km^2), restricted to fire refuge habitats. Not threatened.

Aristea lugens (L.f.) Steud. **Plate 20**

Status: **EN** B1ab(i,iii,iv); C2a(i)
D. Raimondo

[e]**Distribution:** WC. Riebeek-Kasteel to Stellenbosch and Durbanville.
Habitat: Renosterveld on low granitic hills.
Rationale: EOO 2 750 km^2. It has lost over 90% of its habitat over the past 200 years. It now remains in small fragments within agricultural and urban areas. Remaining subpopulations are severely fragmented and continue to decline because of urban and agricultural development, invasion by alien plants, a lack of fire and loss of pollinators associated with fragmentation. We estimate that there are less than 2 500 mature individuals extant, with all recently surveyed subpopulations containing less than 250 mature individuals.

[F] **Aristea nana** Goldblatt & J.C.Manning

Status: **Rare**
P.A. Manyama

[e]**Distribution:** EC WC. Robinson Pass to Baviaanskloof.
Habitat: Arid marginal fynbos on sandy and rocky sandstone slopes.
Rationale: Known from six sites, mostly at high altitude and therefore not threatened.

Plate 19


C. Paterson-Jones

Spiloxene minuta EN


C. Paterson-Jones

Pauridia longituba EN, with purple flowers of *Lachenalia paucifolia*


C. Paterson-Jones

Saniella occidentalis Rare


C. Paterson-Jones

Spiloxene canaliculata EN


C. Paterson-Jones

Spiloxene maximiliani EN


C. Paterson-Jones

Spiloxene linearis VU


C. Paterson-Jones

Empodium veratrifolium EN

Plate 20


C. Paterson-Jones

Aristea lugens EN


A. Harrower

Aristea teretifolia EN


C. Paterson-Jones

Aristea biflora EN


C. Paterson-Jones

Klattia stokoei EN


C. Paterson-Jones

Klattia flava VU


C. Paterson-Jones

Nivenia stokoei Rare


C. Paterson-Jones

Nivenia parviflora Rare


C. Paterson-Jones

Nivenia levynsiae Rare

Plate 21



R. Koopman

Babiana leipoldtii CR



C. Paterson-Jones

Babiana tubulosa VU



C. Paterson-Jones

Babiana noctiflora EN



C. Paterson-Jones

Babiana villosula EN



C. Paterson-Jones

Babiana carminea EN



C. Paterson-Jones

Babiana purpurea EN



C. Paterson-Jones

Babiana rubrocyanea VU



C. Paterson-Jones

Babiana odorata EN

Plate 22


C. Paterson-Jones

Geissorhiza tulbaghensis EN


C. Paterson-Jones

Hesperantha vaginata NT


C. Paterson-Jones

Geissorhiza radians EN


C. Paterson-Jones

Geissorhiza purpureolutea VU


C. Paterson-Jones

Geissorhiza splendidissima VU


C. Paterson-Jones

Geissorhiza monanthos NT


C. Paterson-Jones

Geissorhiza brevituba VU


C. Paterson-Jones

Geissorhiza eurystigma CR


C. Paterson-Jones

Geissorhiza tenella VU

[F] **Aristea nigrescens** J.C.Manning & Goldblatt

Status: **EN** B1ab(ii,iii,iv,v)

D. Raimondo & R. Koopman

[e]**Distribution:** WC. Wolseley to Tulbagh.

Habitat: On ferricrete or sandstone alluvium overlying Malmesbury shale in fynbos-renosterveld transition.

Rationale: A recently described species with a restricted range (EOO 90 km^2), flowering only after fire. Known from three locations. Declining as a result of deciduous fruit and vineyard expansion, lack of fire, and invasion by alien plants. One of the three locations is protected within the Romansrivier Contract Nature Reserve.

Aristea palustris Schltr.

Status: **EN** B1ab(iii)

D. Raimondo, N.A. Helme & D.I.W. Euston-Brown

[e]**Distribution:** WC. Bredasdorp and Agulhas Plain.

Habitat: Wet sites on coastal low slopes.

Rationale: EOO 350 km^2. Known from four locations. This specialist to seasonally wet habitats is severely threatened by invading alien plants which utilise high volumes of groundwater, resulting in a lowered water table and desiccation of its habitat.

Aristea platycaulis Baker

Status: **VU** D2

L. von Staden, J.E. Victor & C.R. Scott-Shaw

[e]**Distribution:** EC. Lusikisiki district.

Habitat: Margins of coastal forest.

Rationale: A range-restricted species (EOO 200 km^2), known from very few records. The forest margin habitat (AOO estimated to be less than 15 km^2) is affected by invasive alien species and degradation due to wood collecting, which could potentially threaten this species.

Aristea recisa Weim.

Status: **Rare**

D. Raimondo

[e]**Distribution:** WC. Hottentots Holland Mountains to Hermanus and Swellendam.

Habitat: Sandstone slopes in wet, sandy places, 600–1 200 m.

Rationale: A mountain species restricted to wet sites, known from four subpopulations, all in protected areas. Not threatened.

[F] **Aristea rupicola** Goldblatt & J.C.Manning

Status: **Critically Rare**

P. Goldblatt & L. von Staden

[e]**Distribution:** WC. Cederberg and Pakhuis Mountains.

Habitat: Grows exclusively in small pockets of soil, or rock crevices in sandstone outcrops and low cliffs.

Rationale: A range-restricted species known from one site. Not threatened as it occurs in a nonarable habitat within a protected area.

Aristea simplex Weim.

Status: **NT** B1ab(ii,iii,iv,v)

D. Raimondo & P. Goldblatt

[e]**Distribution:** WC. Stellenbosch to George, and Swartberg Mountains.

Habitat: Clay flats and slopes in renosterveld.

Rationale: EOO 15 000 km^2. Known from less than 30 locations. This species is difficult to assess as it flowers only after fire and it is possible that there are a number of undiscovered locations. However, it occurs only on clay soils where it has lost significant amounts of habitat to agriculture (at least 50%) over the past 70 years. Habitat loss is ongoing.

Aristea singularis Weim.

Status: **Critically Rare**

D. Raimondo & D. Pillay

[e]**Distribution:** WC. Northern Cederberg.

Habitat: Sandstone slopes near streams, in shade.

Rationale: Confined to the northern Cederberg where it is known from one site. Not threatened as it occurs in a nonarable habitat within a protected area.

[F] **Aristea teretifolia** Goldblatt & J.C.Manning **Plate 20**

Status: **EN** B1ab(iii)

D. Raimondo, J.C. Manning & N.A. Helme

[e]**Distribution:** WC. Shaw's Pass to Napier and Elim.

Habitat: Renosterveld on ferricrete soils on slopes.

Rationale: Occurs as severely fragmented subpopulations within a restricted area (EOO 1 000 km^2). Over 50% of its habitat has been lost to wheat, vineyard and protea cultivation over the past 80 years. Decline is ongoing because of overgrazing and encroachment from invasive alien acacias, hakeas and pines.

[F] **Aristea zeyheri** Baker

Status: **Rare**

P. Goldblatt & J.E. Victor

[e]**Distribution:** WC. Cape Peninsula to Kleinrivier Mountains.

Habitat: Sandstone slopes, usually in damp sites.

Rationale: Known from five sites, restricted to seasonally damp areas and is not threatened as all known subpopulations occur within protected areas.

Babiana Ker Gawl.

[F] **Babiana angustifolia** Sweet

Status: **NT** B1ab(iii)

D. Raimondo & N.A. Helme

[e]**Distribution:** WC. Piketberg to Somerset West.

Habitat: Clay flats in renosterveld.

Rationale: EOO 6 000 km^2. Known from ± 20 locations. It has lost over 95% of its habitat to wheat cultivation and urban expansion over the past 80 years (generation length suspected to be 10 years). At least 20% of this loss has taken place over the past 30 years. Continuing to decline because of urban expansion, especially around Gordon's Bay and Gouda.

[F] **Babiana arenicola** Goldblatt & J.C.Manning

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

J.C. Manning & D. Raimondo

[e]**Distribution:** WC. Brandvlei.

Habitat: Sandy flats.

Rationale: The construction of the Brandvlei Dam caused the loss of a portion of a subpopulation. It is now known from two locations (EOO 10 km^2). Loss to vineyard expansion is ongoing.

Babiana auriculata G.J.Lewis

Status: **Rare**

J.E. Victor & P. Goldblatt

[e]**Distribution:** WC. Pakhuis Mountains.

Habitat: Sandstone crevices.

Rationale: Known from a restricted range (EOO < 100 km^2) from four sites. Not threatened as it occurs in a nonarable habitat.

[F] **Babiana blanda** (L.Bolus) G.J.Lewis

Status: **CR** B1ab(iii)

D. Raimondo & R. Koopman

[e]**Distribution**: WC. Darling to Paarl.

Habitat: Seasonally damp sandy flats.

Rationale: EOO 90 km^2. Known from two severely fragmented subpopulations. A southern Swartland endemic collected three times in the area between Milnerton and Mamre in the 1940s. It was then not recorded again for 56 years, during which period 98% of its habitat was transformed for urban expansion and agriculture. In 2006 N.A. Helme and R. Koopman rediscovered a subpopulation near Philadelphia, where more than 2 000 plants occur in a highly degraded area. A second subpopulation of ± 1 000 plants were found near Malmesbury in 2007. Habitat quality continues to decline because of invasion by alien plants. Part of the Malmesbury subpopulation will be lost to development by 2012.

Babiana brachystachys (Baker) G.J.Lewis

Status: **Declining**

P. Goldblatt & J.E. Victor

[e]**Distribution**: NC WC. Coastal Namaqualand between Lambert's Bay and Hondeklip Bay.

Habitat: Grows on deep white sands near the coast, in West Coast strandveld vegetation.

Rationale: Heavy-mineral sand mining has caused some decline for this taxon, with two historical subpopulations from Namaqua sands likely to be extinct. However, this species occurs on strandveld and sandveld vegetation and is therefore buffered by the fact that much sandveld habitat is still extant, and only a small proportion of the dunes on which it occurs has been mined.

[F] **Babiana carminea** J.C.Manning & Goldblatt **Plate 21**

Status: **EN** D

J.C. Manning, P. Goldblatt & D. Raimondo

[e]**Distribution**: WC. Knersvlakte.

Habitat: Rock crevices in limestone.

Rationale: Known from two sites where less than 100 mature individuals have been recorded.

Babiana cedarbergensis G.J.Lewis

Status: **Rare**

J.E. Victor

[e]**Distribution**: WC. Cederberg Mountains.

Habitat: Rocky sandstone soils.

Rationale: An eastern Cederberg endemic (EOO 465 km^2), known from 10 sites. Not declining as it occurs in a nonarable habitat and many subpopulations fall within the Cederberg Wilderness Area.

[F] **Babiana confusa** (G.J.Lewis) Goldblatt & J.C.Manning

Status: **VU** B1ab(ii,iii,v)

D. Raimondo & P. Goldblatt

[e]**Distribution**: WC. Lambert's Bay, Knersvlakte to Nardous Mountain.

Habitat: Sandy flats and mountain plateaus.

Rationale: EOO 2 500 km^2. Known from five disjunct subpopulations. Possibly under-collected and we estimate that there may be 10 locations. The subpopulation on the Nardous Mountain is experiencing ongoing habitat loss as a result of rooibos tea cultivation.

[F] **Babiana engysiphon** J.C.Manning & Goldblatt

Status: **EN** B1ab(iii)

L. von Staden, N.A. Helme & D. Raimondo

[e]**Distribution**: NC. Southern Bokkeveld Escarpment between Botterkloof and Gifberg.

Habitat: Restio-dominated fynbos in deep, sandy soils.

Rationale: EOO estimated 1 000 km^2. Known from 3–5 locations. Ongoing habitat loss owing to cultivation of rooibos.

Babiana foliosa G.J.Lewis

Status: **CR** PE

D. Raimondo & P. Goldblatt

[e]**Distribution**: WC. Riviersonderend.

Habitat: Clay-loam flats.

Rationale: Known from a single collection near Riviersonderend in 1951. Much of this area has subsequently been converted to wheat cultivation. Possibly extinct.

[F] **Babiana fragrans** (Jacq.) Goldblatt & J.C.Manning

Status: **NT** B1ab(iii)

L. von Staden & D. Raimondo

[e]**Distribution**: WC. Cape Peninsula to Malmesbury and Ceres.

Habitat: Fynbos and renosterveld, low-lying sandstone, granite and clay slopes and flats below 900 m.

Rationale: EOO 6 800 km^2. Known from 14–20 locations. A formerly very common species that has lost much of its habitat in low-lying areas between Stellenbosch, Paarl and Cape Town and within the Ceres Valley. Experiencing ongoing habitat loss due to urban development, agricultural expansion and invasion by alien plants.

Babiana framesii L.Bolus

Status: **Rare**

E. Marinus & D. Raimondo

[e]**Distribution**: WC. Bokkeveld Plateau.

Habitat: Grows on the rocky dolerite outcrops in heavy clay soils.

Rationale: Confined to the area around Nieuwoudtville (EOO < 100 km^2). Not threatened.

Babiana geniculata G.J.Lewis

Status: **Rare**

D. Raimondo & J.E. Victor

[e]**Distribution**: NC WC. Pakhuis Mountains, Biedouw Mountain and northern Cederberg.

Habitat: Rocky sandstone in dry fynbos.

Rationale: A narrow endemic (EOO < 200 km^2). Not threatened as it occurs in a nonarable habitat.

Babiana horizontalis G.J.Lewis

Status: **VU** D2

P. Goldblatt & D. Raimondo

Distribution: NC. Richtersveld.

Habitat: Succulent Karoo shrubland, in rock crevices on granite outcrops.

Rationale: Known from three locations. Potentially threatened by overgrazing by livestock.

[F] **Babiana inclinata** Goldblatt & J.C.Manning

Status: **EN** B1ab(iii)+2ab(iii)

L. von Staden & D. Raimondo

[e]**Distribution**: WC. Lowlands between Piketberg, Porterville, Gouda and Darling.

Habitat: Swartland Shale Renosterveld, damp clay flats and lower slopes.

Rationale: EOO 2 800 km², AOO < 55 km². Restricted to an area that is 95% transformed by wheat cultivation and only 10 severely fragmented subpopulations remain in small, isolated habitat remnants, mainly along roadsides. These fragments are continually being degraded as a result of the effects of fragmentation, which include too infrequent fires, invasion by alien plants and loss of specialist pollinators.

[F] **Babiana karrooica** Goldblatt & J.C.Manning

Status: **VU** B1ab(ii,iii,iv,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Oudtshoorn to De Rust.

Habitat: Enon conglomerate outcrops.

Rationale: EOO 120 km². A recently described species that was previously confused with other more abundant local *Babiana* species. This species is known from fewer than 10 locations, some subpopulations have been lost through urban and agricultural development. There is a continuing decline due to urban expansion.

[F] **Babiana lanata** Goldblatt & J.C.Manning

Status: **VU** B1ab(iii)+2ab(iii)

N.A. Helme, L. von Staden & D. Raimondo

[e]**Distribution:** NC. Namaqualand coastal plain between Kleinsee and Port Nolloth.

Habitat: Succulent karoo, occurs in stony red sand.

Rationale: EOO 460 km². A recently described species known from a few collections, but likely to be more common as it occurs in a remote and botanically very poorly explored part of South Africa. However, because of the restricted range, it is estimated that there are probably fewer than 10 locations. Ongoing diamond mining has a heavy impact on the area at present. About 60% of the habitat within 5 km of the coast has been disturbed or is being actively mined.

[F] **Babiana lapeirousioides** Goldblatt & J.C.Manning

Status: **DD**D

L. von Staden

[e]**Distribution:** NC. Richtersveld.

Habitat: Succulent karoo, precise habitat unknown.

Rationale: Last recorded in 1940. A rare species known from the type collection from an unspecified site that may be somewhere in the far northern Richtersveld between Port Nolloth and the Orange River. Habitat and range unknown, but unlikely to be extinct or severely threatened as the area is very remote.

[F] **Babiana latifolia** L.Bolus

Status: **CR** D

J.C. Manning & D. Raimondo

[e]**Distribution:** WC. Base of the Piketberg.

Habitat: Rocky outcrop in clay flats.

Rationale: Known from one small rock outcrop in the middle of wheat lands, it has lost 98% of its habitat to wheat cultivation. The only remaining subpopulation has less than 50 extant individuals.

Babiana leipoldtii G.J.Lewis **Plate 21**

Status: **CR** B2ab(i,ii,iii,iv,v)

P. Goldblatt, J.C. Manning & D. Raimondo

[e]**Distribution:** WC. Malmesbury to Darling to Klipheuwel.

Habitat: Damp sandy flats.

Rationale: This Swartland endemic was once widespread but has lost > 95% of its habitat to wheat cultivation, urban expansion and dense invasion by alien plants. Less than 5 km² of its damp, sandy flat habitat remains untransformed. It is extant at four small, fragmented locations and is continuing to decline because of invading alien plants and further urban development.

Babiana lewisiana B.Nord.

Status: **VU** D2

D. Raimondo & P. Goldblatt

[e]**Distribution:** WC. Knersvlakte.

Habitat: Confined to quartz patches over saline clays.

Rationale: Known from two locations on the eastern Knersvlakte. Potentially threatened by mining and crop cultivation.

Babiana lobata G.J.Lewis

Status: **Rare**

D. Raimondo & P. Goldblatt

[e]**Distribution:** NC. Richtersveld, Armmanshoek to Stinkfontein Mountains.

Habitat: Rocky lower slopes and flats.

Rationale: A range-restricted species (EOO < 500 km²) that is relatively common within the Richtersveld and not known to be declining.

[F] **Babiana longiflora** Goldblatt & J.C.Manning

Status: **CR** D

J.C. Manning, P. Goldblatt & D. Raimondo

[e]**Distribution:** WC. Piketberg to Porterville.

Habitat: Transitional fynbos-renosterveld, on sandstone outcrops.

Rationale: Known from one remnant of natural vegetation in the middle of wheat lands. It has lost 98% of its habitat to wheat cultivation. The only remaining subpopulation has less than 50 extant individuals.

[F] **Babiana melanops** Goldblatt & J.C.Manning

Status: **VU** B1ab(iii)

L. von Staden & N.A. Helme

[e]**Distribution:** WC. Hills between Darling and Mamre and the Tulbagh Valley. Isolated records from Wellington, Klapmuts and Bottelary Hills.

Habitat: Gravel flats and slopes in Swartland Granite Renosterveld, except Tulbagh Valley, where it occurs on rocky sandstone flats in fynbos.

Rationale: EOO 5 400 km². Known from 7–10 locations. Subpopulations are severely fragmented and its habitat has been extensively transformed by crop cultivation. Remnants are being continually degraded by encroachment from invasive alien species, gravel quarrying, too infrequent fires and the effects of fragmentation such as loss of specialist pollinators.

[F] **Babiana montana** G.J.Lewis

Status: **EN** B1ab(ii,iii,v)

P. Goldblatt & D. Raimondo

[e]**Distribution:** WC. Caledon to Bredasdorp.

Habitat: Sandstone and limestone slopes.

Rationale: EOO < 3 000 km². Known from three locations. It has lost over 80% of its habitat to wheat cultivation over the past 70 years. Remaining subpopulations are threatened by habitat degradation as a result of invasion by alien plants and overgrazing by livestock.

Babiana mucronata (Jacq.) Ker Gawl. subsp. **minor** (G.J.Lewis) Goldblatt & J.C.Manning

Status: **EN** B1ab(ii,iii,iv,v)

P. Goldblatt & D. Raimondo

[e]**Distribution:** NC WC. Gifberg to Bokkeveld Escarpment.

Habitat: Succulent Karoo on sandy soil.
Rationale: EOO < 250 km². Known from five locations. The sandy soils in which it grows are a prime target for rooibos tea cultivation, which is causing ongoing decline to the habitat of this taxon.

F **Babiana nana** (Andrews) Spreng. subsp. **maculata** (Klatt) Goldblatt & J.C.Manning

Status: **NT** B1ab(iii)
L. von Staden & D. Raimondo
e**Distribution:** WC. Cape Peninsula to Mossel Bay.
Habitat: Sandy coastal flats and dunes.
Rationale: EOO 35 800 km². Known from 15–20 severely fragmented subpopulations. It is restricted to an area that is undergoing extensive habitat loss to coastal development, crop cultivation and invasion by alien plants.

F **Babiana nana** (Andrews) Spreng. subsp. **nana**

Status: **EN** B1ab(i,ii,iii,iv,v)
L. von Staden
e**Distribution:** WC. Milnerton to Vredenburg Peninsula, extinct in the southern part of the range.
Habitat: Sand plain fynbos and dune strandveld, sandy coastal flats and dunes.
Rationale: EOO 840–1 400 km². Known from 4–10 locations. Subpopulations of this taxon are severely fragmented and are declining mainly as a result of coastal development and invasion by alien plants.

F **Babiana noctiflora** J.C.Manning & Goldblatt **Plate 21**

Status: **EN** D
J.C. Manning, P. Goldblatt, A.B. Low & D. Raimondo
e**Distribution:** WC. Paardeberg.
Habitat: Renosterveld on granite soils on low slopes.
Rationale: Known from two locations from a very restricted range (EOO < 10 km²). It has lost habitat to orchard cultivation. The remaining two subpopulations together have less than 250 mature individuals.

F **Babiana odorata** L.Bolus **Plate 21**

Status: **EN** B1ab(ii,iii,iv,v)
J.C. Manning & D. Raimondo
e**Distribution:** WC. Piketberg to Durbanville.
Habitat: Alluvial renosterveld on clay flats and slopes.
Rationale: EOO < 3 500 km². This Swartland endemic has lost extensive parts of its habitat to wheat cultivation and urban expansion of Malmesbury and Darling. It is extant at four locations, one of which has lost 98% of individuals to urban and infrastructure expansion since 2005. Habitat degradation due to invasion by alien plants is ongoing.

F **Babiana papyracea** Goldblatt & J.C.Manning

Status: **VU** D2
J.C. Manning, P. Goldblatt & D. Raimondo
e**Distribution:** NC. Nieuwoudtville.
Habitat: Renosterveld on tillite clays.
Rationale: Known from two small fragments. Over 95% of the habitat has been lost to ploughing for wheat since the 1940s. Although not currently declining, potentially threatened by encroachment from invasive alien grasses.

F **Babiana patula** N.E.Br.

Status: **Declining**
D. Raimondo
e**Distribution:** WC. Tulbagh to Albertinia.
Habitat: Clay flats and slopes.
Rationale: Occurring over a wide range (EOO 20 000 km²), known from over 20 large subpopulations. Agriculture, urban expansion and invasion by alien plants have caused a loss of over 60% of its habitat, but this loss has taken place over the past 80 years, much longer than three generations (generation length less than five years). Habitat loss is ongoing.

Babiana pauciflora G.J.Lewis

Status: **VU** D2
P. Goldblatt & D. Raimondo
e**Distribution:** NC. Bokkeveld Escarpment.
Habitat: Arid renosterveld on red sandy/clay soils on rocky flats.
Rationale: Known from four locations. It has lost habitat to wheat cultivation in the past, and although not currently declining, olive and further cereal cultivation as well as clearing of road verges are potential threats.

F **Babiana petiolata** Goldblatt & J.C.Manning

Status: **EN** B1ab(iii)+2ab(iii)
N.A. Helme, L. von Staden & D. Raimondo
e**Distribution:** WC. Velddrif to Lambert's Bay.
Habitat: Strandveld, flat sandy ground close to the coast.
Rationale: EOO 175 km². Known from four locations. Continuing habitat loss due to expanding potato cultivation. Potentially threatened by costal development and mining.

Babiana pilosa G.J.Lewis

Status: **Rare**
D. Raimondo, L. Potter & J.E. Victor
e**Distribution:** WC. Nuwerus.
Habitat: Quartzite patches on rocky slopes.
Rationale: Known from two sites. Not threatened because of the inaccessibility of its habitat.

F **Babiana praemorsa** Goldblatt & J.C.Manning

Status: **Rare**
P.A. Manyama
e**Distribution:** NC. Calvinia, Hantamsberg Mountain to Bloukrans Pass.
Habitat: Dolerite outcrops, often growing in rock crevices in dolerite pavement.
Rationale: Known from fewer than five sites, not threatened as habitat is nonarable.

F **Babiana purpurea** (Jacq.) Ker Gawl. **Plate 21**

Status: **EN** B1ab(ii,iii,iv,v)
J.C. Manning & D. Raimondo
e**Distribution:** WC. Bot River to Bredasdorp to Robertson.
Habitat: Renosterveld on clay flats and slopes.
Rationale: EOO < 5 000 km². Known from two locations. It has lost > 80% of its habitat over the past 60 years to wheat and vineyard cultivation. The largest remaining subpopulation occurs on a commonage in the town of Caledon where it is threatened by urban development and invaded by alien eucalypts and acacias. The second subpopulation occurs on a road verge and is threatened by road works and verge clearing.

Babiana pygmaea (Burm.f.) Baker

Status: **CR** B1ab(i,ii,iii,iv)
J.C. Manning, P. Goldblatt & D. Raimondo
e**Distribution:** WC. Hopefield to Mamre.
Habitat: Gravelly flats and sandstone outcrops.

Rationale: Known from two or three small locations that are highly fragmented as a result of conversion of its habitat for wheat cultivation. Threatened by habitat degradation as a result of overgrazing by livestock and invasion by alien plants.

[F] **Babiana radiata** Goldblatt & J.C.Manning

Status: **CR** B1ab(iii,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. De Rust.

Habitat: Deep gravel soils.

Rationale: A recently discovered species (EOO 20 km^2), known from three small, fragmented subpopulations. One subpopulation was destroyed by construction of a pig farm in 2006. The remaining two subpopulations occur on road verges and are declining as they are very vulnerable to the impact of road works.

[F] **Babiana regia** (G.J.Lewis) Goldblatt & J.C.Manning

Status: **CR** B1ab(ii,iii)+2ab(ii,iii)

P. Goldblatt & D. Raimondo

[e]**Distribution:** WC. Agter-Paarl to Stellenbosch.

Habitat: Seasonally wet flats.

Rationale: EOO 55 km^2. Eleven of the 14 historical locations have been lost over the past 60 years because of agricultural expansion and invasion by alien plants. The habitat of damp, loamy soils in which this plant occurs is targeted for crop cultivation. All three remaining locations are small, fragmented and threatened by invading alien plants.

[F] **Babiana rubella** Goldblatt & J.C.Manning

Status: **VU** D1+2

N.A. Helme & L. von Staden

[e]**Distribution:** NC. Kotzesrus, Namaqualand.

Habitat: Sandy flats in Namaqualand Strandveld.

Rationale: EOO 150 km^2. Known from two sites. A small area of ± 200 ha around the type locality has been transformed for crop cultivation over the last 10 years and this subpopulation is potentially threatened by further expansion of crops. The total population is estimated to be less than 1 000 mature individuals.

[F] **Babiana rubrocyanea** (Jacq.) Ker Gawl. **Plate 21**

Status: **VU** D2

P. Goldblatt & J.E. Victor

[e]**Distribution:** WC. Darling.

Habitat: Damp, alluvial sands over clay.

Rationale: Known from one location. Most of its habitat has been lost to wheat cultivation. The remaining subpopulation occurs in a small private nature reserve that is frequented by thousands of tourists during the spring flower season and used for stock farming at other times of the year. Potentially threatened by the impact of grazing by cattle and trampling by tourists.

Babiana salteri G.J.Lewis

Status: **VU** D2

P. Goldblatt & D. Raimondo

[e]**Distribution:** WC. Knersvlakte.

Habitat: Grows between white quartz pebbles on saline clay flats.

Rationale: Known from two locations. Potentially threatened by trampling by livestock and gypsum mining.

[F] **Babiana sambucina** (Jacq.) Ker Gawl. subsp. **longibracteata** (G.J.Lewis) Goldblatt & J.C.Manning

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

L. von Staden & D. Raimondo

[e]**Distribution:** NC. Narrow endemic to the Bokkeveld Plateau around Nieuwoudtville.

Habitat: Bokkeveld Sandstone Fynbos, in deep sandy soils on flats and gentle slopes.

Rationale: EOO 450 km^2, AOO < 450 km^2. Likely to persist at five locations. Most records of this taxon are from before 1970, in an area that has undergone rapid transformation over the last 10 years as a result of the expansion of the rooibos tea industry. It continues to decline because of ongoing habitat loss.

[F] **Babiana secunda** (Thunb.) Ker Gawl.

Status: **CR** B2ab(iii)

D. Raimondo & N.A. Helme

[e]**Distribution:** WC. Hopefield to Paarl.

Habitat: Clay flats.

Rationale: Extant at three small, severely fragmented subpopulations, having lost 44 of 47 historical locations to urban expansion on the Cape Flats and wheat and vineyard expansion in the Swartland. All remaining suitable flat clay renosterveld habitat within its range is smaller than 10 km^2. Its habitat continues to be degraded because of invasion by alien plants.

Babiana stenomera Schltr.

Status: **CR** PE

P. Goldblatt & D. Raimondo

[e]**Distribution:** WC. Nuwerus, Kareebergen.

Habitat: Sandy granitic and clay soils.

Rationale: Not collected for over 100 years. Probably extinct because of grazing by livestock, as repeated searches have failed to relocate it.

[F] **Babiana stricta** (Aiton) Ker Gawl.

Status: **NT** B1ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Piketberg and Cape Peninsula to Worcester and Swellendam.

Habitat: Waterlogged clay or gravelly soils in renosterveld or fynbos.

Rationale: EOO 22 000 km^2. This relatively widespread species occurs mainly in a restricted habitat of moist clays. It has lost 47% of subpopulations over the past 120 years as a result of crop cultivation and urban expansion. Its habitat continues to be transformed for agriculture and urban developments and is being degraded owing to encroachment from invasive alien grasses.

[F] **Babiana tanquana** J.C.Manning & Goldblatt

Status: **Rare**

L. von Staden & N.A. Helme

[e]**Distribution:** NC WC. Tanqua Karoo.

Habitat: Dolerite outcrops.

Rationale: Known from four sites, but this recently described species may occur at additional sites. It has a known range of ± 250 km^2. The full range is not yet known, but the EOO may be as large as 10 000 km^2 if it occurs across the Tanqua Karoo. It is a habitat specialist that is locally common. Large areas of its habitat, including two of the known sites, are protected within the Tanqua Karoo National Park.

Babiana thunbergii Ker Gawl.

Status: **NT** B1ab(ii,iii,iv,v)

D. Raimondo & N.A. Helme

Distribution: NC WC. Coastal Namaqualand between Saldanha and the mouth of the Orange River.

Habitat: Sandy flats and dunes, coastal.

Rationale: It has a long, narrow, coastal distribution from Saldanha Bay to the mouth of the Orange River (EOO 21 000 km^2), known from 17 locations. Threatened by diamond mining activities in the northern part of its range and by grazing and development in the southern part. A new threat to the southern populations is the planned mining for heavy minerals in the Groen River area. Some subpopulations may also have been affected by the implementation of centre-point irrigation schemes, which have allowed the planting of crops in previously nonarable areas. If decline continues, this species will soon be considered vulnerable.

[F] **Babiana toximontana** J.C.Manning & Goldblatt

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

N.A. Helme, L. von Staden & D. Raimondo

[e]**Distribution:** WC. Foothills and plains below the Matsikamma and Gifberg Mountains between Klawer and Vanrhynsdorp.

Habitat: Arid fynbos, sandy flats and stony lower slopes.

Rationale: EOO 75 km^2. Known from four or five locations. Subpopulations on sandy flats are threatened by habitat loss as a result of expanding rooibos tea cultivation.

Babiana tritonioides G.J.Lewis

Status: **VU** D2

P. Goldblatt, A. le Roux & D. Raimondo

[e]**Distribution:** NC. Southern Richtersveld to Komaggas.

Habitat: Stony, granitic slopes.

Rationale: Known from fewer than five locations. Potentially threatened by grazing livestock.

[F] **Babiana tubiflora** (L.f.) Ker Gawl.

Status: **Declining**

L. von Staden

[e]**Distribution:** WC. Coastal areas from Lambert's Bay to Still Bay and inland around Darling and Piketberg.

Habitat: Sandy coastal flats and dunes in strandveld and fynbos.

Rationale: EOO 47 000 km^2, AOO ± 4 600 km^2 (based on available habitat). Known from more than 10 subpopulations and not severely fragmented. It has lost significant amounts of habitat to urban and coastal development as well as agriculture. It is able to tolerate severe disturbance, but coastal development is causing ongoing, irreversible habitat loss and although this species is not threatened at the moment, it should be monitored.

[F] **Babiana tubulosa** (Burm.f.) Ker Gawl. **Plate 21**

Status: **VU** D2

J.C. Manning & D. Raimondo

[e]**Distribution:** WC. Darling, Mamre and Langebaan.

Habitat: Humic soils on granite.

Rationale: Known from three locations. Potentially threatened by urban expansion in Langebaan and trampling and overgrazing by livestock in Darling and Mamre.

[F] **Babiana unguiculata** G.J.Lewis

Status: **VU** D2

P. Goldblatt, J.E. Victor & K. Naidoo

[e]**Distribution:** NC WC. Nardous Mountain and southern Bokkeveld Escarpment.

Habitat: Sandy seeps.

Rationale: Known from two locations. Restricted to rare seep habitats. Potentially threatened by rooibos tea cultivation at both locations.

Babiana vanzijliae L.Bolus

Status: **NT** B1ab(ii,iii,iv,v)

D. Raimondo & P. Goldblatt

Distribution: NC. Bokkeveld Mountains, from Nieuwoudtville to Lokenburg.

Habitat: Rocky sandstone and tillite-derived soils, in renosterveld and fynbos.

Rationale: EOO < 600 km^2. Known from 10–15 locations. Experiencing ongoing habitat loss to wheat and rooibos cultivation.

[F] **Babiana villosa** (Aiton) Ker Gawl.

Status: **NT** B1ab(ii,iii,iv,v)

D. Raimondo & J.C. Manning

[e]**Distribution:** WC. Malmesbury to Wellington and Tulbagh Valley.

Habitat: Shale renosterveld on flats, hills and lower mountain slopes.

Rationale: EOO 1 995 km^2. Known from 16 locations. It has lost 80% of its habitat to agriculture but is short-lived and cannot be listed under Criterion A. Plants are locally common in remnant fragments of renosterveld, especially in the Tulbagh Valley, but it continues to lose habitat to agriculture, especially vineyards and olive cultivation.

[F] **Babiana villosula** (J.F.Gmel.) Ker Gawl. ex Steud. **Plate 21**

Status: **EN** B1ab(ii,iii,iv,v)

J.C. Manning & D. Raimondo

[e]**Distribution:** WC. Malmesbury to Gordon's Bay.

Habitat: Renosterveld and shale fynbos in seasonally moist areas on clay flats and slopes.

Rationale: A range-restricted species (EOO < 2 000 km^2), extant at seven of its 18 historical locations. It has lost over 80% of its habitat to urban development, wheat and vineyard expansion and infestations of invasive alien plants. Occurs as small, severely fragmented subpopulations. Loss to urban expansion and invasion by alien plants is ongoing.

Babiana virginea Goldblatt

Status: **Rare**

J.E. Victor & D. Raimondo

[e]**Distribution:** NC. Roggeveld Escarpment, Middelpos to Verlate Kloof.

Habitat: Shale outcrops amongst clumps of *Merxmuellera* grass.

Rationale: A range-restricted Roggeveld endemic (EOO 550 km^2). Not threatened or declining.

Bobartia L.

Bobartia fasciculata J.B.Gillett ex Strid

Status: **NT** B1ab(ii,iii,iv,v)

D. Raimondo

[e]**Distribution:** WC. Tulbagh to Citrusdal.

Habitat: Fynbos on mountain slopes, often in sandy places, 350–750 m.

Rationale: Although only nine locations are recorded, there are likely to be a few more given that this species occurs in mountainous areas. Two of the historical locations have been lost as a result of rooibos cultivation.

Ongoing habitat loss for subpopulations occurring on sandy areas is probably due to the high rates of transformation of this habitat for rooibos cultivation.

Bobartia gladiata (L.f.) Ker Gawl. subsp. **major** (G.J.Lewis) Strid

Status: **Rare**

D. Raimondo & D. Pillay

e**Distribution:** WC. Southern Cape Peninsula.

Habitat: Marshy places and sandy plateaus.

Rationale: EOO 90 km^2. Known from three sites, all within the Cape Point section of the Table Mountain National Park.

Bobartia longicyma J.B.Gillett subsp. **longicyma**

Status: **NT** B1ab(i,iii,iv,v)

D. Raimondo

e**Distribution:** WC. Caledon and Hermanus to Soetanysberg.

Habitat: Sandy flats at lower mountain slopes.

Rationale: EOO < 2 700 km^2. Known from 15 locations. This taxon has lost 60% of its habitat over the past 70 years and continues to decline because of ongoing habitat loss to agriculture and invasion by alien plants.

Bobartia longicyma J.B.Gillett subsp. **microflora** Strid

Status: **VU** D2

D. Raimondo

e**Distribution:** WC. Potberg.

Habitat: Sandstone slopes.

Rationale: A range-restricted taxon (EOO 35 km^2) known from the one location. Potentially threatened by invading alien plants.

Bobartia macrocarpa Strid

Status: **VU** A2c; B1ab(ii,iii,iv,v)

D. Raimondo

e**Distribution:** EC. Kareedouw to Grahamstown.

Habitat: Flat open grassy patches.

Rationale: EOO < 3 000 km^2. Known from fewer than 10 locations. Over 30% of the grassy habitat where this species occurs has been transformed over the past 36 years. Generation length of this species is estimated to be 15 years. There is a continuing decline throughout its range due to crop cultivation and commercial forestry plantations.

Bobartia macrospatha Baker subsp. **anceps** (Baker) Strid

Status: **Rare**

D. Raimondo & J.E. Victor

e**Distribution:** WC. Langeberg Mountains between Garcia's Pass and Tradouw Pass.

Habitat: Mountain slopes in fynbos, sandy soils.

Rationale: A range-restricted taxon (EOO < 500 km^2) that has large subpopulations within its limited range and is not declining.

Bobartia orientalis J.B.Gillett subsp. **occidentalis** Strid

Status: **Rare**

D. Raimondo & J.E. Victor

e**Distribution:** WC. Piketberg and Cederberg.

Habitat: Dry, stony sandstone slopes.

Rationale: A range-restricted taxon (EOO < 500 km^2) occurring only on rocky slopes that are not arable. Not threatened.

Bobartia paniculata G.J.Lewis

Status: **Rare**

J.E. Victor & D. Raimondo

e**Distribution:** WC. Kammanassie Mountains.

Habitat: Middle to upper slopes in dry fynbos.

Rationale: A range-restricted species (EOO < 300 km^2) occurring mostly within protected areas in a nonarable habitat. Not threatened.

Bobartia parva J.B.Gillett

Status: **Rare**

J.E. Victor & L. von Staden

e**Distribution:** WC. Langeberg Mountains, Swellendam to Lemoenshoek.

Habitat: Moist mountain slopes.

Rationale: A range-restricted Langeberg endemic (EOO < 150 km^2). Occurs within protected areas and is not threatened.

Chasmanthe N.E.Br.

Chasmanthe bicolor (Gasp.) N.E.Br.

Status: **VU** B1ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

e**Distribution:** WC. McGregor and Swellendam.

Habitat: Open woodland near streams.

Rationale: EOO 600 km^2. Known from three locations, but its habitat is very difficult to explore and we estimate that there are ± 10 locations. Declining as a result of crop cultivation, dam construction and invasion by alien plants.

Crocosmia Planch.

Crocosmia fucata (Herb.) M.P.de Vos

Status: **VU** D2

P. Goldblatt & N.A. Helme

e**Distribution:** NC. Northern Kamiesberg.

Habitat: Mountain renosterveld on granitic soils in wet kloofs.

Rationale: Restricted to the Sneeukop area of the northern Kamiesberg. Only one subpopulation is known from alongside a seasonal stream. Potentially threatened by grazing and trampling by livestock.

Crocosmia masoniorum (L.Bolus) N.E.Br.

Status: **VU** B1ab(ii,iii,iv,v)

P. Goldblatt & J.E. Victor

e**Distribution:** EC. Southern Drakensberg Mountains, near Engcobo.

Habitat: Highland sourveld, loam sandstone soils.

Rationale: EOO < 3 000 km^2. Known from seven locations and severely threatened by invading alien plants, afforestation and overgrazing by livestock.

Crocosmia mathewsiana (L.Bolus) Goldblatt

Status: **VU** D2

P. Goldblatt & D. Raimondo

e**Distribution:** MP. Drakensberg Escarpment in Mpumalanga, God's Window to Mac Mac Falls.

Habitat: Damp, shady places and along forest margins.

Rationale: Known from a restricted range (EOO < 60 km^2), from fewer than five locations. Potentially threatened by invading alien plants.

Crocosmia pearsei Oberm.

Status: **Rare**

J.E. Victor, C.R. Scott-Shaw & P. Goldblatt

Distribution: KZN. Cathedral Peak and Mont-aux-Sources.

Habitat: Subalpine grassland, occurring in moist places often at the base of basalt rock faces, 2 200–3 000 m.

Rationale: Drakensberg endemic restricted to a specialised habitat at high altitudes. Not threatened as most subpopulations occur within protected areas.

Devia Goldblatt & J.C.Manning

[F] **Devia xeromorpha** Goldblatt & J.C.Manning

Status: **Rare**

P.A. Manyama, D. Raimondo & D.A. Kamundi†

[e] **Distribution:** NC. Roggeveld Escarpment northwest of Sutherland.

Habitat: Rocky loam in renosterveld, 1 500–1 700 m.

Rationale: A highly range-restricted species (EOO 70 km^2) occurring only in the highest parts of the Roggeveld Escarpment. Known from two subpopulations. No known threats.

Dierama K.Koch

Dierama dubium N.E.Br.

Status: **VU** B1ab(ii,iii,v)

L. von Staden, J.E. Victor & C.R. Scott-Shaw

[e] **Distribution:** KZN. Mahlabatini to Mapumulo.

Habitat: Grassland, 1 200–1 500 m.

Rationale: It has a restricted distribution in central KwaZulu-Natal (EOO 3 800 km^2) and is very rare, occurring in very low abundances and known from 5–7 locations. Its habitat is severely transformed in the southern parts of the range. Across the known range of this species there is a continuing decline due to subsistence agriculture (crop cultivation and overgrazing of communal rangelands).

Dierama erectum Hilliard

Status: **EN** B1ab(ii,iii,iv,v)

C.R. Scott-Shaw, L. von Staden & J.E. Victor

[e] **Distribution:** KZN. Ngome.

Habitat: Wet mistbelt grassland on dolerite along streams, 1 000–1 200 m.

Rationale: Known from a few subpopulations at two locations, in a very small area between Vryheid, Ngome and Paulpietersburg, northern KwaZulu-Natal (EOO 1 800 km^2). Most subpopulations remain in grassland fragments owned by a commercial forestry company and are all declining because of overgrazing. There may be a few other undiscovered locations on privately owned land, but probably not more than five.

[F] **Dierama grandiflorum** G.J.Lewis **Plate 30**

Status: **Rare**

J.E. Victor

[e] **Distribution:** EC. Graaff-Reinet and Somerset East.

Habitat: Grass slopes among rock outcrops.

Rationale: Known from two sites. No known threats.

Dierama luteoalbidum I.Verd.

Status: **VU** B1ab(iii)

I.M. Johnson, C.R. Scott-Shaw, D. Raimondo & L. von Staden

[e] **Distribution:** KZN. KwaZulu-Natal Midlands.

Habitat: Open grassland in deep, dolerite soils, 1 100–1 700 m.

Rationale: Known from a very small range (EOO 1 200–5 500 km^2), from 8–10 locations in an area that is highly transformed by forestry plantations and where heavy grazing by livestock is causing a continuing decline in habitat quality.

Dierama nixonianum Hilliard

Status: **EN** B2ab(ii,iii,iv)

C.R. Scott-Shaw, L. von Staden & D. Pillay

[e] **Distribution:** KZN. KwaZulu-Natal Midlands and Wakkerstroom.

Habitat: Open grassland over sandstone, 760–1 500 m.

Rationale: The grassland habitat of this species has been massively transformed by sugarcane cultivation, forestry plantations, subsistence farming and severe overgrazing (over 61% of its habitat has been lost in the Midlands area). Less than 2 000 km^2 of its mistbelt grassland habitat remains. Extant at 2–6 locations. Occurs mainly between Mapumulo, Richmond and Mount Gilboa in the Lions River district, with one outlying record near Wakkerstroom. The subpopulation at the type locality is locally extinct and many other subpopulations may also be declining or locally extinct. One subpopulation is about to be lost to a housing development.

Dierama pallidum Hilliard

Status: **VU** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

C.R. Scott-Shaw & L. von Staden

[e] **Distribution:** KZN. Pietermaritzburg to Durban and Valley of a Thousand Hills.

Habitat: Open grassland on stony slopes, 300–900 m.

Rationale: It has an extremely restricted range (EOO 832 km^2), persisting at 6–10 locations in one of the most highly transformed areas of KwaZulu-Natal. More than 50% of the habitat is already transformed, but over a period longer than three generations. There is a severe, continuing decline in the habitat as a result of urban expansion, woody encroachment of smaller grassland fragments, too frequent fires and overgrazing in larger grassland patches.

Dierama pumilum N.E.Br.

Status: **VU** B1ab(iii)

C.R. Scott-Shaw, L. von Staden & J.E. Victor

[e] **Distribution:** KZN. Nkandla to Noodsberg.

Habitat: Rocky grasslands, 1 000–1 200 m.

Rationale: EOO 1 750 km^2. Known from fewer than 10 locations. Grassland transformation by agriculture and forestry has severely reduced suitable habitat. Most areas of the Noodsberg and Little Noodsberg are transformed to forestry plantations, commercial sugarcane cultivation and subsistence agriculture or degraded because of severe overgrazing. The grasslands between Nkandla and Melmoth are almost completely under forestry plantations and much of the habitat around Mahlabatini is severely degraded because of overgrazing by livestock and subsistence farming.

[F] **Dierama sertum** Hilliard

Status: **NT** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

C.R. Scott-Shaw, I.M. Johnson & L. von Staden

[e] **Distribution:** KZN. Tugela Mouth to St Lucia.

Habitat: Mainly in grasslands between coastal forest patches, but in rocky grassland near Ngoye Forest.

Rationale: Occurring in a restricted range (EOO 1 900 km^2) at 10–15 locations, but $<$ 700 km^2 of natural grassland remains within its range. Urban expansion and subsistence farming is causing a continuing decline.

Dierama tysonii N.E.Br.

Status: **VU** B1ab(ii,iii)

C.R. Scott-Shaw & D. Raimondo

e**Distribution:** EC KZN. East Griqualand, Swartberg and Ngele Mountains to Giant's Castle in the southern Drakensberg.

Habitat: Montane grassland, 1 300–1 700 m.

Rationale: EOO < 4 400 km^2. Known from fewer than 10 locations. The habitat of this species is being targeted for afforestation and it is declining in habitat quality as a result of overgrazing and trampling by livestock.

Dietes Salisb. ex Klatt

Dietes bicolor (Steud.) Sweet ex Klatt

Status: **Rare**

D. Raimondo, J.E. Victor & C.R. Scott-Shaw

e**Distribution:** EC. Grahamstown to East London.

Habitat: Alongside streams and vleis.

Rationale: A habitat specialist, not currently known to be declining.

Ferraria Burm. ex Mill.

Ferraria brevifolia G.J.Lewis

Status: **Rare**

J.E. Victor

e**Distribution:** NC WC. Southern Namaqualand, Bitterfontein to Garies.

Habitat: Gravel and rocky granitic slopes.

Rationale: A range-restricted species (EOO < 100 km^2), known from fewer than five sites. Not threatened or declining.

Ferraria crispa Burm. subsp. **nortieri** M.P.de Vos

Status: **VU** A2bc; A4bc

N.A. Helme & D. Raimondo

e**Distribution:** WC. Hopefield to Lambert's Bay to Clanwilliam.

Habitat: Sandy soil, often amongst rocks.

Rationale: A sandveld endemic that has lost over 30% of its habitat over the past 15 years (generation length estimated to be 10 years) to potato and rooibos cultivation. This loss is ongoing.

Ferraria densepunctulata M.P.de Vos

Status: **EN** B1ab(ii,iii,iv,v)

P. Goldblatt, N.A. Helme & D. Raimondo

e**Distribution:** WC. Lambert's Bay to Langebaan.

Habitat: Strandveld, deep coastal sands in rocky sites within 15 km of the coast.

Rationale: A West Coast strandveld endemic (EOO < 1 000 km^2), known from four locations. Declining as a result of coastal development, crop cultivation and invasion by alien plants.

Ferraria foliosa G.J.Lewis

Status: **NT** B1ab(ii,iii,iv,v)

D. Raimondo & N.A. Helme

e**Distribution:** NC. Groen River to Elands Bay.

Habitat: Deep coastal sands, just above the high-water mark to 15 km inland.

Rationale: EOO 5 437 km^2. Recorded from 15 locations but suspected to occur at a few more, declining as a result of diamond and heavy-metal mining activities in the northern parts of its range and because of coastal development and expanding crop cultivation, especially the centre-point pivot irrigation schemes, in the south.

Ferraria kamiesbergensis M.P.de Vos

Status: **VU** D2

P. Goldblatt, J.C. Manning, N.A. Helme & D. Raimondo

e**Distribution:** NC. Namaqualand, Kamiesberg.

Habitat: Sandy flats in sandy soils derived from granite.

Rationale: Known from three locations. Potentially threatened by overgrazing by livestock.

F **Ferraria ovata** (Thunb.) Goldblatt & J.C.Manning

Status: **Rare**

P. Goldblatt & K. Naidoo

e**Distribution:** NC. Kamiesberg to Bitterfontein.

Habitat: Shallow soils on granite outcrops and gravel slopes.

Rationale: Known from three sites, from small subpopulations. Grazing by livestock is not severe in the areas where this species occurs and it is therefore not considered threatened.

Freesia Klatt

Freesia caryophyllacea (Burm.f.) N.E.Br.

Status: **Declining**

P. Goldblatt & J.E. Victor

e**Distribution:** WC. Bot River to Swellendam and Bredasdorp.

Habitat: Mainly clay and shale flats, occasionally in limestone.

Rationale: Although much of the habitat has been lost to wheat cultivation, it is still very common and occurs at more than 30 localities. Decline due to crop cultivation is ongoing but slow.

F **Freesia fergusoniae** L.Bolus

Status: **VU** B1ab(ii,iii,iv,v)

D. Raimondo & P. Goldblatt

e**Distribution:** WC. Heidelberg to Mossel Bay.

Habitat: Renosterveld on clay flats.

Rationale: EOO 6 500 km^2. Subpopulations have been severely fragmented by crop cultivation over the past 70 years and occur mainly on roadside reserves and small renosterveld remnants. The decline due to expanding crop cultivation is ongoing.

F **Freesia fucata** J.C.Manning & Goldblatt

Status: **VU** D2

J.E. Victor & N.A. Helme

e**Distribution:** WC. Villiersdorp.

Habitat: Renosterveld, clay slopes and flats.

Rationale: A range-restricted species (EOO 28 km^2), known from three locations. It is likely to have lost habitat to vineyard expansion. Not currently declining but potentially threatened by vineyard expansion.

F **Freesia leichtlinii** Klatt **Plate 25**

Status: **VU** B1ab(ii,iii,iv,v)

D. Raimondo

e**Distribution:** WC. Agulhas to Mossel Bay.

Habitat: Deep sands close to the coast.

Rationale: EOO 6 200 km^2. Occurs as highly fragmented subpopulations that are declining as a result of coastal development, crop cultivation and invasion by alien plants.

[F] **Freesia marginata** J.C.Manning & Goldblatt

Status: **EN** D

J.C. Manning & D. Raimondo

[e]**Distribution:** WC. Worcester and Robertson.

Habitat: Succulent karoo, in washes on sandstone-shale transition.

Rationale: Known from one site. It has lost habitat to olive cultivation in the past. There are less than 100 mature individuals extant. It remains potentially threatened by crop cultivation.

Freesia sparrmannii (Thunb.) N.E.Br.

Status: **Rare**

P. Goldblatt & D. Raimondo

[e]**Distribution:** WC. Langeberg foothills near Grootvadersbosch.

Habitat: Forest margins in loamy clay.

Rationale: EOO < 25 km^2. Known from one subpopulation. It has lost habitat and part of the subpopulation to crop cultivation in the past. No threats currently have an impact on this species as it occurs adjacent to a protected area, on private land of conservation-minded landowners.

Freesia speciosa L.Bolus **Plate 25**

Status: **VU** B1ab(iii,v); C1

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Montagu to Calitzdorp.

Habitat: Karroid shrubland, in shale-derived soils on stony flats and dry sandstone outcrops.

Rationale: A Little Karoo endemic (EOO < 6 500 km^2), known from many small, severely fragmented subpopulations. We estimate that the total population consists of less than 10 000 mature individuals. Declining as a result of crop cultivation and livestock farming and has lost 10% of the total population over the past 10 years.

Geissorhiza Ker Gawl.

[F] **Geissorhiza alticola** Goldblatt

Status: **Rare**

D. Raimondo, B. Mohamed & D.A. Kamundi†

[e]**Distribution:** WC. Bain's Kloof to Wemmershoek Mountains.

Habitat: High peaks, above 1 500 m.

Rationale: A high-altitude, range-restricted species (EOO 70 km^2), known from three subpopulations. No known threats.

Geissorhiza arenicola Goldblatt

Status: **VU** B1ab(iii,iv,v)

P. Goldblatt & R.C. Turner

[e]**Distribution:** NC WC. Bokkeveld Mountains, Gifberg and Olifants River Mountains.

Habitat: Dry montane fynbos or mountain renosterveld, in sandstone-derived soils, usually in seasonally moist sites.

Rationale: Eight of 12 records are from the Nieuwoudtville area, which is heavily transformed by crop cultivation. Individual subpopulation numbers are low and there is an immediate, ongoing threat from rooibos tea cultivation.

[F] **Geissorhiza barkerae** Goldblatt

Status: **EN** B1ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Piketberg and southern Olifants River Valley.

Habitat: Seasonal marshes and streambanks, in sand or light clay.

Rationale: Known from five locations and is threatened by an ongoing habitat loss to wheat, rooibos and potato cultivation.

[F] **Geissorhiza brehmii** Eckl. ex Klatt

Status: **VU** B1ab(i,ii,iii,iv,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Cape Peninsula to Malmesbury to Caledon and Bredasdorp.

Habitat: Sandy ground, either swampy or seasonally flooded or at the edge of pools.

Rationale: EOO 13 200 km^2. Known from seven locations. This wetland specialist used to occur from the Cape Peninsula north to the Malmesbury district and east to Caledon and Bredasdorp. It has lost 50% of locations to crop cultivation and urban development. The loss is ongoing, especially as a result of invasion by alien plants.

Geissorhiza brevituba (G.J.Lewis) Goldblatt **Plate 22**

Status: **VU** D2

P. Goldblatt & R.C. Turner

[e]**Distribution:** WC. Piketberg Mountains.

Habitat: Sandstone-derived soils and rocky slopes.

Rationale: Confined to the Piketberg Mountains (EOO 60 km^2) and known from two locations, with a potential threat from crop cultivation and invasion by alien plants.

[F] **Geissorhiza bryicola** Goldblatt

Status: **Rare**

D. Raimondo

[e]**Distribution:** WC. Kleinrivier Mountains.

Habitat: Wet rocks, waterfalls and stream edges in montane fynbos.

Rationale: Known from two sites in the western section of the Kleinrivier Mountains, both within a protected area. Not threatened.

Geissorhiza callista Goldblatt

Status: **Rare**

P. Goldblatt & R.C. Turner

[e]**Distribution:** WC. Riviersonderend to Langeberg Mountains.

Habitat: Wet, peaty rocks and cliffs.

Rationale: A habitat specialist, known from two sites in mountains. Not threatened.

[F] **Geissorhiza cataractarum** Goldblatt

Status: **Rare**

D. Raimondo, B. Mohamed & D.A. Kamundi†

[e]**Distribution:** WC. Betty's Bay to Hermanus.

Habitat: Waterfalls and damp cliffs.

Rationale: A range-restricted habitat specialist (EOO 210 km^2), known from three subpopulations. No known threats.

[F] **Geissorhiza cedarmontana** Goldblatt

Status: **Rare**

N.A. Helme, D. Raimondo & D.A. Kamundi†

[e]**Distribution:** WC. Cederberg Mountains.

Habitat: Damp ledges and peaty, south-facing slopes.

Rationale: Known from two mountain peaks within the Cederberg Wilderness Area. Not threatened.

[F] **Geissorhiza ciliatula** Goldblatt

Status: **Rare**

D. Raimondo

[e]**Distribution:** WC. Cederberg.

Habitat: Wet cliffs and cracks in rocks above 1 400 m in montane fynbos.

Rationale: Known from two collections not threatened because of inaccessibility of its habitat.

Geissorhiza corrugata Klatt

Status: **Rare**

P. Goldblatt, D. Raimondo & R.C. Turner

[e]**Distribution:** NC. Calvinia.

Habitat: Seasonally moist, clay soils derived from Karoo shales, on flats and slopes.

Rationale: A range-restricted species (EOO 14 km^2), with a large but localised population known from four sites. Not threatened or declining.

Geissorhiza darlingensis Goldblatt

Status: **CR** B1ab(iii)+2ab(iii); C2a(ii)

P. Goldblatt, J.E. Victor, I. Ebrahim & R.C. Turner

[e]**Distribution:** WC. Darling.

Habitat: Damp sandy soil.

Rationale: Known from one population of less than 250 plants. Habitat quality is declining because of invasive alien grass.

Geissorhiza divaricata Goldblatt

Status: **Rare**

P. Goldblatt, D. Raimondo & R.C. Turner

[e]**Distribution:** NC WC. Bokkeveld Mountains to Gifberg.

Habitat: Sandstone pavements, in rock crevices.

Rationale: EOO < 780 km^2. Known from six sites. Not threatened as its occurs in rocky areas not suitable for rooibos cultivation.

Geissorhiza elsiae Goldblatt

Status: **VU** D1

P. Goldblatt & R.C. Turner

[e]**Distribution:** EC WC. Kammanassie Mountains and Baviaanskloof Mountains.

Habitat: Cool, damp, south-facing slopes.

Rationale: Known from two naturally disjunct sites/subpopulations with very low subpopulation numbers. The total number of plants in the entire population is much less than 1 000. It faces a slight potential threat from the combined effect of frequent fires and drought.

[F] **Geissorhiza erubescens** Goldblatt

Status: **Rare**

D. Raimondo, B. Mohamed & D.A. Kamundi†

[e]**Distribution:** WC. Pakhuis Pass.

Habitat: Light, sandy clay gravel.

Rationale: A highly range-restricted, northern Cederberg endemic (EOO 10 km^2). No known threats.

Geissorhiza esterhuyseniae Goldblatt

Status: **Critically Rare**

P. Goldblatt, K. Naidoo & D. Raimondo

[e]**Distribution:** WC. Groot Winterhoek Mountains.

Habitat: Sheltered, rocky, south-facing sandstone slopes, 2 000 m.

Rationale: Known from one site, from an area smaller than 1 km^2. Not threatened as it occurs in a rocky habitat within a protected area.

Geissorhiza eurystigma L.Bolus **Plate 22**

Status: **CR** B1ab(i,ii,iii,iv,iv)

P. Goldblatt, D. Raimondo & R.C. Turner

[e]**Distribution:** WC. Darling and Mamre to Kalbaskraal.

Habitat: Renosterveld, sand plain fynbos transition in moist granitic soils.

Rationale: Recorded recently from one small stand (10 plants) at a location in a nature reserve that is invaded by alien plants. We suspect that there are three severely fragmented subpopulations within an area of 60 km^2. There has been at least a 60% reduction in the range of this species, with over 94% of its habitat lost as a result of agriculture, grazing and trampling by livestock and invasion by alien plants.

[F] **Geissorhiza foliosa** Klatt

Status: **NT** B1ab(ii,iii,iv,v)

D. Raimondo

[e]**Distribution:** WC. Swellendam to Riversdale.

Habitat: Slopes and flats in renosterveld and fynbos.

Rationale: Confined to the lower foothills of the Langeberg (EOO 975 km^2), known from less than 20 locations. Threatened by ongoing loss and degradation of habitat as a result of crop cultivation and encroachment from invasive alien species.

Geissorhiza furva Ker Gawl. ex Baker

Status: **EN** B1ab(ii,iii,iv,v)

P. Goldblatt, D. Raimondo & R.C. Turner

[e]**Distribution:** WC. Piketberg to Paarl and Stellenbosch.

Habitat: Stony or sandy sites at the foot of mountains that run north-south, parallel to the coast.

Rationale: EOO 2 400 km^2. Extant at four locations. It has lost over 50% of locations to wheat and vineyard cultivation over the past 100 years. Declines are continuing as a result of olive and vineyard expansion.

Geissorhiza geminata E.Mey. ex Baker

Status: **EN** B1ab(ii,iii,iv,v)

P. Goldblatt, D. Raimondo & R.C. Turner

[e]**Distribution:** NC. Brandvlei to Kouebokkeveld.

Habitat: Marshes and vleis, in sandy areas.

Rationale: EOO < 1 100 km^2. Known from three locations. It has lost over 50% of locations to vineyards, orchards and olive cultivation over the past 100 years. It is habitat-specific (occurring in vleis and marshes) and it continues to be threatened by crop cultivation and associated wetland drainage as well as encroachment from invasive alien plants.

Geissorhiza humilis (Thunb.) Ker Gawl.

Status: **VU** B1ab(iii,v)

P. Goldblatt, D. Raimondo & R.C. Turner

[e]**Distribution:** WC. Cape Peninsula to Paarl.

Habitat: Fynbos, in coarse, sandy soils, 50–300 m.

Rationale: EOO 900 km^2. Known from fewer than 10 locations. At least 60% of its habitat has been lost to crop cultivation and urban development. Declining as a result of invasion by alien plants and urban expansion.

Geissorhiza imbricata (D.Delaroche) Ker Gawl. subsp. **bicolor** (Thunb.) Goldblatt

Status: **NT** B1ab(ii,iii,iv,v)

P. Goldblatt & D. Raimondo

[e]**Distribution:** WC. False Bay to Porterville, and Olifants River Valley.

Habitat: Wet, poorly drained flats and marshes or streamsides.
Rationale: EOO 5 625 km². Known from 15–20 locations. Declining as a result of crop cultivation, urban expansion and invasion by alien plants.

Geissorhiza inaequalis L.Bolus

Status: **Rare**
D. Raimondo, E. Marinus, S. Todd & P. Goldblatt
eDistribution: NC. Bokkeveld Escarpment.
Habitat: Grows in heavy red clay soils associated with rocky doleritic outcrops.
Rationale: Known from fewer than 10 sites. Not threatened by ploughing and not a species preferred by livestock.

F Geissorhiza intermedia Goldblatt

Status: **Rare**
D. Raimondo, B. Mohamed & D.A. Kamundi†
eDistribution: WC. Simonsberg and Twenty-Four Rivers Mountains.
Habitat: Rocky crevices and at base of cliffs.
Rationale: Known from three sites in mountain habitats. Naturally rare but not threatened.

Geissorhiza kamiesmontana Goldblatt

Status: **VU** D1
P. Goldblatt, N.A. Helme, R.C. Turner & D. Raimondo
eDistribution: NC. Namaqualand, Kamiesberg.
Habitat: Mountain renosterveld, sheltered sites amongst rocks and tall shrubs on granitic soils.
Rationale: Known from four subpopulations, each with less than 50 plants. Even allowing for undiscovered subpopulations, there are likely to be less than 1 000 plants in total. Not subject to any threats.

Geissorhiza karooica Goldblatt

Status: **VU** D2
P. Goldblatt, J.E. Victor & R.C. Turner
eDistribution: NC. Roggeveld Mountains to Matjiesfontein.
Habitat: Succulent karoo shrubland, on coarse shale slopes.
Rationale: Known from three locations. Potentially threatened by overgrazing by livestock and soil erosion.

Geissorhiza leipoldtii R.C.Foster

Status: **Rare**
P. Goldblatt, K. Naidoo & R.C. Turner
eDistribution: WC. Pakhuis Mountains to Citrusdal.
Habitat: South-facing shale slopes.
Rationale: A habitat specialist known from nine sites, not threatened as it occurs mostly within the Cederberg Wilderness Area.

Geissorhiza lithicola Goldblatt

Status: **VU** D2
P. Goldblatt & R.C. Turner
eDistribution: WC. Kogelberg.
Habitat: Rocky lower slopes, 50–200 m.
Rationale: Known from three locations, with EOO ± 42 km². Potentially threatened by invading alien plants on the slopes above Gordon's Bay.

Geissorhiza louisabolusiae R.C.Foster

Status: **EN** B1ab(ii,iii,v)
P. Goldblatt & R.C. Turner
eDistribution: WC. Olifants River Valley and Kouebokkeveld.
Habitat: Seasonally wet, sandy flats and vleis.
Rationale: EOO < 425 km². Known from three locations. Declining as a result of ongoing, severe habitat loss to citrus cultivation at Citrusdal and in the Kouebokkeveld.

Geissorhiza malmesburiensis R.C.Foster

Status: **CR** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v); D
P. Goldblatt, N.A. Helme, K. Naidoo, J.E. Victor & R.C. Turner
eDistribution: WC. Malmesbury.
Habitat: Renosterveld, on granitic sands.
Rationale: EOO < 30 km², AOO < 10 km². It has lost over 98% of its habitat to wheat cultivation and the urban expansion of Malmesbury. One of two known subpopulations was lost to urban expansion on the outskirts of Malmesbury in 2005. The other subpopulation was last recorded in 2002 and there were only six plants. It is on the brink of extinction.

Geissorhiza mathewsii L.Bolus

Status: **CR** B1ab(ii,iii,v)+2ab(ii,iii,v)
P. Goldblatt, R.C. Turner & D. Raimondo
eDistribution: WC. Darling and Malmesbury.
Habitat: Wet, sandy flats, moist clay soils, and waterlogged soil.
Rationale: EOO 5.2 km². It has lost extensive amounts of habitat to wheat and pasture cultivation over the past 120 years. It is known from one confirmed subpopulation where the numbers continue to decline. There is a possible second location which is highly threatened by encroachment from invasive alien acacias that are particularly dense in the seasonally wet habitat favoured by this species.

F Geissorhiza minuta Goldblatt

Status: **Rare**
D. Raimondo
eDistribution: WC. Matsikamma to Pakhuis Mountains.
Habitat: Moist, mossy pads fringing seasonal stream, on rocky steps in fynbos.
Rationale: Known from two sites, this tiny species is confined to a habitat that is not threatened by agriculture.

Geissorhiza monanthos Eckl. Plate 22

Status: **NT** B1ab(i,ii,iii,iv,v)
P. Goldblatt, D. Raimondo & R.C. Turner
eDistribution: WC. Citrusdal, Saldanha to Somerset West.
Habitat: Sandy or rocky soils of granitic origin, sometimes in cracks on granite rocks.
Rationale: EOO < 5 000 km². Known from 15 locations. Over 50% of its habitat has been transformed, mostly by crop cultivation, but now also by housing developments along the coast.

Geissorhiza namaquensis W.F.Barker

Status: **Rare**
P. Goldblatt, N.A. Helme & D. Raimondo
eDistribution: NC. Kamiesberg to Steinkopf.
Habitat: Mountain renosterveld, on granitic soil at the Kamiesberg but elsewhere restricted to shale and quartzite outcrops of the Nama System.
Rationale: A range-restricted species known from four subpopulations. Not threatened.

F Geissorhiza nana Klatt

Status: **VU** B1ab(ii,iii,iv,v)
D. Raimondo
eDistribution: WC. Caledon to Riversdale.

Habitat: Renosterveld on clay flats and slopes.
Rationale: Known from fewer than 10 locations, this Overberg renosterveld endemic (EOO 6 400 km²) is threatened by crop cultivation, grazing by livestock and invasion by alien plants.

Geissorhiza nigromontana Goldblatt

Status: **Rare**
P. Goldblatt, K. Naidoo & R.C. Turner
[e]**Distribution:** WC. Groot Swartberg Mountains.
Habitat: Along streams.
Rationale: A range-restricted species (EOO 40 km²) that occurs mostly within protected areas and is not threatened.

Geissorhiza outeniquensis Goldblatt

Status: **VU** D2
P. Goldblatt, K. Naidoo & R.C. Turner
[e]**Distribution:** WC. Outeniqua Mountains.
Habitat: Moist, shady kloofs, along streams, waterfalls and wet banks in shade.
Rationale: Known from one subpopulation occurring at four locations (EOO ± 30 km²). Potentially threatened by invading alien plants in the passes and on surrounding slopes and by future extraction of water. It was threatened by road construction in the past.

Geissorhiza purpurascens Goldblatt

Status: **CR** B2ab(iii,v); C2a(i)
D. Raimondo, P. Goldblatt & R.C. Turner
[e]**Distribution:** WC. Piketberg to Stellenbosch.
Habitat: Damp, low-lying places and on the edges of vleis.
Rationale: Historically known from seven locations but now only three are confirmed (further field assessment is urgently needed). There has been at least a 75% reduction in the number of locations and EOO. Its seasonally wet lowland habitat is now very rare (AOO < 7.5 km²) and under severe threat from crop cultivation, *Acacia saligna* encroachment and urban development. The total population is suspected to be less than 250 plants, with no subpopulation having more than 50 mature individuals. Subpopulations are severely fragmented.

Geissorhiza purpureolutea Baker **Plate 22**

Status: **VU** B1ab(ii,iii,iv,v)
P. Goldblatt, D. Raimondo & R.C. Turner
[e]**Distribution:** WC. Piketberg to Paarl and Tulbagh.
Habitat: Wet, sandy, gravel flats, poorly drained.
Rationale: EOO 8 300 km². This species is not abundant and is extant at ± seven out of at least 30 historical locations. It is under severe threat from crop cultivation, urban expansion and encroachment from invasive alien vegetation.

[F] **Geissorhiza radians** (Thunb.) Goldblatt **Plate 22**

Status: **EN** B1ab(ii,iii,iv,v)
D. Raimondo & N.A. Helme
[e]**Distribution:** WC. Malmesbury to Klapmuts.
Habitat: Seasonally damp sands of granitic origin.
Rationale: Formerly widespread on clay soils between Gordon's Bay and Malmesbury. Its EOO is now much reduced because of agricultural expansion (EOO 1 000 km²). It now persists on small, isolated fragments mostly in the Darling area where it is still undergoing declines as a result of invasion by alien plants, grazing by livestock and effects of fertiliser and pesticide runoff.

Geissorhiza rupicola Goldblatt & J.C.Manning

Status: **Critically Rare**
P. Goldblatt, J.E. Victor & R.C. Turner
[e]**Distribution:** WC. Langeberg Mountains, Mostertshoek Twins.
Habitat: Moist sites in thin soil on rocks, sometimes in cracks in steep cliffs.
Rationale: Known from one subpopulation, occurring in a gorge within a protected area, therefore not threatened.

[F] **Geissorhiza scopulosa** Goldblatt

Status: **Rare**
D. Raimondo
[e]**Distribution:** WC. Hex River Mountains.
Habitat: Damp, rocky sites in cliffs or under boulders at high altitudes.
Rationale: A habitat specialist known from two mountain peaks, EOO 30 km². Not threatened.

[F] **Geissorhiza setacea** (Thunb.) Ker Gawl.

Status: **EN** B1ab(i,ii,iii,iv,v)
D. Raimondo
[e]**Distribution:** WC. Cape Peninsula to Hottentots Holland Mountains to Gouda.
Habitat: Wet flats in renosterveld.
Rationale: Known from a small range in the southwestern Cape (EOO 2 500 km²), from seven locations. It has lost 60% of locations and > 90% of available habitat over the past 150 years as a result of crop cultivation and urban development. Loss is continuing in the Gordon's Bay, Strand and Durbanville areas.

Geissorhiza silenoides Goldblatt & J.C.Manning

Status: **VU** D2
P. Goldblatt & R.C. Turner
[e]**Distribution:** WC. Ceres, Gydo Pass.
Habitat: Heavy clay soils derived from shales.
Rationale: Known from one location from a roadside cutting. Potentially threatened by erosion and clearing of road verges.

[F] **Geissorhiza sp. nov.**

Voucher: *Helme 4200* NBG
Status: **CR** B1ab(ii,iii,iv,v)
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Northern base of Piketberg.
Habitat: Shale foothills.
Rationale: EOO 5 km². A recently discovered species known from one location. It has lost most of its habitat to wheat cultivation, and this loss is continuing.

Geissorhiza spiralis (Burch.) M.P.de Vos ex Goldblatt

Status: **VU** D2
P. Goldblatt & R.C. Turner
[e]**Distribution:** NC. Sutherland.
Habitat: Mountain renosterveld, on stony clay slopes.
Rationale: EOO < 500 km². Known from three locations. Potentially threatened by overgrazing by livestock and soil erosion.

Geissorhiza splendidissima Diels **Plate 22**

Status: **VU** D2

D. Raimondo, E. Marinus & S. Todd

Distribution: NC. Nieuwoudtville.

Habitat: Renosterveld on tillite clay soils.

Rationale: EOO < 90 km², AOO < 10 km². Known from five locations. It has lost 82% of its habitat to wheat cultivation over the past 60 years. Although there is no current decline, a significant proportion of remaining locations is suitable for ploughing, which remains a potential future threat.

F **Geissorhiza stenosiphon** Goldblatt

Status: **Rare**

N.A. Helme

Distribution: WC. Kouebokkeveld.

Habitat: Sandstone slopes above 1 500 m.

Rationale: Known from two sites in a tiny range in the Kouebokkeveld (EOO < 20 km²). Occurring on high-altitude sandstone slopes and therefore not threatened.

Geissorhiza subrigida L.Bolus

Status: **CR** B1ab(iii,v)+2ab(iii,v); C2a(i,ii); D

P. Goldblatt & D. Raimondo

Distribution: NC. Bokkeveld Mountains.

Habitat: Dry montane fynbos in rocky soils derived from sandstone.

Rationale: EOO < 20 km² historically, but because of crop cultivation its current EOO is < 0.5 km². There are less than 20 plants known from one location and it is threatened by expanding rooibos tea cultivation, as well as by encroachment from invasive alien acacias and pines.

F **Geissorhiza sulphurascens** Schltr. ex R.C.Foster

Status: **VU** B1ab(ii,iii,iv,v)

D. Raimondo, N.A. Helme & R.C. Turner

Distribution: NC. Bokkeveld Escarpment.

Habitat: Seasonally wet, deep, sandstone-derived sands.

Rationale: EOO < 800 km². Known from eight locations. Its habitat is declining as a result of rooibos tea cultivation.

F **Geissorhiza tabularis** Goldblatt

Status: **Rare**

N.A. Helme & D. Raimondo

Distribution: WC. Cape Peninsula, Table Mountain.

Habitat: Seasonally wet, marshy fynbos.

Rationale: Known from a very restricted area on the plateau above Skeleton George (EOO 10 km²), from one continuous subpopulation. Occurs within the Table Mountain National Park and is not threatened. It flowers only in the year following fire.

F **Geissorhiza tenella** Goldblatt **Plate 22**

Status: **VU** B1ab(ii,iii,iv,v)

D. Raimondo & N.A. Helme

Distribution: WC. Darling to De Hoop.

Habitat: Sandy and seasonally wet flats.

Rationale: EOO 19 800 km². It has lost 52% of known locations over the past 100 years, mostly as a result of urban development and crop cultivation. Remaining subpopulations are severely fragmented. Loss is ongoing as a result of invasion by alien plants and further urban and agricultural expansion.

F **Geissorhiza tulbaghensis** F.Bolus **Plate 22**

Status: **EN** B1ab(ii,iii,iv,v)

I. Ebrahim, D. Raimondo & R.C. Turner

Distribution: WC. Porterville to Wellington.

Habitat: Stony clay flats.

Rationale: EOO 360 km². Persists in five small, fragmented locations, mostly on road verges and in remnant patches of renosterveld. It has lost extensive habitat to wheat and vineyard expansion. We suspect that there are less than 2 500 extant mature individuals. Declining as a result of invasion by alien plants, pesticide spraying and agricultural and urban expansion.

Geissorhiza uliginosa Goldblatt & J.C.Manning

Status: **Rare**

P. Goldblatt & D. Raimondo

Distribution: WC. Swartberg and Kammanassie Mountains.

Habitat: Waterfalls and wet cliffs.

Rationale: A rare, range-restricted species from arid mountain ranges (EOO 450 km²). Not threatened.

F **Geissorhiza unifolia** Goldblatt

Status: **Rare**

N.A. Helme & D. Raimondo

Distribution: WC. Northern Cederberg and Kouebokkeveld Mountains.

Habitat: Thin sandy soil over sandstone pavements at high altitudes in fynbos.

Rationale: Known from two collections, one in the Kouebokkeveld and the other in the northern Cederberg. Occurs on high-altitude peaks and is therefore not threatened.

Gladiolus L.

Gladiolus abbreviatus Andrews **Plate 24**

Status: **VU** B1ab(ii,iii,iv,v)

P. Goldblatt, D. Raimondo & N.A. Helme

Distribution: WC. Bot River to Riversdale.

Habitat: Renosterveld, in clay soil among low shrubs.

Rationale: EOO < 12 600 km². Now occurs as small, severely fragmented subpopulations that survive on small renosterveld fragments along roads and or railways. It has lost over 80% of its habitat to wheat cultivation. Subpopulations are never large.

Gladiolus acuminatus F.Bolus

Status: **EN** B1ab(iii,v)

P. Goldblatt, D. Raimondo & J.E. Victor

Distribution: WC. Caledon to Bredasdorp.

Habitat: Renosterveld in stony clay soils on flats and north-facing slopes at low elevation.

Rationale: EOO < 1 403 km². Fewer than five known locations remain. It has lost > 80% of its habitat to wheat cultivation and continues to decline because of ongoing habitat loss and degradation caused by invading alien plants, overgrazing and loss of pollinators due to fragmentation.

F **Gladiolus aquamontanus** Goldblatt

Status: **VU** D2

A.L. Schutte-Vlok & D. Raimondo

Distribution: WC. Swartberg Mountains, on the Blesberg.

Habitat: Perennial mountain streams and on wet cliffs.

Rationale: Known from two locations in a restricted

range (EOO < 350 km²). Potentially threatened by extraction of groundwater.

[F] **Gladiolus atropictus** Goldblatt & J.C.Manning

Status: **VU** D2

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Northern slopes of the Riviersonderend Mountains.

Habitat: Montane fynbos, growing in pockets of deeper soil on rocky sandstone slopes, 600–900 m.

Rationale: Known from two locations. Plants are rare and scattered. Potentially threatened by encroachment of invasive alien pines.

Gladiolus aureus Baker Plate 23

Status: **CR** A2ace; B1ab(i,ii,iii,v)+2ab(i,ii,iii,v); C2a(i,ii); D

J.E. Victor & G.D. Duncan

[e]**Distribution:** WC. Cape Peninsula.

Habitat: Sandstone, in peaty sand in seeps that remain wet well into spring.

Rationale: First collected near Kommetjie in 1894, known from a small area on the mountain slopes above the village. Recorded as having been locally common before 1980. It has declined drastically as a result of quarrying, extraction of groundwater, invasion by alien plants, flower-picking and harvesting of seed. Less than 50 plants remain at one site, which is close to a low-income housing settlement. Decline due to invasion by alien plants, trampling by humans and pollution is ongoing. Generation length suspected to be 7–10 years.

Gladiolus bilineatus G.J.Lewis

Status: **VU** D1+2

P. Goldblatt & D. Raimondo

[e]**Distribution:** WC. Langeberg Mountains.

Habitat: Fynbos in coarse, sandstone-derived soils or in heavier, loamy sand on sandstone or shales.

Rationale: A very rare species known from five subpopulations, all with low numbers of individuals. We estimate the total population to be less than 1 000 mature individuals. Potentially threatened by overgrazing by livestock and invasion by alien plants.

Gladiolus bonaspei Goldblatt & M.P.de Vos Plate 24

Status: **NT** D2

J.E. Victor & L. von Staden

[e]**Distribution:** WC. Cape Peninsula.

Habitat: Seasonally damp, peaty sand, both on flats near the coast and at higher elevations.

Rationale: Known from 6–10 locations. Potentially threatened by invading alien plants.

Gladiolus buckerveldii (L.Bolus) Goldblatt

Status: **Rare**

P. Goldblatt & K. Naidoo

[e]**Distribution:** WC. Northern Cederberg.

Habitat: Riverbanks, hanging down from the banks of mountain streams, on steep moss-covered cliffs, 1 000 m.

Rationale: A range-restricted species (EOO < 50 km²). Occurs within a protected area in a very specific habitat and is not threatened.

Gladiolus caeruleus Goldblatt & J.C.Manning

Status: **NT** B1ab(ii,iii,v)

N.A. Helme, I. Ebrahim & D. Raimondo

[e]**Distribution:** WC. Yzerfontein to Cape Columbine.

Habitat: Sandy soils in limestone outcrops or on calcareous sands close to the coast.

Rationale: EOO 560 km². Known from less than 15 locations. Declining as a result of coastal development.

Gladiolus carmineus C.H.Wright Plate 23

Status: **VU** D2

P. Goldblatt & D. Raimondo

[e]**Distribution:** WC. Cape Hangklip to Cape Infanta.

Habitat: Rocky sandstone outcrops and cliffs along the coast, wedged in cracks between rocks, sometimes with virtually no soil.

Rationale: A habitat specialist that occurs within a very small coastal area (AOO < 20 km²). There is no evidence of decline as the habitat is generally not affected by development, but locations further away from the shore, e.g. at Cape Infanta and Blesberg between Hangklip and Betty's Bay, could potentially be developed for housing.

Gladiolus cataractarum Oberm.

Status: **EN** B1ab(iii)+2ab(iii); C2a(i)

M. Lötter, J.E. Burrows, D. McMurtry, S. Burns & L. von Staden

[e]**Distribution:** MP. Dullstroom and Lydenburg.

Habitat: Moisture loving, growing on waterfalls, cliffs and steep rocky slopes on quartzite in sheltered, south-facing sites.

Rationale: A rare endemic (EOO < 40 km², AOO < 10 km²), from the eastern escarpment in Mpumalanga. Occurs as scattered subpopulations along three streams in the Dullstroom–Lydenburg area. All these stream systems are invaded by alien wattles which are causing ongoing degradation of the habitat. We estimate that between 500 and 1 000 mature individuals exist, no subpopulation is larger than 250 individuals.

Gladiolus comptonii G.J.Lewis Plate 23

Status: **Critically Rare**

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Olifants River Mountains.

Habitat: Montane fynbos, upper rocky sandstone slopes, 600–700 m.

Rationale: Restricted to a very small area (EOO < 20 km²) on an inselberg in the Clanwilliam district. Not threatened.

[F] **Gladiolus crispulatus** L.Bolus

Status: **Rare**

F. Cholo & D. Raimondo

[e]**Distribution:** WC. Langeberg Mountains between Swellendam and Riversdale.

Habitat: Southern slopes, 300–900 m.

Rationale: A rare, range-restricted endemic (EOO < 500 km²). Not threatened.

Gladiolus cruentus T.Moore

Status: **CR** B2ab(ii,iii,iv,v)

L. von Staden & C.R. Scott-Shaw

[e]**Distribution:** KZN. Between Pietermaritzburg, Pinetown and Inanda, with isolated occurrences at Umbululu, Little Noodsberg and Kranskop.

Habitat: Scarp forest, on damp sandstone cliffs, often near waterfalls, or anywhere where water drips continu-

ously during the growth season (generally prefers south-facing cliffs), 400–900 m.

Rationale: Found in a very rare, highly specific habitat near waterfalls (AOO ± 0.1 km^2), known from 5–7 locations that are highly fragmented. Subpopulations are small and isolated. There is continuing decline in habitat quality, in subpopulations and mature individuals as a result of invasion by alien plants and extraction of water.

Gladiolus delpierrei Goldblatt

Status: **Rare**

P. Goldblatt & J.E. Victor

[e]**Distribution:** WC. Sneeuberg in the Cederberg Mountains.

Habitat: Leached, stony, sandstone-derived soil, in seepages that remain moist until the flowering season in midsummer, 1 300 m.

Rationale: Restricted to the Cederberg range (EOO < 200 km^2). Not threatened.

Gladiolus deserticola Goldblatt

Status: **Rare**

P. Goldblatt, K. Naidoo & D. Raimondo

[e]**Distribution:** NC. Richtersveld.

Habitat: Clay soils on south-facing slopes in lee of rocks or under shrubs.

Rationale: A range-restricted species (EOO < 140 km^2) known from four sites. Not threatened as plants occur in sheltered sites safe from the impact of livestock.

Gladiolus dolomiticus Oberm.

Status: **Rare**

P.J.D. Winter & J.E. Victor

[e]**Distribution:** LM. Makapan's Valley.

Habitat: Dolomite hills, dry woodland, on dolomite slopes, 1 700 m.

Rationale: A range-restricted species (EOO < 120 km^2), known from fewer than five sites. Not threatened.

Gladiolus emiliae L.Bolus

Status: **NT** B1ab(iii,v)

P. Goldblatt & K. Naidoo

[e]**Distribution:** WC. Riviersonderend to George.

Habitat: Rocky sites on either clay soils or loamy sand along the interface between shale and sandstone rocks.

Rationale: EOO 13 784 km^2. Known from 15–20 locations. It has lost habitat to afforestation and is declining as a result of invasion by alien plants.

Gladiolus engysiphon G.J.Lewis **Plate 23**

Status: **VU** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

P. Goldblatt & D. Raimondo

[e]**Distribution:** WC. Lower foothills of the Langeberg Mountains.

Habitat: Clay loam at the interface of shale and sandstone strata.

Rationale: EOO < 800 km^2. Known from fewer than 10 locations. It has lost over 80% of its habitat to crop cultivation. Declining as a result of invasion by alien plants and grazing and trampling by livestock.

Gladiolus exilis G.J.Lewis

Status: **NT** B1ab(iii)

D. Raimondo & N.A. Helme

[e]**Distribution:** WC. Porterville to Du Toit's Kloof.

Habitat: Well-drained, rocky slopes, in loamy, sandstone-derived soil in low fynbos. At Slanghoek and Bain's Kloof it grows on lower slopes close to the sandstone-shale interface, or near shale bands.

Rationale: EOO < 1 200 km^2. Known from 10–15 locations. Declining in habitat quality owing to invasion by alien plants (species of *Hakea*).

[F] **Gladiolus filiformis** Goldblatt & J.C.Manning

Status: **Critically Rare**

P. Goldblatt & J.E. Victor

[e]**Distribution:** NW. Gopane Mountains.

Habitat: Red soil on a rocky outcrop.

Rationale: Known from a single collection in 1977 in rocky hills in the Gopane Mountains in North West Province, an area that is botanically very poorly explored.

Gladiolus fourcadei (L.Bolus) Goldblatt & M.P.de Vos

Status: **CR** B1ab(iii,v)+2ab(iii,v)

J.H. Vlok, P. Goldblatt & D. Raimondo

[e]**Distribution:** WC. Uniondale.

Habitat: Fynbos, heavy soils, either clay or loam at the sandstone-shale transition.

Rationale: EOO, AOO < 1 km^2. Known from at least eight historical locations but is now restricted to only one, in the Kammanassie Mountains. It has suffered severe declines this century. All remaining habitat on the shale band of the Kammanassie Mountains is privately owned and is badly overgrazed.

Gladiolus geardii L.Bolus

Status: **Rare**

D. Raimondo

[e]**Distribution:** EC. Baviaanskloof, Groot Winterhoek, Kouga and Van Stadens River Mountains of the Eastern Cape.

Habitat: Montane seeps, streambanks, shady kloofs and ravines on peaty, sandstone soil.

Rationale: Disjunct populations in specialised habitat not under threat, eight sites known.

Gladiolus griseus Goldblatt & J.C.Manning **Plate 23**

Status: **CR** B2ab(ii,iii,iv,v); C2a(i)

P. Goldblatt, J.C. Manning & D. Raimondo

[e]**Distribution:** WC. Saldanha to Milnerton.

Habitat: Low coastal scrub, close to the coast, in calcareous sands or limestone gravel.

Rationale: AOO 5 km^2. Known from three severely fragmented subpopulations, with no subpopulation consisting of more than 50 mature individuals. The total population is estimated to be less than 250 individuals. Throughout its range it is threatened by coastal development.

Gladiolus huttonii (N.E.Br.) Goldblatt & M.P.de Vos

Status: **VU** B1ab(i,ii,iii,iv,v)

D. Raimondo & J.H. Vlok

[e]**Distribution:** EC WC. East London to Grahamstown to Plettenberg Bay.

Habitat: Sandy loam, clay or moderately fertile soils derived form the Witteberg slopes, mostly confined to the coastal plain.

Rationale: EOO 8 458 km^2. Known from 17 historical locations, more than half between Storms River Mouth and Port Elizabeth. This area has been significantly transformed as a result of coastal development, agriculture and afforestation over the past 40 years. Most collections

were made before 1970, so it is likely to be extinct at many of them. We suspect that there are fewer than 10 locations extant. Decline due to coastal development, agriculture and invasion by alien plants is ongoing.

[F] **Gladiolus insolens** Goldblatt & J.C.Manning

Status: **VU** D2

N.A. Helme, P. Goldblatt & D. Raimondo

[e]**Distribution:** WC. Piketberg.

Habitat: Seeps and streams that remain wet until December, always in rocky sites on higher slopes.

Rationale: Known from one location, damming of streams was a past and is a potential future threat.

Gladiolus jonquilliodorus Eckl. ex G.J.Lewis

Status: **EN** B1ab(i,ii,iii,iv,v)

D. Raimondo & P. Goldblatt

[e]**Distribution:** WC. Cape Peninsula to Yzerfontein.

Habitat: Fynbos, on well-drained stony hill slopes and white sandy flats.

Rationale: EOO < 500 km^2. Known from five locations. Declining as a result of coastal development and invasion by alien plants.

Gladiolus kamiesbergensis G.J.Lewis

Status: **Rare**

P. Goldblatt, N.A. Helme & D. Raimondo

[e]**Distribution:** NC. Namaqualand, Kamiesberg.

Habitat: Rocky sites on granites in shrubby fynbos, above 1 200 m.

Rationale: Endemic to the upper slopes of the Kamiesberg. Known from Sneeukop in the north of the range and collected several times on Rooiberg and its foothills to the south (EOO < 500 km^2). Not threatened because of its habitat being inaccessible.

Gladiolus lapeirousioides Goldblatt

Status: **VU** D2

P. Goldblatt & K. Naidoo

[e]**Distribution:** NC. Loeriesfontein.

Habitat: Sparse karoo shrubland, on dry, shale gravel flats.

Rationale: Known from one location. Potentially threatened by agriculture and road works.

Gladiolus leptosiphon F.Bolus

Status: **VU** C2a(i)

J.H. Vlok, A.L. Schutte-Vlok & D. Raimondo

[e]**Distribution:** WC. Swartberg to Baviaanskloof Mountains.

Habitat: Occurs on stony hills and low mountain slopes in renosterveld or arid fynbos.

Rationale: EOO < 5 000 km^2. Known from less than 20 subpopulations, all with less than 50 mature individuals. The total population is suspected to have less than 10 000 individuals. It has lost habitat to crop cultivation and is declining because of grazing and trampling by livestock and ostriches.

Gladiolus loteniensis Hilliard & B.L.Burtt

Status: **Critically Rare**

J.E. Victor & C.R. Scott-Shaw

[e]**Distribution:** KZN. Southern Drakensberg Mountains.

Habitat: Montane grassland, along streams or on riverbanks in peaty soils below low cliffs and boulders.

Rationale: Known from one site. No threats are known to have an impact on this species.

Gladiolus macneilii Oberm.

Status: **CR** B1ab(iii)+2ab(iii)

M. Lötter, J.E. Burrows & L. von Staden

[e]**Distribution:** LM. Abel Erasmus Pass.

Habitat: Grassland and light woodland, in loamy soil on very rocky ground on dolomite outcrops.

Rationale: Confined to a small area on dolomites at the summit of Abel Erasmus Pass (EOO < 20 km^2, AOO < 10 km^2). The location is communally owned and severely overgrazed and over-utilised for firewood.

[F] **Gladiolus malvinus** Goldblatt & J.C.Manning

Status: **VU** B1ab(i,ii,iii,iv,v)

M. Lötter & L. von Staden

[e]**Distribution:** MP. Dullstroom to Belfast.

Habitat: Dolerite outcrops in grassland, around 2 000 m.

Rationale: Restricted to a small area on the hilly, upper Mpumalanga Escarpment (EOO 400 km^2), known from six locations. It has lost habitat to commercial forestry plantations and most locations are threatened by encroachment from invasive alien species, especially wattles, which prefer rocky areas where they are protected from fire. It is also under development pressure from golf resorts.

[F] **Gladiolus meliusculus** (G.J.Lewis) Goldblatt & J.C.Manning

Status: **VU** B1ab(ii,iii,iv,v)

R. Koopman & D. Raimondo

[e]**Distribution:** WC. Hopefield to Cape Peninsula.

Habitat: Damp sandstone and granite slopes and flats.

Rationale: EOO 2 376 km^2. Of 27 recorded subpopulations, seven (26%) are likely to be extinct because of crop cultivation and urban expansion, especially on the Cape Flats over the past 120 years. Remaining subpopulations are severely fragmented and declines are ongoing as its habitat continues to be transformed and degraded by crop cultivation, urban developments and invasion by alien grasses.

Gladiolus miniatus Eckl. **Plate 24**

Status: **VU** B1ab(ii,iii,iv,v)

P. Goldblatt & D. Raimondo

[e]**Distribution:** WC. Hawston to Agulhas.

Habitat: Limestone hills, always fairly close to the seashore or within sight of the ocean.

Rationale: EOO < 1 850 km^2. Probably extinct at three of 13 historically recorded locations because of urban development. Six locations are threatened by severe invasion by alien plants, three are threatened by urban development and three fall within conservation areas. We estimate that it is extant at 10 locations.

Gladiolus monticola G.J.Lewis ex Goldblatt & J.C.Manning

Status: **Rare**

P. Goldblatt, N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Cape Peninsula.

Habitat: Rocky sandstone slopes.

Rationale: A range-restricted species (EOO < 270 km^2), occurs only within the Table Mountain National Park. Not threatened.

Gladiolus mostertiae L.Bolus

Status: **VU** D2

P. Goldblatt, N.A. Helme & D. Raimondo

e**Distribution:** NC. Bokkeveld Escarpment.

Habitat: Sandy soils in marshy places that remain moist well into the dry season.

Rationale: Known from four locations, occurs within the area currently being cultivated for rooibos tea. Farmers do not tend to plough the seasonally marshy areas where this species grows as rooibos will not grow in such a wet habitat. However, ploughing is a potential threat as some farmers accidentally plough this habitat; one location was lost in 2005 because of accidental ploughing.

Gladiolus nerineoides G.J.Lewis

Status: **Rare**

P. Goldblatt & D. Raimondo

e**Distribution:** WC. Bain's Kloof to Somerset West.

Habitat: Restricted to rocky outcrops, mainly above 1 000 m.

Rationale: A habitat specialist that occurs within protected areas and is not threatened.

Gladiolus nigromontanus Goldblatt **Plate 23**

Status: **Rare**

P. Goldblatt, K. Naidoo & J.E. Victor

e**Distribution:** WC. Swartberg Mountains.

Habitat: Perennially moist areas in semi-arid fynbos.

Rationale: A range-restricted species (EOO < 500 km^2), known from three sites within the Groot Swartberg Nature Reserve. Not threatened.

Gladiolus oppositiflorus Herb.

Status: **Declining**

J.E. Victor & A.P. Dold

e**Distribution:** EC KZN. Polela to East London.

Habitat: Open grassland, often in rocky sites.

Rationale: Widespread (EOO > 30 000 km^2), known from over 30 sites. Declining throughout its range because of crop cultivation and overgrazing by livestock.

Gladiolus oreocharis Schltr.

Status: **Rare**

P. Goldblatt, D. Raimondo & K. Naidoo

e**Distribution:** WC. Cederberg to Langeberg Mountains.

Habitat: South-facing, moist slopes, along streams or in seeps.

Rationale: Flowers only well after fire. Despite its wide range it appears to be a naturally rare, habitat-specific species. Not threatened.

Gladiolus overbergensis Goldblatt & M.P.de Vos **Plate 24**

Status: **VU** B1ab(iii)

P. Goldblatt & D. Raimondo

e**Distribution:** WC. Hermanus to Cape Agulhas.

Habitat: Either low fynbos or mixed fynbos-renosterveld, in sandy loams on sandstone slopes.

Rationale: EOO < 2 100 km^2. Known from fewer than 10 locations. Declining as a result of encroachment from invasive alien plants.

F **Gladiolus pardalinus** Goldblatt & J.C.Manning

Status: **Rare**

M. Lötter, J.E. Burrows & L. von Staden

e**Distribution:** LM MP. Groblersdal to Modimolle.

Habitat: Bushveld, among dolerite outcrops on low hills and plains, altitude 1 200–1 500 m.

Rationale: A habitat specialist known from nine sites and not threatened.

F **Gladiolus pavonia** Goldblatt & J.C.Manning

Status: **CR** B1ab(iii)+2ab(iii)

M. Lötter, J.E. Burrows & L. von Staden

e**Distribution:** LM. Abel Erasmus Pass.

Habitat: Tall, open woodland on semi-arid rocky dolomite slopes, found in shaded as well as exposed sites.

Rationale: EOO 30 km^2, AOO < 10 km^2. Known from a single location. Its habitat is being rapidly degraded as a result of firewood harvesting and overgrazing by livestock.

F **Gladiolus phoenix** Goldblatt & J.C.Manning

Status: **Critically Rare**

F. Cholo & D. Raimondo

e**Distribution:** WC. Bain's Kloof Mountains.

Habitat: Moist banks and ravines.

Rationale: Known from one site, occurs within a protected area and is not threatened.

Gladiolus pole-evansii I.Verd.

Status: **Rare**

J.C. Manning, P. Goldblatt, J.E. Victor

e**Distribution:** G MP. Verena to Groblersdal.

Habitat: Granite basement rock.

Rationale: Restricted to granite boulders. Not threatened as its habitat is nonarable.

Gladiolus quadrangulus (D.Delaroche) Barnard **Plate 23**

Status: **EN** B1ab(iii,v)

D. Raimondo, P. Goldblatt & H. Preston

e**Distribution:** WC. Malmesbury to Cape Flats.

Habitat: Rocky sandstone slopes and sandy soil in seasonal wetlands, often slightly saline or brackish.

Rationale: EOO 2 514 km^2. Known from seven severely fragmented subpopulations. Urban expansion has destroyed most subpopulations on the Cape Flats. Threatened by encroachment from invasive alien acacias and annual grasses at all locations, and by extraction of water and overgrazing by livestock at some locations around Darling.

Gladiolus recurvus L.

Status: **VU** B1ab(ii,iii,iv,v)

D. Raimondo & P. Goldblatt

e**Distribution:** WC. Ceres to Somerset West.

Habitat: Clay flats and lower slopes.

Rationale: EOO < 4 000 km^2. Persisting at eight locations. It has lost habitat to wheat, vineyard, olive and deciduous fruit cultivation over the past 100 years. All locations are under threat from ongoing agricultural expansion and the reserves that protect two subpopulations are infested with invasive alien plants.

F **Gladiolus rhodanthus** J.C.Manning & Goldblatt

Status: **Rare**

D. Raimondo & F. Cholo

e**Distribution:** WC. Stettynsberg near Villiersdorp.

Habitat: Sandstone cliffs on warm, north-facing slopes, 1 800 m.

Rationale: Known from a single large population (EOO < 5 km^2) occurring in an inaccessible habitat. No known threats.

Gladiolus robertsoniae F.Bolus

Status: **NT** B1ab(iii)

M. Lötter, J.E. Burrows, L. von Staden & J.E. Victor

e**Distribution:** FS G MP. Southeastern Gauteng, northern Free State and southwestern Mpumalanga.

Habitat: Moist highveld grasslands, found in wet, rocky sites, mostly dolerite outcrops, wedged in rock crevices.

Rationale: Known from a restricted range (EOO 12 000 km^2) and from 12–14 locations. Habitat quality is declining as a result of mining and overgrazing by livestock. Subpopulations are large and not severely fragmented.

F **Gladiolus roseovenosus** Goldblatt & J.C.Manning

Status: **CR** C2a(i)

J.H. Vlok & D. Raimondo

e**Distribution:** WC. Outeniqua Mountains.

Habitat: Moist fynbos on sandstone slopes.

Rationale: Endemic to a small area on the southern slopes of the Outeniqua Mountains (EOO < 100 km^2), known from four historical subpopulations, one of which was destroyed by afforestation. The three remaining subpopulations are all very small (average 20 plants) and there are less than 200 plants in total. A decline in habitat quality is occurring because of invasion by alien plants.

Gladiolus rufomarginatus G.J.Lewis

Status: **Rare**

L. von Staden, M. Lötter & J.E. Burrows

e**Distribution:** MP. Lydenburg to Ohrigstad.

Habitat: Grasslands, either in the open or in light shade, on stony shale ground, sometimes in crevices in bare shale outcrops.

Rationale: Narrow endemic of the Lydenburg district in Mpumalanga, through the dry hills and valleys on the western side of the Drakensberg Escarpment as far as Ohrigstad (EOO < 500 km^2). The species is locally common and not threatened.

Gladiolus salteri G.J.Lewis

Status: **Rare**

D. Raimondo & J.E. Victor

e**Distribution:** NC. Springbok.

Habitat: Coarse, gritty, decomposed granite along the edges of drainage lines on stony hillsides.

Rationale: A range-restricted species (EOO 250 km^2). Not threatened as it occurs in an arid area in a nonarable habitat.

F **Gladiolus saxatilis** Goldblatt & J.C.Manning **Plate 23**

Status: **Rare**

J.E. Burrows, M. Lötter & L. von Staden

e**Distribution:** MP. Mariepskop to Graskop.

Habitat: Shady places on sandstone rocks and cliffs of black reef quartzite.

Rationale: A narrow endemic to the edge of the Mpumalanga Escarpment between Mariepskop and Graskop (EOO 200 km^2). Almost the entire range of this species falls within the Blyde River Canyon Nature Reserve. Its habitat is also quite inaccessible. Not threatened.

F **Gladiolus sekukuniensis** P.J.D.Winter

Status: **VU** D2

P.J.D. Winter & J.E. Victor

e**Distribution:** LM. Leolo and Strydpoort Mountains.

Habitat: Banded ironstone in soil containing lumps of calcrete, or on norite.

Rationale: Suspected to occur at 3–5 locations. Potentially threatened by mining and habitat degradation from grazing and trampling by livestock.

Gladiolus sempervirens G.J.Lewis **Plate 24**

Status: **Rare**

J.E. Victor

e**Distribution:** EC WC. George to Kareedouw.

Habitat: Seeps on sandstone slopes.

Rationale: A rare species that occurs only in favoured habitats in the Outeniqua and Tsitsikamma Mountains. Not threatened.

F **Gladiolus serpenticola** Goldblatt & J.C.Manning

Status: **Rare**

J.E. Burrows, M. Lötter, B. Mohamed & D.A. Kamundi†

Distribution: MP. Barberton and Swaziland.

Habitat: Serpentine soils.

Rationale: Endemic to the Barberton district (Barberton Centre of Endemism). Although a slight potential threat of mining exists, the soils on which this species occurs do not contain very valuable minerals and there are no active mines in the area nor any mining applications under consideration.

Gladiolus stefaniae Oberm. **Plate 24**

Status: **Rare**

J.H. Vlok & D. Raimondo

e**Distribution:** WC. Montagu and Potberg.

Habitat: Sandstone slopes, 100–800 m.

Rationale: Known from two disjunct sites and less than 5 000 mature individuals. Not threatened.

Gladiolus stokoei G.J.Lewis

Status: **Critically Rare**

P. Goldblatt, J.E. Victor & L. von Staden

e**Distribution:** WC. Riviersonderend Mountains.

Habitat: Marshy sandstone slopes.

Rationale: Restricted to the eastern end of the Riviersonderend Mountains (EOO < 100 km^2). All collection records are from the slopes of Pilaarkop, the highest mountain in the range. Not threatened.

Gladiolus subcaeruleus G.J.Lewis

Status: **NT** B1ab(ii,iii,v)

D. Raimondo & N.A. Helme

e**Distribution:** WC. Caledon to Bredasdorp.

Habitat: Sandy loam and clay soils in renosterveld.

Rationale: EOO 6 300 km^2. Known from 10–20 locations. It has lost over 80% of its habitat to wheat cultivation. Subpopulations still occur on low slopes along the Riviersonderend and Shaw's Mountains, where they are threatened by encroachment from invasive alien plants.

Gladiolus sufflavus (G.J.Lewis) Goldblatt & J.C.Manning

Status: **VU** D2

P. Goldblatt, N.A. Helme & D. Raimondo

e**Distribution:** NC. Bokkeveld Escarpment.

Habitat: Fynbos on seasonally waterlogged, sandy soils and at the edge of streams, marshes and ponds.

Rationale: Known from three locations, occurs within the area currently being cultivated for rooibos tea. Farmers do not tend to plough the seasonally marshy areas where

this species grows as rooibos will not grow in such a wet habitat. However, ploughing is a potential threat as some farmers accidentally plough this habitat; one location was lost in 2005 as a result of accidental ploughing.

Gladiolus symonsii F.Bolus

Status: **Rare**

C.R. Scott-Shaw & D. Pillay

Distribution: KZN. Bushman's Nek to Giant's Castle.

Habitat: Rocky sandstone or basalt in montane and subalpine grassland, on cliffs and steep grassy slopes, 1 900–3 000 m.

Rationale: Known from four sites. Highly habitat-specific and occurs at high altitudes within protected areas and is therefore not threatened.

[F] **Gladiolus taubertianus** Schltr.

Status: **Rare**

D. Raimondo, N.A. Helme & F. Cholo

[e]**Distribution:** WC. Pakhuis Pass to Kouebokkeveld.

Habitat: Coarse, stony, sandstone-derived ground on well-drained sites in dry montane fynbos.

Rationale: Restricted to the eastern Cederberg and the northern edge of the Kouebokkeveld. Rare, collected on only five occasions and there have never been more than a few plants recorded at each site. Not threatened.

[F] **Gladiolus teretifolius** Goldblatt & M.P.de Vos **Plate 24**

Status: **NT** B1ab(ii,iii,iv,v)

D. Raimondo

[e]**Distribution:** WC. Caledon to Mossel Bay.

Habitat: Renosterveld on clay soils.

Rationale: EOO 9 500 km^2. Known from 16 locations. At least 80% of its habitat has been transformed for wheat cultivation in the past. This loss is ongoing at a moderate rate, especially around Mossel Bay and Albertinia.

Gladiolus trichonemifolius Ker Gawl. **Plate 23**

Status: **VU** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

P. Goldblatt, D. Raimondo & K. Naidoo

[e]**Distribution:** WC. Hopefield and Ceres to Bredasdorp.

Habitat: Wet sandy flats.

Rationale: EOO < 20 000, AOO < 100 km^2. Now known from 10 locations. Principally a low-altitude species, it also occurs inland in the Kouebokkeveld and Agter-Witzenberg Vlakte. It may still be found in relatively undisturbed vleis, but agriculture with its attendant development of dams, pasture enrichment and wetland drainage has left the species little of its once plentiful habitat. Declines due to agriculture are ongoing.

[F] **Gladiolus uitenhagensis** Goldblatt & Vlok

Status: **VU** D2

D. Raimondo & J.H. Vlok

[e]**Distribution:** EC. Eastern Cape, Groot Winterhoek Mountains, Hankey to Loerie.

Habitat: Fynbos, on well-drained, rocky sandstone slopes.

Rationale: Known from two locations. Potentially threatened by grazing by livestock and crop cultivation.

[F] **Gladiolus vaginatus** F.Bolus

Status: **VU** B1ab(iii)

J.H. Vlok, D. Raimondo & L. von Staden

[e]**Distribution:** WC. Cape Peninsula to Knysna.

Habitat: Limestone and clay loam soil, fynbos and renosterveld on coastal lowlands.

Rationale: Formerly a very common species, now remaining mostly as small isolated subpopulations on fragments of natural vegetation within its lowland distribution range. EOO 16 700 km^2. Severely fragmented and declining as a result of crop cultivation, coastal development and alien invasive plants.

Gladiolus vandermerwei (L.Bolus) Goldblatt & M.P.de Vos

Status: **EN** B1ab(iii,v)+2ab(iii,v); C2a(i)

D. Raimondo & P. Goldblatt

[e]**Distribution:** WC. Bot River to Heidelberg.

Habitat: Renosterveld, on shale slopes.

Rationale: EOO < 5 000 km^2. Known from 10 severely fragmented subpopulations, it has lost over 80% of its habitat to wheat cultivation, and all subpopulations are small, with less than 250 individuals each. Decline is ongoing as a result of invasion by alien plants and overgrazing by livestock.

Gladiolus variegatus (G.J.Lewis) Goldblatt & J.C.Manning **Plate 23**

Status: **VU** B1ab(iii)

P. Goldblatt & D. Raimondo

[e]**Distribution:** WC. Gansbaai to Cape Agulhas.

Habitat: Cracks in limestone outcrops or in stony calcareous sands.

Rationale: EOO < 500 km^2. Known from fewer than 10 locations. Declining as a result of invasion by alien plants.

Gladiolus vigilans Barnard

Status: **EN** D

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Cape Peninsula and potentially in the Kogelberg.

Habitat: Sandstone slopes and rocky ridges that are very exposed to salt-laden sea breezes.

Rationale: Confirmed to occur at only one site on the southern Cape Peninsula, with a possible second subpopulation on the slopes of the Kogelberg. Known from less than 250 mature individuals. Potentially threatened by invading alien plants.

[F] **Gladiolus watsonius** Thunb. **Plate 24**

Status: **NT** B1ab(i,iii,v)

D. Raimondo

[e]**Distribution:** WC. Piketberg to Stellenbosch.

Habitat: Renosterveld on clay.

Rationale: EOO 5 500 km^2. Of 60 recorded subpopulations, only 15 are still likely to be extant. It has experienced severe habitat loss to urban expansion and crop cultivation, with at least 95% of its habitat being transformed since 1940. It appears to have been very common in the northern suburbs of Cape Town, but most of these locations have been lost to urban development. Loss to urban and agricultural expansion is ongoing.

Hesperantha Ker Gawl.

Hesperantha alborosea Hilliard & B.L.Burtt

Status: **Rare**

C.R. Scott-Shaw & D. Pillay

[e]**Distribution:** KZN. Cobham Forest Reserve and Upper Polela Cave.

Habitat: Drakensberg alpine tundra. In damp sedge mats in streamlines, rock-flushes and wet gravelly areas.

Rationale: Known from two collections in a restricted range (EOO 50 km^2). Not threatened.

Plate 23


C. Paterson-Jones

Gladiolus variegatus VU


C. Paterson-Jones

Gladiolus trichonemifolius VU


C. Paterson-Jones

Gladiolus carmineus VU


C. Paterson-Jones

Gladiolus nigromontanus Rare


C. Paterson-Jones

Gladiolus engysiphon VU


C. Paterson-Jones

Gladiolus comptonii Critically Rare


C. Paterson-Jones

Gladiolus griseus CR


M. Lotter

Gladiolus saxatilis Rare


C. Paterson-Jones

Gladiolus aureus CR


C. Paterson-Jones

Gladiolus quadrangulus EN

Plate 24


C. Paterson-Jones

Gladiolus bonaspei NT


C. Paterson-Jones

Gladiolus teretifolius NT


C. Paterson-Jones

Gladiolus watsonius NT


C. Paterson-Jones

Gladiolus sempervirens Rare


C. Paterson-Jones

Gladiolus stefaniae Rare


C. Paterson-Jones

Gladiolus abbreviatus VU


M. Raimondo

Gladiolus miniatus VU


C. Paterson-Jones

Gladiolus overbergensis VU

Plate 25



J.H. Viok

Freesia speciosa VU



C. Paterson-Jones

Freesia leichtlinii VU



C. Paterson-Jones

Watsonia mtamvunae VU



C. Paterson-Jones

Watsonia hysterantha NT



C. Paterson-Jones

Watsonia humilis CR



C. Paterson-Jones

Watsonia bachmannii VU



C. Paterson-Jones

Watsonia fergusoniae VU



C. Paterson-Jones

Watsonia rogersii NT

Plate 26


C. Paterson-Jones

Ixia tenuifolia EN


C. Paterson-Jones

Ixia maculata var. *fuscocitrina* EN


C. Paterson-Jones

Ixia metelerkampiae Rare


C. Paterson-Jones

Ixia esterhuyseniae Rare


C. Paterson-Jones

Ixia acaulis VU


C. Paterson-Jones

Ixia viridiflora var. *viridiflora* EN


C. Paterson-Jones

Ixia curta VU


C. Paterson-Jones

Ixia purpureorosea EN


C. Paterson-Jones

Ixia versicolor CR

[F] **Hesperantha brevicaulis** (Baker) G.J.Lewis

Status: **Rare**

J.E. Burrows, M. Lötter, P.A. Manyama & D.A. Kamundi†

[e]**Distribution:** LM MP. Eastern Mpumalanga Escarpment and the Wolkberg Mountains.

Habitat: In damp moss between rock crevices on steep rocks and cliffs, around 1 600 m.

Rationale: A habitat specialist that is not threatened.

[F] **Hesperantha cedarmontana** Goldblatt

Status: **Rare**

D. Raimondo & R.C. Turner

[e]**Distribution:** WC. Cederberg, Kouebokkeveld and Piketberg Mountains.

Habitat: Shallow, seasonally moist soils, usually among rocks.

Rationale: A habitat specialist known from eight sites, no significant threats known.

[F] **Hesperantha curvula** Hilliard & B.L.Burtt

Status: **Rare**

D. Raimondo & F. Cholo

[e]**Distribution:** KZN. KwaZulu-Natal Drakensberg Mountains.

Habitat: Wet turf ledges above sheets of outcropping cave sandstone or under boulders, 2 000–2 470 m.

Rationale: Known from a very limited area (EOO 25 km^2), from only two collections. Appears to be naturally rare and very habitat-specific. It has no known threats.

Hesperantha elsiae Goldblatt

Status: **Critically Rare**

P. Goldblatt, K. Naidoo

[e]**Distribution:** WC. Cederberg Mountains.

Habitat: Damp places on south-facing, rocky sandstone slopes.

Rationale: Known from one site in the Krom River Kloof in the Cederberg within a protected area and is therefore not threatened.

Hesperantha erecta (Baker) Benth. ex Baker

Status: **NT** B1ab(ii,iii,iv,v)

D. Raimondo

[e]**Distribution:** WC. Klawer to Mamre.

Habitat: Sandveld and renosterveld, occurs on shales and granites.

Rationale: EOO 6 750 km^2. Known from less than 20 locations in lowland habitats, with most subpopulations occurring in the Vredenburg Peninsula area. This area is under severe pressure from coastal development and is declining as a result.

[F] **Hesperantha fibrosa** Baker

Status: **VU** B1ab(iii,v)

D. Raimondo

[e]**Distribution:** WC. Caledon to Heidelberg.

Habitat: Renosterveld, on clay slopes.

Rationale: An Overberg endemic (EOO 2 600 km^2), now known from fewer than 10 locations. It has lost over 80% of its habitat to wheat cultivation and is declining as a result of invasion by alien plants.

Hesperantha flava G.J.Lewis

Status: **Rare**

D. Raimondo

[e]**Distribution:** NC. Steinkopf and Matjiesfontein.

Habitat: Stony soils of decomposing shale.

Rationale: Occurs as small, sparse, disjunct subpopulations. Only four subpopulations have been recorded over a vast range (23 000 km^2). Not threatened.

[F] **Hesperantha glabrescens** Goldblatt

Status: **Rare**

D. Raimondo, P.A. Manyama & D.A. Kamundi†

[e]**Distribution:** NC. Roggeveld Escarpment southwest of Sutherland.

Habitat: Moist clay flats along watercourses.

Rationale: A range-restricted habitat specialist (EOO 30 km^2), known from two subpopulations. No known threats.

Hesperantha gracilis Baker

Status: **VU** D2

D. Raimondo

[e]**Distribution:** KZN. Sandstone plateaus inland from Durban.

Habitat: Scarp forest, hangs from moss cushions or patches of humus on dripping wet cliffs that are mostly inaccessible.

Rationale: EOO < 2 000 km^2. Known from four locations. This range-restricted habitat specialist is potentially threatened by invading alien plants and urban expansion.

Hesperantha hantamensis Schltr. ex R.C.Foster

Status: **VU** D2

P. Goldblatt, K. Naidoo & R.C. Turner

[e]**Distribution:** NC. Hantamsberg Mountain.

Habitat: Renosterveld, on shale flats, favouring soils derived from dolerite.

Rationale: EOO < 10 km^2. Known from one location. Even though locally common and partly conserved in a nature reserve, it was and remains potentially threatened by dam expansion and road widening.

Hesperantha hutchingsiae Hilliard & B.L.Burtt

Status: **Rare**

P. Goldblatt & K. Naidoo

[e]**Distribution:** EC. Mthatha and Naude's Nek.

Habitat: Marshy areas below dolerite rocks.

Rationale: Known from two sites. Not threatened.

Hesperantha ingeliensis Hilliard & B.L.Burtt

Status: **Rare**

C.R. Scott-Shaw & D. Pillay

[e]**Distribution:** EC KZN. Ngele Mountain, Mjika Mountain, hills north of Mthatha and Mhlahlane Forestry Reserve.

Habitat: Marshes in montane grassland, in damp cliff crevices or in flat rocky areas.

Rationale: Known from two sites, this species is a habitat specialist and has no recorded threats.

Hesperantha juncifolia Goldblatt

Status: **EN** B1ab(iii,v)

D. Raimondo & P. Goldblatt

[e]**Distribution:** WC. Agulhas Peninsula.

Habitat: Wet depressions on coastal limestone flats.

Rationale: Known from four locations between Quoin Point and Cape Agulhas (EOO 268 km^2). Declining as a result of encroachment from invasive alien acacias.

Hesperantha karooica Goldblatt

Status: **DD**D

P. Goldblatt, D. Raimondo & R.C. Turner

e**Distribution**: NC. Hantamsberg Mountain.

Habitat: Shale flats.

Rationale: This rare species is known from two collections from the same site and was last observed in 1965. No plants resembling this species have been recollected at the type locality since, nor elsewhere, and the population has probably declined.

Hesperantha latifolia (Klatt) M.P.de Vos

Status: **VU** D2

R.C. Turner & P. Goldblatt

e**Distribution**: NC. Namaqualand, Kamiesberg.

Habitat: Mountain renosterveld or dry montane fynbos, in shallow seasonal pools, or in damp sand or moss overlying flat or concave granite rock shelves.

Rationale: AOO < 5 km^2. Known from eight locations. Potentially threatened by overgrazing and trampling by livestock and climate change as it grows in seasonally wet pools.

F **Hesperantha malvina** Goldblatt

Status: **Critically Rare**

J.E. Victor, L. von Staden & R.C. Turner

e**Distribution**: WC. Anysberg.

Habitat: Damp, south-facing sandstone cliffs and rocks.

Rationale: Known from one site. Appears to be very rare and local, occurring on cliffs a relatively safe habitat.

Hesperantha minima (Baker) R.C.Foster

Status: **EN** D

N.A. Helme & D. Raimondo

e**Distribution**: NC. Namaqualand, Kamiesberg.

Habitat: Granitic soils, growing close to watercourses, 1 400 m.

Rationale: Known from two sites. It has small subpopulations and there are less than 200 mature individuals.

F **Hesperantha muirii** (L.Bolus) G.J.Lewis

Status: **EN** B1ab(ii,iii,iv,v)

D. Raimondo & R.C. Turner

e**Distribution**: WC. Bredasdorp to Albertinia.

Habitat: Renosterveld, on clay slopes and flats.

Rationale: EOO 2 534 km^2. Over 70% of its habitat has been lost to crop cultivation since 1940. It persists in isolated fragments of renosterveld and is declining because of invasion by alien plants and ongoing conversion of habitat for crop cultivation in the Albertinia and Riversdale areas.

Hesperantha namaquana Goldblatt

Status: **Rare**

P. Goldblatt, K. Naidoo & R.C. Turner

e**Distribution**: NC. Bitterfontein.

Habitat: Streambanks in arid shale hills.

Rationale: Known from a restricted range (EOO 32 km^2), from two sites. Rare but not threatened.

Hesperantha oligantha (Diels) Goldblatt

Status: **CR** B1ab(iii); C2a(i,ii); D

D. Raimondo, P. Goldblatt & R.C. Turner

e**Distribution**: EC NC. Hantamsberg Mountain.

Habitat: Mountain renosterveld, marshy ground in seasonal streams, seeps and shallow pools on moist, south-facing slopes.

Rationale: Known from one location where there are less than 30 mature individuals. Experiencing a decline in habitat quality due to overgrazing by livestock.

Hesperantha pallescens Goldblatt

Status: **CR** B1ab(iii,v)+2ab(iii,v)

P. Goldblatt, D. Raimondo & K. Naidoo

e**Distribution**: WC. Olifants River Mountains.

Habitat: Renosterveld, on clay slopes.

Rationale: Known from two highly fragmented and isolated subpopulations in the northern Swartland (EOO 27 km^2, AOO 1 km^2). Over 98% of its habitat has been transformed for wheat cultivation and the two remaining subpopulations are declining as a result of overgrazing by livestock and the impact of fragmentation.

Hesperantha pubinervia Hilliard & B.L.Burtt

Status: **Rare**

J.E. Victor & C.R. Scott-Shaw

e**Distribution**: KZN. KwaZulu-Natal Drakensberg Mountains.

Habitat: Montane rocky grassland.

Rationale: Known from two subpopulations within a restricted range (EOO < 500 km^2). Both subpopulations fall within the Ukhahlamba Drakensberg National Park and are not threatened.

Hesperantha purpurea Goldblatt

Status: **VU** D2

P. Goldblatt, K. Naidoo, J.E. Victor & R.C. Turner

e**Distribution**: NC. Hantam.

Habitat: Karroid shrubland, in heavy clay soils on stony, moist, south-facing slopes of rocky hills.

Rationale: Known from the type locality (EOO 1 km^2). Potentially threatened by overgrazing and trampling by livestock.

Hesperantha quadrangula Goldblatt

Status: **Rare**

P. Goldblatt, K. Naidoo & R.C. Turner

e**Distribution**: NC. Hantamsberg Mountain and Roggeveld Escarpment.

Habitat: Stony clay slopes.

Rationale: Known from two disjunct subpopulations (EOO < 100 km^2). Occurs on slopes and has no known threats.

Hesperantha rivulicola Goldblatt

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

D. Raimondo & E. Marinus

e**Distribution**: NC. Bokkeveld Mountains to Calvinia.

Habitat: Mountain karoo shrubland or mountain renosterveld, seasonal seeps and streams on tillite soil, growing in, or near, running water.

Rationale: EOO 1 408 km^2, AOO < 10 km^2. Historically known from four locations. One location in the town of Nieuwoudtville was destroyed by the municipality's road and river maintenance activities in 2003. There are ongoing threats to the remaining three subpopulations from overgrazing by livestock and potentially from ploughing.

F **Hesperantha rupestris** N.E.Br. ex R.C.Foster

Status: **DD**D

J.E. Burrows, M. Lötter & L. von Staden

e**Distribution**: MP. Waterval Boven.

Habitat: Uncertain, either rocky grassland or marshy vleis.
Rationale: The habitat of this species has to be determined. Could be threatened if restricted to wetlands.

Hesperantha saldanhae Goldblatt
Status: **CR** PE
P. Goldblatt & D. Raimondo
eDistribution: WC. Vredenburg.
Habitat: Granite rocks.
Rationale: Known from the type locality, growing on granite rocks at Vredenburg. Repeated visits to the presumed type locality (a cluster of granite boulders on the edge of Vredenburg) have failed to relocate it. Moderate disturbance makes it unlikely that the species is extinct as a result of human activity. Nevertheless, it must be considered seriously endangered and possibly extinct.

F **Hesperantha saxicola** Goldblatt
Status: **VU** D2
J.E. Burrows, M. Lötter & L. von Staden
eDistribution: MP. Long Tom Pass.
Habitat: Wet cliffs and seeps among rocks above 2 000 m.
Rationale: Known from 2–4 locations. Potentially threatened by mining.

F **Hesperantha spicata** (Burm.f.) N.E.Br. subsp. **fistulosa** (Baker) Goldblatt
Status: **CR** B1ab(iii,v)
D. Raimondo
eDistribution: WC. Porterville to Cape Peninsula.
Habitat: Clay soils in wet seeps.
Rationale: Now known from an area of 70 km^2, from two severely fragmented subpopulations (Porterville and Joostenberg Vlakte) on remnant renosterveld patches. This taxon has lost over 95% of its habitat to wheat cultivation over the past 80 years. It is threatened by overgrazing by livestock, encroachment from invasive alien grass and acacias and consequent desiccation of its seep habitat.

F **Hesperantha spicata** (Burm.f.) N.E.Br. subsp. **spicata**
Status: **VU** B1ab(ii,iii,iv,v)
D. Raimondo & N.A. Helme
eDistribution: WC. Piketberg to Gordon's Bay to Upper Breede River Valley.
Habitat: Low hills and clay flats.
Rationale: EOO 5 124 km^2. Known from fewer than 10 extant locations, declining as a result of crop cultivation, urban development and infestations of invasive alien plants.

F **Hesperantha sufflava** Goldblatt
Status: **CR** B1ab(ii,iii,iv,v)
D. Raimondo
eDistribution: WC. Malmesbury to Durbanville.
Habitat: Sandy gravel slopes in renosterveld.
Rationale: EOO 60 km^2. Known from three severely fragmented subpopulations, the largest of which is losing habitat for the development of a housing estate. Loss is ongoing and rapid.

Hesperantha teretifolia Goldblatt
Status: **Rare**
J.E. Victor & R.C. Turner
eDistribution: NC. Roggeveld Escarpment.
Habitat: Stony slopes, often growing in rock crevices.
Rationale: EOO 31 km^2. Known from two subpopulations but it is possible that a few more exist along the Roggeveld Escarpment. This species is rare and localised, occurring only at the edge of the Roggeveld Escarpment. No significant threats have been recorded.

Hesperantha truncatula Goldblatt
Status: **Critically Rare**
J.E. Victor
eDistribution: WC. Klein Swartberg Mountains.
Habitat: Dry, north-facing shale slopes in renosterveld.
Rationale: Known from one site. Not threatened.

Hesperantha vaginata (Sweet) Goldblatt **Plate 22**
Status: **NT** D2
P. Goldblatt, D. Raimondo & E. Marinus
eDistribution: NC. Bokkeveld Escarpment and Calvinia.
Habitat: Dolerite clays on vertisol soils.
Rationale: Known from 8–10 locations. Potentially threatened by agriculture and climate change.

Ixia L.

Ixia acaulis Goldblatt & J.C.Manning **Plate 26**
Status: **VU** D2
P. Goldblatt, J.C. Manning & K. Naidoo
eDistribution: WC. Knersvlakte.
Habitat: Succulent karoo shrubland, in rock crevices or wedged between boulders on limestone ridges.
Rationale: Known from one location. Potentially threatened by cement mining.

F **Ixia amethystina** J.C.Manning & Goldblatt
Status: **Rare**
P.A. Manyama
eDistribution: NC. Middelpos, Roggeveld Escarpment.
Habitat: Renosterveld shrubland in stony clay.
Rationale: Known from two subpopulations from a restricted range (EOO < 10 km^2). No threats known.

F **Ixia atrandra** Goldblatt & J.C.Manning
Status: **EN** B1ab(ii,iii)
P.A. Manyama & D. Raimondo
eDistribution: WC. Villiersdorp to Worcester.
Habitat: Renosterveld on clay soils derived from shales of the Bokkeveld series.
Rationale: Known from a restricted range (EOO 70 km^2), from two locations. Experiencing ongoing habitat loss to vineyard expansion.

F **Ixia aurea** J.C.Manning & Goldblatt
Status: **VU** D2
D. Raimondo, J.E. Victor & K. Naidoo
eDistribution: WC. Darling to Yzerfontein.
Habitat: Granite slopes.
Rationale: Known from three locations. Potentially threatened by crop cultivation, eutrophication and grazing and trampling by livestock.

Ixia brevituba G.J.Lewis
Status: **Rare**
D. Raimondo
eDistribution: NC. Sutherland.
Habitat: Wet clay flats along watercourses.
Rationale: A range-restricted species (EOO < 500 km^2), known from fewer than five subpopulations. Not threatened.

Ixia brunneobractea G.J.Lewis

Status: **VU** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)
N.A. Helme & D. Raimondo
Distribution: NC WC. Bokkeveld Escarpment.
Habitat: Deep acid sands.
Rationale: EOO < 100 km², AOO < 10 km². Known from seven locations. Declining because of loss of its habitat to rooibos cultivation.

Ixia campanulata Houtt.

Status: **EN** B1ab(ii,iii,iv,v)
P. Goldblatt, J.C. Manning, I. Ebrahim & D. Raimondo
Distribution: WC. Tulbagh, Paarl and Worcester.
Habitat: Transitions between renosterveld and fynbos at the base of mountain ranges.
Rationale: EOO < 510 km². Known from five locations. Experiencing ongoing habitat loss to vineyard cultivation.

Ixia cochlearis G.J.Lewis

Status: **Rare**
P. Goldblatt, J.C. Manning & K. Naidoo
Distribution: WC. Stellenbosch.
Habitat: Sandstone slopes.
Rationale: EOO < 20 km². Known only from Jonkershoek Mountains. No threats are affecting this rare and localised species.

Ixia collina Goldblatt & Snijman

Status: **EN** B1ab(ii,iii)+2ab(ii,iii)
D. Raimondo
Distribution: WC. Breede River Valley near Worcester.
Habitat: Moist, south-facing karroid hills.
Rationale: EOO 200 km², AOO < 200 km². Fewer than five remaining locations continue to decline because of ongoing habitat loss to vineyard expansion.

Ixia curta Andrews **Plate 26**

Status: **VU** B1ab(ii,iii,iv,v)
D. Raimondo, J.E. Victor & K. Naidoo
Distribution: WC. Darling to Malmesbury.
Habitat: Flats and slopes.
Rationale: EOO < 340 km². Known from six locations. It has lost habitat to wheat cultivation and urban development. Declining as a result of encroachment from invasive alien annual grasses and acacias.

Ixia dubia Vent.

Status: **Declining**
D. Raimondo
Distribution: WC. Piketberg to Caledon.
Habitat: Sandstone and granite flats and slopes.
Rationale: EOO 25 000 km². Although this species has lost and continues to lose habitat to wheat and vineyard cultivation, urban development and invasive alien plant infestations, it is still too common to be listed as threatened or Near Threatened. Between 30 and 50 locations have been recorded. A synonym, *I. frederickii*, was listed as Endangered by Hilton-Taylor (1996a).

Ixia esterhuyseniae M.P.de Vos **Plate 26**

Status: **Rare**
P. Goldblatt, J.C. Manning & K. Naidoo
Distribution: WC. Jonkershoek and Hottentots Holland Mountains.
Habitat: Sandstone slopes, 900–1 200 m.
Rationale: EOO < 200 km². Known from fewer than five sites. Occurs on mountain slopes within protected areas. Not threatened.

Ixia gloriosa G.J.Lewis

Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v)
N.A. Helme & D. Raimondo
Distribution: WC. Montagu to Barrydale.
Habitat: Lower mountain slopes.
Rationale: EOO < 5 000 km². Known from four locations. Declining because of expanding vineyards and road construction.

Ixia leipoldtii G.J.Lewis

Status: **CR** B1ab(ii,iii); D
P. Goldblatt, J.C. Manning & D. Raimondo
Distribution: WC. Montagu to Swellendam.
Habitat: Renosterveld on shale.
Rationale: EOO < 50 km². Known from one subpopulation of less than 50 plants. Threatened by expanding vineyards on the Op de Tradouw Plateau.

Ixia longituba N.E.Br. var. **bellendenii** (R.C.Foster) M.P.de Vos

Status: **VU** B1ab(iii)
P. Goldblatt, J.C. Manning & K. Naidoo
Distribution: WC. McGregor to Stormsvlei and near Montagu.
Habitat: Lower sandstone slopes.
Rationale: EOO 2 453 km². Known from fewer than 10 locations. This taxon continues to lose habitat to crop cultivation.

Ixia lutea Eckl. var. **ovata** (Andrews) B.Nord.

Status: **EN** B1ab(i,ii,iii,iv,v)
P. Goldblatt, J.C. Manning & K. Naidoo
Distribution: WC. Piketberg to Darling and Porterville.
Habitat: Sandy, usually damp, flats.
Rationale: EOO 519 km². Known from 3–5 locations. This taxon has lost over 50% of its habitat to crop cultivation and this loss is ongoing.

Ixia maculata L. var. **fuscocitrina** (Desf. ex DC.) G.J.Lewis **Plate 26**

Status: **EN** B1ab(ii,iii,iv,v)
P. Goldblatt, J.C. Manning & D. Raimondo
Distribution: WC. Darling to Saldanha.
Habitat: Sandy, usually damp, flats.
Rationale: EOO 220 km². Known from four locations. Declining as a result of urban development, agricultural expansion and collecting for horticultural purposes.

Ixia maculata L. var. **intermedia** G.J.Lewis

Status: **NT** B1ab(ii,iii,iv,v)
D. Raimondo
Distribution: WC. Vanrhynsdorp to Hopefield.
Habitat: Sandy flats and hills.
Rationale: EOO 12 000 km². Declining because of conversion of its habitat for wheat, rooibos and potato cultivation. Between 15 and 20 locations are suspected to be extant.

Ixia maculata L. var. **maculata**

Status: **NT** B1ab(ii,iii,iv,v)
D. Raimondo
Distribution: WC. Vanrhynsdorp and Clanwilliam to Malmesbury and Stellenbosch.

Habitat: Sandy flats and hills.
Rationale: EOO 20 000 km². Declining as a result of ongoing conversion of its habitat for wheat, vineyards, citrus, rooibos and potato cultivation and urban development. Decline is approaching thresholds for a vulnerable listing; 20 locations are likely to be extant.

[F] **Ixia metelerkampiae** L.Bolus Plate 26

Status: **Rare**
J.E. Victor & K. Naidoo
[e]**Distribution:** WC. Wellington to Worcester.
Habitat: Mountain slopes.
Rationale: A range-restricted mountain species (EOO < 400 km²). Not threatened.

[F] **Ixia monadelpha** D.Delaroche

Status: **EN** B1ab(i,ii,iii,iv,v)
D. Raimondo, J.E. Victor & K. Naidoo
[e]**Distribution:** WC. Cape Peninsula to Darling and Tulbagh.
Habitat: Wet, sandy flats and lower slopes.
Rationale: EOO < 1 500 km². Known from 10 historical locations but extant at only two of them. The remainder were lost to wheat and vineyard expansion and to urban development. Its habitat is being degraded as a result of invasion by alien plants and fertiliser runoff.

Ixia mostertii M.P.de Vos

Status: **EN** A2c; B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v); C1
P. Goldblatt, I. Ebrahim & D. Raimondo
[e]**Distribution:** WC. Wolseley to Worcester.
Habitat: Renosterveld, on flat gravelly shales.
Rationale: Endemic to the Upper Breede River Valley (EOO < 300 km²), known historically from five locations, three of which have been lost to urban expansion, including one that was lost between 2005 and 2007. Less than 1 000 mature individuals remain, and at least 20% of the population has been lost over the past 10 years (two generations).

Ixia patens Aiton var. **linearifolia** G.J.Lewis

Status: **EN** B1ab(ii,iii,iv,v)
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Villiersdorp to Worcester.
Habitat: Clay slopes and sandy loams at the base of hills.
Rationale: EOO < 100 km². Known from two locations. Threatened by expansion of vineyards and by infrastructure development.

Ixia patens Aiton var. **patens**

Status: **EN** B1ab(i,iii,iv)
P. Goldblatt, J.C. Manning & K. Naidoo
[e]**Distribution:** WC. Clanwilliam to Worcester.
Habitat: Clay slopes in renosterveld.
Rationale: EOO 3 755 km². Known from fewer than five locations. Threatened by invading alien plants and agricultural expansion.

Ixia pumilio Goldblatt & Snijman

Status: **VU** D2
P. Goldblatt, J.C. Manning & K. Naidoo
[e]**Distribution:** WC. Breede River Valley.
Habitat: Deep sand on riverbanks.
Rationale: Known from one location. Potentially threatened by invading alien plants and vineyard expansion.

Ixia purpureorosea G.J.Lewis Plate 26

Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v)
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Vredenburg to Saldanha.
Habitat: Calcrete and associated sand.
Rationale: EOO 185 km². Known from four locations. Experiencing an ongoing loss of habitat to cement mining and urban development.

Ixia rouxii G.J.Lewis

Status: **CR** PE
P. Goldblatt, D. Raimondo & I. Ebrahim
[e]**Distribution:** WC. Tulbagh to Porterville.
Habitat: Renosterveld-fynbos transitions on lower slopes.
Rationale: Last collected in 1987, but despite repeated surveys it has not been relocated since and may have been lost to vineyards and deciduous fruit orchard cultivation.

Ixia splendida G.J.Lewis

Status: **VU** D2
P. Goldblatt, J.C. Manning & K. Naidoo
[e]**Distribution:** WC. Piketberg.
Habitat: Streamsides.
Rationale: Known from one location. Potentially threatened by expansion of orchards and dam construction.

[F] **Ixia stohriae** L.Bolus

Status: **Rare**
D. Raimondo, J.E. Victor & K. Naidoo
[e]**Distribution:** WC. Langeberg Mountains behind Swellendam.
Habitat: Sandstone slopes and in kloofs.
Rationale: A range-restricted species (EOO 130 km²) known from five sites. Not threatened.

Ixia stolonifera G.J.Lewis

Status: **DD**
P. Goldblatt, J.C. Manning & J.E. Victor
[e]**Distribution:** WC. Montagu.
Habitat: Unknown.
Rationale: Known from the Kiesiesberg in the Montagu district. Last collected in 1946, no habitat or population data exist.

Ixia tenuifolia Vahl Plate 26

Status: **EN** B1ab(i,iii,iv,v)
D. Raimondo, J.E. Victor & K. Naidoo
[e]**Distribution:** WC. Darling and Kalbaskraal.
Habitat: Damp sandy flats.
Rationale: EOO 640 km². Known from four or five locations. Continuing declines due to overgrazing by livestock, invasion by alien plants and eutrophication from fertiliser runoff from surrounding wheat fields.

[F] **Ixia trinervata** (Baker) G.J.Lewis

Status: **NT** B1ab(ii,iii)
P. Goldblatt, J.C. Manning, N.A. Helme, D. Raimondo & K. Naidoo
[e]**Distribution:** WC. Elgin to Caledon.
Habitat: Renosterveld on shale.
Rationale: EOO < 1 200 km². Known from 15–20 locations. Threatened by invading alien plants and agricultural expansion.

Ixia vanzijliae L.Bolus

Status: **VU** B1ab(ii,iii,iv,v)

D. Raimondo, J.E. Victor & P. Goldblatt

e**Distribution:** WC. Bonnievale to Worcester.

Habitat: Arid shale soils.

Rationale: EOO < 1 200 km². Known from 5–10 locations. It has lost over 50% of its habitat to vineyards over the past 15 years, loss is ongoing.

Ixia versicolor G.J.Lewis **Plate 26**

Status: **CR** A2ac; B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

P. Goldblatt, J.C. Manning, K. Naidoo, D. Raimondo & J.E. Victor

e**Distribution:** WC. Stellenbosch to Somerset West.

Habitat: Seasonally wet clay flats.

Rationale: EOO < 100 km², AOO < 1 km². It has lost > 80% of locations and habitat over the past 15 years to the development of Gordon's Bay and Somerset West; only two small, severely fragmented subpopulations remain. A large subpopulation at Disa Road, Gordon's Bay, was lost in 2005. Both remaining extant subpopulations are declining because of invasion by alien grasses. Also, one is being mowed annually by the council, preventing seed set.

Ixia vinacea G.J.Lewis

Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v)

P. Goldblatt, J.C. Manning & I. Ebrahim

e**Distribution:** WC. Tulbagh.

Habitat: Stony clay flats.

Rationale: A range-restricted species (EOO 80 km², AOO < 10 km²), known from three or four locations. It has lost at least 80% of its habitat to vineyard and deciduous fruit cultivation over the past 100 years, a time period longer than three generations (15 years). Declining because of crop cultivation and invasion by alien plants.

F **Ixia viridiflora** Lam. var. **minor** M.P.de Vos

Status: **CR** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

D. Raimondo, P. Goldblatt & J.C. Manning

e**Distribution:** WC. Wolseley.

Habitat: Shale flats.

Rationale: EOO < 50 km², AOO < 2 km². This taxon is known from Wolseley and has lost at least 80% of its habitat to vineyard and orchard expansion over the past 100 years, a time period longer than three generations (15 years). One subpopulation of less than 50 plants has been seen in an orchard and there are claims of another subpopulation, but this has to be confirmed. It is threatened by crop cultivation and declines are ongoing.

Ixia viridiflora Lam. var. **viridiflora** **Plate 26**

Status: **EN** B1ab(i,iii,iv,v)+2ab(ii,iii,iv,v)

D. Raimondo, I. Ebrahim & K. Naidoo

e**Distribution:** WC. Northern Tulbagh Valley.

Habitat: The ecotone between sandstone and shale soils.

Rationale: EOO < 230 km², AOO < 5 km². Known from three locations. This taxon has lost over 70% of its habitat to vineyard and orchard expansion over the past 100 years, more than three generations (15 years). It now occurs in remnant patches between fruit orchards and is threatened by invasive alien plants, lack of fire, harvesting for horticultural purposes and ongoing habitat loss for crop cultivation.

Klattia Baker

Klattia flava (G.J.Lewis) Goldblatt **Plate 20**

Status: **VU** D1+2

A.L. Schutte-Vlok, J.C. Manning, N.A. Helme & D. Raimondo

e**Distribution:** WC. Hottentots Holland Mountains to Bain's Kloof.

Habitat: Restricted to seeps and gullies or near perennial streams above 800 m where summer cloud and precipitation are frequent.

Rationale: A range-restricted habitat specialist (EOO 400 km², AOO < 20 km²). Occurs as very small stands and is estimated to have less than 1 000 mature individuals. Potentially threatened by extraction of groundwater.

Klattia partita Baker

Status: **NT** D2

A.L. Schutte-Vlok & D. Raimondo

e**Distribution:** WC. Cape Peninsula, Hottentots Holland and Langeberg Mountains.

Habitat: Restricted to cooler, south-facing slopes in seeps and marsh margins above 600 m.

Rationale: EOO 7 500 km². Known from fewer than 10 locations. Subpopulations in the Hottentots Holland Mountains are potentially threatened by extraction of groundwater.

F **Klattia stokoei** L.Guthrie **Plate 20**

Status: **EN** D

A.L. Schutte-Vlok, N.A. Helme & D. Raimondo

e**Distribution:** WC. Kogelberg.

Habitat: Sandstone mountain seeps.

Rationale: A Kogelberg endemic (EOO 200 km²), known from 10 subpopulations, all of which consist of fewer than 10 individuals. The total population is estimated to be less than 250 mature individuals. Potentially threatened by extraction of groundwater.

Lapeirousia Pourr.

Lapeirousia azurea (Eckl. ex Baker) Goldblatt

Status: **EN** B1ab(i,ii,iii,iv,v)

N.A. Helme, P. Goldblatt & J.C. Manning

e**Distribution:** WC. Gouda to Paarl.

Habitat: Granite soils, on clay flats and slopes.

Rationale: This Swartland endemic (EOO 4 050 km²) has lost over 50% of its historical locations to crop cultivation and urban development. Loss is ongoing, with locations around Paarl and Malmesbury recently being lost. All remaining subpopulations are severely fragmented, with many occurring on road verges or in remnant renosterveld patches between agricultural fields.

Lapeirousia corymbosa (L.) Ker Gawl.

Status: **Declining**

D. Raimondo & N.A. Helme

e**Distribution:** WC. Piketberg to Agulhas.

Habitat: Sandy and granite slopes.

Rationale: At least 30% of known locations and habitat have been lost to crop cultivation and urban expansion over the past 50 years. Generation length unknown, so it cannot be listed under Criterion A. It persists in at least 40 sites. Determining generation length is a priority conservation action.

Lapeirousia dolomitica Dinter subsp. **lewisiana** (B.Nord.) Goldblatt

Status: **Rare**
D. Raimondo & N.A. Helme
eDistribution: NC WC. Kamiesberg to Bitterfontein.
Habitat: Quartzite patches over saline clays in succulent karoo shrubland.
Rationale: Known from four collections. A rare and localised taxon. Not threatened.

FLapeirousia fastigiata (Lam.) Ker Gawl.

Status: **VU** B1ab(i,ii,iii,iv,v)
N.A. Helme & D. Raimondo
eDistribution: WC. Piketberg to Malmesbury.
Habitat: Clay slopes and flats in renosterveld.
Rationale: A northern Swartland endemic (EOO 3 240 km^2), now known from nine locations. It has lost 45% of historical locations and most of the flat areas where it once occurred to wheat cultivation (over 94% of habitat). Experiencing continuing declines due to expanding olive and rooibos tea cultivation and degradation from annual grass invasions and overgrazing by livestock.

Lapeirousia simulans Goldblatt & J.C.Manning

Status: **VU** B1ab(ii,iii,iv,v)
N.A. Helme
eDistribution: WC. Southwestern Knersvlakte.
Habitat: Spiny grassland sandveld in red aeolian sand.
Rationale: EOO < 2 000 km^2. Known from fewer than 10 locations. Declining as a result of tomato and vineyard expansion and heavy-mineral sand mining (the deep red sands in which this species occurs are targeted for mining).

Lapeirousia tenuis (Goldblatt) Goldblatt & J.C.Manning

Status: **Rare**
N.A. Helme
eDistribution: NC. Kleinsee to the escarpment west of Springbok.
Habitat: Sandy coastal plain.
Rationale: Poorly known and evidently rare. Appears to be restricted to central coastal Namaqualand, occurring as small, localised subpopulations. Known from fewer than 10 sites.

Lapeirousia verecunda Goldblatt

Status: **VU** D2
N.A. Helme, P. Goldblatt, J.C. Manning & K. Naidoo
eDistribution: NC. Escarpment west of Springbok.
Habitat: Rocky granite soils.
Rationale: Known from five locations in the Spektakelberg area. Potentially threatened by road works, quarrying and crop cultivation.

Lapeirousia violacea Goldblatt

Status: **NT** B1ab(ii,iii)
D. Raimondo
eDistribution: NC. Bokkeveld Escarpment to Biedouw Valley.
Habitat: Loamy sands and on arid shales.
Rationale: Restricted to the southern Bokkeveld and Biedouw Valley, known from nine locations but a few more are likely to exist. Occurs in areas and in habitat that are being converted for rooibos tea cultivation.

Moraea Mill.

Moraea amissa Goldblatt

Status: **CR** B1ab(iii)+2ab(iii)
D. Raimondo, I. Ebrahim & C. von Witt
eDistribution: WC. Malmesbury.
Habitat: Course granitic soils amongst rocky outcrops in renosterveld.
Rationale: Known from one location (EOO and AOO < 1 km^2), 56 mature individuals of this species were recorded in 2005. Its habitat is being degraded by grazing cattle and invasion by alien plants.

Moraea angulata Goldblatt

Status: **CR** B2ab(ii,iii,iv,v)
P. Goldblatt, J.C. Manning & D. Raimondo
eDistribution: WC. Malmesbury to Gordon's Bay.
Habitat: Wet sandy flats.
Rationale: Less than 10 km^2 of suitable habitat remains. Probably extant at four severely fragmented subpopulations. It has suffered severe declines over the past century; we estimate that there has been a 90% decline over the past 20 years. All four remaining subpopulations are threatened by invading alien plants and the associated drying up of seasonal wetlands.

Moraea aristata (D.Delaroche) Asch. & Graebn. **Plate 27**

Status: **CR** D
J.E. Victor, J.C. Manning, P. Goldblatt & R.C. Turner
eDistribution: WC. Cape Peninsula.
Habitat: Clay slopes and flats in the northern Cape Peninsula.
Rationale: This Cape Flats endemic has lost all of its habitat to urban expansion of the city of Cape Town. It persists in one subpopulation, where there are less than 50 plants growing in a completely transformed habitat in Observatory.

Moraea aspera Goldblatt

Status: **VU** D2
P. Goldblatt, D. Raimondo & K. Naidoo
eDistribution: WC. Bokkeveld Escarpment.
Habitat: Tillite clay soils in renosterveld.
Rationale: AOO < 20 km^2. Known from three locations. Potentially threatened by agricultural expansion.

Moraea atropunctata Goldblatt **Plate 27**

Status: **CR** B1ab(iii,v)+2ab(iii,v)
P. Goldblatt & D. Raimondo
eDistribution: WC. Eseljagberg near Villiersdorp.
Habitat: Gentle clay slopes in renosterveld.
Rationale: EOO and AOO < 1 km^2. Known from one location. Declining because of overgrazing by livestock and flower-picking; 320 mature individuals were counted in 2003.

Moraea autumnalis (Goldblatt) Goldblatt

Status: **Rare**
P. Goldblatt, L. von Staden & R.C. Turner
eDistribution: WC. Kouebokkeveld, Elandskloof.
Habitat: Well-drained, sandy, stony soil on sandstone.
Rationale: It has no imminent threats but is known from two sites (EOO < 500 km^2). It flowers only after fire.

Moraea barnardiella Goldblatt **Plate 27**

Status: **EN** B1ab(ii,iii,iv,v); C2a(ii)

P. Goldblatt, R.C. Turner & K. Naidoo

[e]**Distribution:** WC. Villiersdorp to Caledon.

Habitat: Clay slopes in renosterveld or renosterveld-fynbos transition.

Rationale: EOO 373 km^2. Known from four locations. Declining as a result of crop cultivation, urban development, invasion by alien plants and road maintenance. We estimate that the total population has less than 1 000 mature individuals. Subpopulations are typically small, consisting of 10–100 individuals.

Moraea barnardii L.Bolus **Plate 27**

Status: **CR** B1ab(iii,v)+2ab(iii,v); C2a(ii)

D. Raimondo, P. Goldblatt & R.C. Turner

[e]**Distribution:** WC. Caledon.

Habitat: Coarse, stony gravels on sandstone-shale transitions.

Rationale: Known from two severely fragmented subpopulations, with 10 plants in one subpopulation and 150 plants in the other. Declining as a result of crop cultivation, overgrazing and invasion by alien plants.

Moraea calcicola Goldblatt **Plate 27**

Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v); C2a(i)

P. Goldblatt, D. Raimondo & K. Naidoo

[e]**Distribution:** WC. Saldanha.

Habitat: Limestone hills.

Rationale: A highly range-restricted species (EOO 60 km^2), known from three locations, all of which have less than 200 mature individuals. Declining because of urban expansion of Saldanha and limestone mining for cement.

Moraea cedarmonticola Goldblatt

Status: **Rare**

R.C. Turner & D. Raimondo

[e]**Distribution:** WC. Cederberg Mountains.

Habitat: Rocky sandstone slopes.

Rationale: A range-restricted Cederberg endemic (EOO 150 km^2) that may flower only after fire, known from four sites. Not threatened.

Moraea comptonii (L.Bolus) Goldblatt

Status: **EN** B1ab(i,iii,iv,v)

P. Goldblatt, R.C. Turner & K. Naidoo

[e]**Distribution:** WC. Villiersdorp to Stanford.

Habitat: Clay slopes in renosterveld.

Rationale: EOO 230 km^2. Known from five locations. It has lost 80% of its habitat to cereal cultivation over the past 70 years and loss is ongoing.

Moraea contorta Goldblatt

Status: **Rare**

P. Goldblatt, R.C. Turner & K. Naidoo

[e]**Distribution:** WC. Hantamsberg Mountain to Roggeveld Escarpment.

Habitat: Stony clay flats and slopes.

Rationale: A range-restricted species to the Roggeveld (EOO < 500 km^2), known from three sites. Not threatened.

Moraea cooperi Baker

Status: **VU** B1ab(ii,iii,iv,v)

P. Goldblatt & D. Raimondo

[e]**Distribution:** WC. Tulbagh to Worcester to Caledon and Stanford.

Habitat: Seasonally wet flats, in sandy soil or rocky alluvium at the base of high mountains.

Rationale: EOO 7 100 km^2. Subpopulations are declining rapidly as a result of crop cultivation and urban development. Remaining subpopulations are severely fragmented and all except the Elandsberg subpopulation are under threat.

Moraea debilis Goldblatt

Status: **EN** B1ab(ii,iii,iv,v)

P. Goldblatt, J.C. Manning, D. Raimondo & R.C. Turner

[e]**Distribution:** WC. Bot River to Bredasdorp and Swellendam.

Habitat: Shale flats and gentle slopes in renosterveld.

Rationale: EOO 2 700 km^2. Known from fewer than five locations. Declining as a result of overgrazing by livestock, road construction, crop cultivation and invasion by alien plants.

Moraea deserticola Goldblatt

Status: **Rare**

P. Goldblatt, J.C. Manning, R.C. Turner & K. Naidoo

[e]**Distribution:** WC. Knersvlakte.

Habitat: Stony, quartz-covered slopes and flats in succulent karoo shrubland.

Rationale: Known from four subpopulations from a very localised area (EOO < 250 km^2). Not threatened.

Moraea elegans Jacq. **Plate 27**

Status: **EN** B1ab(i,ii,iii,iv,v)

P. Goldblatt, R.C. Turner & K. Naidoo

[e]**Distribution:** WC. Teslaarsdal to Bredasdorp.

Habitat: Clay slopes in renosterveld.

Rationale: EOO < 600 km^2. It has lost 60–80% of its habitat to crop cultivation and all remaining subpopulations are severely fragmented. Declining as a result of invasion by alien plants, and crop cultivation.

Moraea elsiae Goldblatt

Status: **VU** B1ab(i,ii,iii,iv,v)

D. Raimondo, P. Goldblatt & R.C. Turner

[e]**Distribution:** WC. Cape Peninsula and Bredasdorp.

Habitat: Deep sandy soils.

Rationale: Although this species is known from 38 herbarium records, it has gone extinct at most of these collecting localities over the past 100 years as a result of urban expansion on the Cape Flats and crop cultivation on the Agulhas Plain. Only two recent collections from the Cape Flats exist, making it difficult to know if areas with intact habitat, such as Cape of Good Hope Nature Reserve and the area around Bredasdorp, have extant subpopulations. From historical records we suspect it is still extant at only seven locations. Loss to crop cultivation, invading alien plants and urban expansion is ongoing.

[F] **Moraea exiliflora** Goldblatt

Status: **Critically Rare**

D.A. Kamundi† & D. Raimondo

[e]**Distribution:** WC. Klein Swartberg Mountain.

Habitat: Weathered, seasonally wet rock faces, in pockets of soil on narrow ledges, 1 000–1 500 m.

Rationale: EOO < 10 km^2. Known from one site. Occurs within a protected area and is not threatened.

Moraea fenestralis (Goldblatt & E.G.H.Oliv.) Goldblatt

Status: **Rare**

P. Goldblatt, R.C. Turner & K. Naidoo

e**Distribution:** NC WC. Kliprand and Platbakkies east of Leliefontein.

Habitat: Sandy seepage areas in cracks or pockets on large granite boulders.

Rationale: A range-restricted, habitat specialist (EOO < 500 km^2), known from four subpopulations and not suspected to be affected by any threats.

Moraea fenestrata (Goldblatt) Goldblatt

Status: **Rare**

P. Goldblatt, R.C. Turner & K. Naidoo

e**Distribution:** NC WC. Tanqua and Doorn River basins.

Habitat: Clay slopes in renosterveld.

Rationale: A range-restricted species (EOO < 500 km^2), known from two subpopulations. Not threatened.

Moraea fistulosa (Goldblatt) Goldblatt

Status: **Critically Rare**

P. Goldblatt, L. von Staden & R.C. Turner

e**Distribution:** NC. Roggeveld Escarpment.

Habitat: Dry stony flats.

Rationale: A range-restricted Roggeveld endemic (EOO < 10 km^2), known from one site. Not threatened.

Moraea flexicaulis Goldblatt

Status: **Critically Rare**

P. Goldblatt, L. von Staden & R.C. Turner

e**Distribution:** NC. Southern Richtersveld.

Habitat: Sandy loams on exposed, arid flats.

Rationale: A range-restricted Richtersveld endemic (EOO < 10 km^2), known from one site. Not threatened.

Moraea fragrans Goldblatt

Status: **Rare**

P. Goldblatt, D. Raimondo, S. Todd & E. Marinus

e**Distribution:** NC. North of Nieuwoudtville.

Habitat: Dolerite vertisol soils.

Rationale: A range-restricted species (EOO 80 km^2), known from seven subpopulations. Not threatened as its habitat is nonarable.

Moraea fuscomontana (Goldblatt) Goldblatt

Status: **Rare**

P. Goldblatt, K. Naidoo & R.C. Turner

e**Distribution:** WC. Swartruggens Mountains.

Habitat: Rocky sandstone slopes in fynbos.

Rationale: A range-restricted species (EOO < 500 km^2), known from four subpopulations. Not threatened.

Moraea gigandra L.Bolus

Status: **EN** B1ab(ii,iii,iv,v)

P. Goldblatt, D. Raimondo & I. Ebrahim

e**Distribution:** WC. Piketberg to Porterville.

Habitat: Steep, stony slopes in heavy clay soils.

Rationale: EOO 189 km^2. Known from six severely fragmented subpopulations. Over 95% of its habitat has been transformed for wheat cultivation. Occurs in small, isolated fragments of renosterveld on south-facing slopes between wheat lands. One subpopulation has experienced severe decline (over 90% of mature individuals lost) as a result of too frequent fires. The remnant is burnt with surrounding wheat stubble annually after the harvest in November. Frequent fires, coupled with grazing by livestock, are causing continuing declines at most of the remaining subpopulations.

F **Moraea graminicola** Oberm. subsp. **graminicola**

Status: **NT** A2c; B1ab(iii)

C.R. Scott-Shaw, I.M. Johnson, L. von Staden & D. Raimondo

e**Distribution:** KZN. KwaZulu-Natal Midlands and Ngome.

Habitat: Moist slopes and flats in open mistbelt grasslands, 900–1 500 m.

Rationale: EOO 9 500 km^2. Remaining at 10–20 locations. This taxon has lost 31% of its habitat across its range since the 1950s, but only ± 20% (mainly to forestry plantations) within the last 30–40 years, which corresponds to less than three generations (generation length estimated to be 10–15 years). Habitat loss due to forestry and small-scale farming is continuing. Subpopulations are not severely fragmented.

Moraea hesperantha (Goldblatt) Goldblatt

Status: **NT** D2

D. Raimondo, E. Marinus & S. Todd

e**Distribution:** NC. Bokkeveld Plateau.

Habitat: Heavy clay dolerite soils in renosterveld.

Rationale: EOO 74 km^2. Known from fewer than 10 locations. Although it has lost some habitat in the past, the heavy dolerite soils on which it occurs are no longer targeted for agriculture and no future decline due to crop cultivation is predicted. One subpopulation is being heavily grazed and future loss to overgrazing is a potential threat.

Moraea hiemalis Goldblatt

Status: **NT** B1ab(ii,iii,v)

C.R. Scott-Shaw & D. Pillay

e**Distribution:** KZN. Pietermaritzburg and Richmond to Kamberg.

Habitat: Mistbelt and montane open grassland, 100–2 000 m.

Rationale: EOO < 9 500 km^2. Known from 10–15 locations. Its habitat has been transformed and fragmented by afforestation, crop cultivation and urban development. Loss to urban expansion, habitat degradation through lack of fire and invasion by alien plants is causing a continuing decline.

Moraea incurva G.J.Lewis

Status: **VU** D1+2

I. Ebrahim, D. Raimondo & R.C. Turner

e**Distribution:** WC. Tulbagh.

Habitat: Well-drained, sandy, rocky soil on sandstone slopes.

Rationale: EOO 130 km^2. Known from five locations. Subpopulations that occur on the upper slopes of the Groot Winterhoek Mountains are not threatened, whereas those on the lower slopes are potentially threatened by vineyard expansion in the northern parts of the Tulbagh Valley. All subpopulations are small and this species is known from less than 1 000 mature individuals.

Moraea indecora Goldblatt

Status: **VU** D1

P. Goldblatt, R.C. Turner & D. Raimondo

e**Distribution:** NC. Springbok.

Habitat: Hard, flat, sandy ground, on course granite-derived soils.

Rationale: Known from four sites within an area of < 50 km^2 and from less than 1 000 mature individuals.

Moraea insolens Goldblatt

Status: **CR** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

J.C. Manning, P. Goldblatt & D. Raimondo

e**Distribution:** WC. Caledon Swartberg.

Habitat: Renosterveld, in gravel-clay soils, with fynbos elements and various geophytes.

Rationale: EOO 63 km², AOO < 1 km². Known from three severely fragmented subpopulations, all on small remnants that are not managed and are being steadily encroached by invasive alien plants and becoming moribund because of lack of fire.

Moraea kamiesensis Goldblatt **Plate 27**

Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v)

P. Goldblatt, N.A. Helme & D. Raimondo

e**Distribution:** NC. Namaqualand, Kamiesberg.

Habitat: Sandy, lower granitic slopes, 1 000 m.

Rationale: EOO < 150 km². Now known from three locations. It has lost ± 50% of its habitat over the past 70 years to agriculture, and is declining as a result of further crop cultivation and overgrazing and trampling by livestock.

Moraea kamiesmontana (Goldblatt) Goldblatt

Status: **VU** D2

N.A. Helme & D. Raimondo

e**Distribution:** NC. Namaqualand, Kamiesberg.

Habitat: Shallow granitic sand over rock.

Rationale: EOO 50 km². Known from four locations. Vulnerable to trampling by livestock.

F **Moraea lilacina** Goldblatt & J.C.Manning

Status: **EN** B1ab(ii,iii,iv,v)

J.H. Vlok & D. Raimondo

e**Distribution:** WC. Langeberg Mountains.

Habitat: Renosterveld, in loamy clay soils on rocky slopes.

Rationale: Known from three locations on the northern lower foothills of the Langeberg (EOO 50 km²). Threatened by overgrazing by livestock and crop cultivation.

Moraea linderi Goldblatt

Status: **CR** D

P. Goldblatt, J.E. Victor, K. Naidoo & R.C. Turner

e**Distribution:** WC. Piketberg Mountains and the Kouebokkeveld.

Habitat: Quartzitic sands.

Rationale: Known from two subpopulations with less than 50 mature individuals in total. A third subpopulation was lost during construction of a dam.

Moraea longiaristata Goldblatt

Status: **CR** B1ab(iii,v)+2ab(iii,v); C2a(i)

P. Goldblatt, D. Raimondo, N.A. Helme & R.C. Turner

e**Distribution:** WC. Caledon Swartberg.

Habitat: Lower to medium-altitude slopes in stony, sandstone-derived soil.

Rationale: Known from one location, with a severe threat of invasion by alien plants; 80 plants were recorded at two subpopulations in 2005 and 2007.

Moraea longiflora Ker Gawl.

Status: **VU** D1+2

N.A. Helme & D. Raimondo

e**Distribution:** NC. Namaqualand, Kamiesberg.

Habitat: Open granitic sands at 1 200 m, often in seasonally damp areas.

Rationale: EOO < 80 km², AOO < 1 km². Known from two locations from less than 1 000 mature individuals. Potentially threatened by overgrazing by livestock.

Moraea loubseri Goldblatt

Status: **CR** PE

D.A. Snijman, D. Raimondo & C. von Witt

e**Distribution:** WC. Langebaan.

Habitat: A granite outcrop on sandy, granite-derived soils.

Rationale: Restricted to one outcrop of which over 80% has been destroyed by quarrying that started in the 1970s. During visits to the only known subpopulation in 1995 and 2002, fewer than five plants were found. Subsequent annual searches have not relocated this species. Signs of digging by porcupines were noted in 2002, and 2005 was a year of good rainfall but no plants were found. It is probably extinct in the wild.

Moraea louisabolusiae Goldblatt

Status: **Rare**

P. Goldblatt, D. Raimondo & R.C. Turner

e**Distribution:** NC WC. Namaqualand to Nardous Mountain.

Habitat: Rock outcrops.

Rationale: A rare geophyte that is restricted to sandstone outcrops. Known from four collections over a large range (EOO 5 100 km²). It is likely that a few more undiscovered subpopulations exist. Not threatened.

Moraea macgregorii Goldblatt

Status: **Rare**

D. Raimondo & R.C. Turner

e**Distribution:** NC. Bokkeveld Escarpment.

Habitat: Dry, stony slopes on renosterveld-succulent karoo transition.

Rationale: Known from one site. Not threatened as it occurs in an arid, nonarable habitat.

F **Moraea marginata** J.C.Manning & Goldblatt

Status: **Critically Rare**

P.A. Manyama

e**Distribution:** NC. Sutherland.

Habitat: Open, succulent karroid scrub, in fine alluvial sands over shale at the foot of sandstone outcrops at an altitude of 1 550 m.

Rationale: Known from a single population. Not threatened.

F **Moraea melanops** Goldblatt & J.C.Manning

Status: **EN** B1ab(iii)+2ab(iii)

D. Raimondo & D.A. Kamundi†

e**Distribution:** WC. Caledon and Bredasdorp.

Habitat: Clay slopes in renosterveld.

Rationale: EOO 482 km², AOO < 482 km². It has lost habitat to agriculture, and all three remaining locations continue to decline as a result of ongoing habitat degradation caused by invading alien plants.

Moraea minima Goldblatt

Status: **CR** PE

P. Goldblatt, J.C. Manning, D. Raimondo & R.C. Turner

e**Distribution:** WC. Bredasdorp.

Habitat: Clay flats in renosterveld.

Rationale: Known from one location that is heavily invaded by alien acacias and overgrazed by livestock. It has not been collected recently (last collected in 1981) despite botanical surveys work by a number of botanists in the area.

Moraea monticola Goldblatt

Status: **VU** D1

P. Goldblatt, K. Naidoo & R.C. Turner

e**Distribution:** WC. Kamiesberg to Swartberg Mountains.

Habitat: Rocky lower slopes.

Rationale: Known from two highly disjunct subpopulations. Subpopulations are small (less than 200 plants) and less than 1 000 mature individuals of this species are known.

Moraea namaquamontana Goldblatt

Status: **Rare**

P. Goldblatt & D. Raimondo

e**Distribution:** NC. Richtersveld, Stinkfontein Mountains.

Habitat: Stony ground in full sun, on south-facing slopes, at altitudes above 1 000 m.

Rationale: Occurs on one mountain range (EOO 87 km^2). Flowers only after good rains and it is not under any threat.

Moraea namaquana (Goldblatt) Goldblatt

Status: **Critically Rare**

P. Goldblatt & L. von Staden

e**Distribution:** NC. Spektakel Mountains.

Habitat: Hard, stony, clay soil, sometimes covered with white quartzite.

Rationale: Known from one subpopulation. Not threatened.

Moraea namibensis Goldblatt

Status: **VU** D2

L. von Staden

Distribution: NC. Southern Namibia to Port Nolloth.

Habitat: Sandy flats in succulent karoo.

Rationale: Known only from two locations and potentially threatened by mining.

Moraea nubigena Goldblatt

Status: **Critically Rare**

P. Goldblatt, L. von Staden & R.C. Turner

e**Distribution:** WC. Fonteintjiesberg.

Habitat: Wet, moss-covered Table Mountain Sandstone rocks at 1 400 m.

Rationale: Known from one subpopulation. Not threatened.

Moraea patens (Goldblatt) Goldblatt

Status: **CR** B1ab(ii,iii,iv,v)

P. Goldblatt, D. Raimondo & R.C. Turner

e**Distribution:** WC. Nardous to Pakhuis Mountains.

Habitat: Lowlands, sandy soils.

Rationale: Restricted to a tiny range (EOO 34 km^2), occurring in lowland areas in the Biedouw Valley and Nardous Kloof area. This area has already lost over 50% of its habitat to crop cultivation and there is ongoing, rapid expansion of rooibos tea in the region. Of the four historical records for this species, three were collected before 1950 in areas now under cultivation.

Moraea pendula (Goldblatt) Goldblatt

Status: **VU** B1ab(ii,iii,v)+2ab(ii,iii,v)

N.A. Helme, D. Raimondo & A. le Roux

e**Distribution:** NC. Namaqualand, Kamiesberg.

Habitat: Grows in seasonally wet areas along streams.

Rationale: Endemic to the Kamiesberg (EOO < 300 km^2), known from 5–10 locations. Threatened by habitat loss due mainly to crop cultivation but also to infrastructure development around Leliefontein.

Moraea radians (Goldblatt) Goldblatt

Status: **CR** B1ab(ii,iii,iv,v)

P. Goldblatt, D. Raimondo & R.C. Turner

e**Distribution:** WC. McGregor.

Habitat: Clay soils in renosterveld.

Rationale: EOO 80 km^2. Known from two severely fragmented subpopulations. It has already lost over 60% of its habitat to vineyards and now persists in renosterveld fragments between vineyards. Conversion of its habitat is ongoing and severe. The most recent count of one of the subpopulations recorded only eight mature individuals.

Moraea regalis Goldblatt & J.C.Manning **Plate 27**

Status: **CR** B1ab(iii,v)

J.H. Vlok & D. Raimondo

e**Distribution:** WC. De Rust.

Habitat: Pebbly, loamy soils on south-facing slopes.

Rationale: Known from one population, 50% of which was lost to infrastructure development. Declining because of habitat degradation by collecting of firewood and overgrazing by livestock. There are less than 1 000 mature individuals.

F **Moraea rivulicola** Goldblatt & J.C.Manning

Status: **Rare**

D. Raimondo, B. Mohamed & D.A. Kamundi†

e**Distribution:** NC. Spektakel Mountains west of Springbok southward to the Kamiesberg.

Habitat: Moist sites on granite bedrock.

Rationale: A habitat specialist known from six subpopulations. Not threatened as it occurs on unploughable granite bedrock. Moraeas are also not susceptible to grazing by livestock, the main land use within its range.

F **Moraea stagnalis** (Goldblatt) Goldblatt

Status: **VU** B1ab(iii)

D. Raimondo & L. von Staden

e**Distribution:** NC WC. Northern Cederberg, Nieuwoudtville, Nardous Mountain and northwards to Garies.

Habitat: Seasonal pools, seeps and in seasonal streams on sandstone soils, 400–800 m.

Rationale: EOO 8 700 km^2. Known from 7–10 locations. Experiencing an ongoing degradation of its habitat due to surrounding areas being converted to rooibos tea cultivation which is disturbing seasonal water flow patterns.

F **Moraea tricolor** Andrews

Status: **EN** B1ab(i,ii,iii,iv,v)

J.C. Manning, P. Goldblatt & D. Raimondo

e**Distribution:** WC. Hopefield to Napier.

Habitat: Clay soils in renosterveld, in wet, sandy flats.

Rationale: The range of this species has been reduced from 8 000 km^2 to 1 200 km^2 over the past 80 years as a result of wheat and vineyard expansion and urban development on the Cape Flats. Once common in damp places in the Swartland and Overberg, it is now reduced to four locations. Declines are continuing because of invasion by alien plants, crop cultivation and urban development.

Moraea tulbaghensis L.Bolus **Plate 27**

Status: **EN** B1ab(ii,iii,iv,v)

P. Goldblatt, J.C. Manning & D. Raimondo

e**Distribution:** WC. Piketberg to Paarl.

Habitat: Stony, sandy clay flats in renosterveld.

Rationale: Known from seven severely fragmented subpopulations within an EOO of 1 300 km^2. Declining because of urban expansion and crop cultivation.

Moraea unibracteata Goldblatt

Status: **NT** B1ab(ii,iii,iv,v)

C.R. Scott-Shaw, D. Pillay & R.C. Turner

[e]**Distribution:** KZN. Mooi River and Giant's Castle Game Reserve to Inanda.

Habitat: Mistbelt and montane grassland, usually on steep slopes, 600–2 000 m.

Rationale: EOO 5 000 km^2. Estimated to occur at 15 locations. It has lost over 40% of its habitat to afforestation, crop cultivation and urban development. There is ongoing degradation of its habitat because of overgrazing by livestock and invasion by alien plants. Habitat loss to urban expansion is also continuing.

Moraea vallisavium Goldblatt

Status: **Rare**

D. Pillay & R.C. Turner

[e]**Distribution:** WC. Kleinrivier and Langeberg Mountains.

Habitat: Sandstone rocks, 500–1 000 m.

Rationale: Known from two sites (EOO < 400 km^2). Only appears after fire and seems to be very rare. No threats are likely to have an impact on this species.

Moraea vallisbelli (Goldblatt) Goldblatt

Status: **NT** B1ab(ii,iii,iv,v)

P. Goldblatt, D. Raimondo & E. Marinus

[e]**Distribution:** NC WC. Bokkeveld Mountains to Botterkloof Pass.

Habitat: Transition between rocky sandstone soils and tillite clays, seasonally waterlogged.

Rationale: EOO < 700 km^2. Known from 11 locations, with a few undiscovered subpopulations expected. Severe past and continuing declines around Nieuwoudtville due to wheat and olive cultivation, but it also occurs in the Koebee Mountains and Botterkloof Pass areas. The overall decline therefore does not yet qualify the species as VU.

Moraea variabilis (G.J.Lewis) Goldblatt

Status: **EN** B1ab(ii,iii,iv,v)

P. Goldblatt, R.C. Turner & D. Raimondo

[e]**Distribution:** WC. Kouebokkeveld to Ceres.

Habitat: Sand and clay soils, 100–500 m.

Rationale: EOO 651 km^2. Known from three locations. Occurs on clay and sandy plateaus between mountain ranges, a habitat that has been severely affected by urban expansion in the Ceres Valley and by extensive fruit orchards, vineyards and onion cultivation in both the Ceres Valley and in the Kouebokkeveld. It has lost over 50% of its habitat and historical locations. Loss to crop cultivation is ongoing.

Moraea verecunda Goldblatt

Status: **Rare**

D. Raimondo, P. Goldblatt & D. Pillay

[e]**Distribution:** NC. Bokkeveld Escarpment.

Habitat: Rocky sandstone flats in arid fynbos.

Rationale: A range-restricted species (EOO < 160 km^2), known from two sites. Grows on rocky pavements and is hence not threatened by expanding rooibos tea cultivation, which targets deep sandy habitats.

[F] **Moraea versicolor** (Salisb. ex Klatt) Goldblatt

Status: **VU** B1ab(ii,iii,iv,v)

R. Koopman & D. Raimondo

[e]**Distribution:** WC. Tulbagh to Cape Peninsula and Houwhoek.

Habitat: Clay and granite flats and slopes, often in seasonally damp depressions, below 300 m.

Rationale: EOO 7 400 km^2. Known from 11–20 severely fragmented subpopulations. It has lost over 80% of its habitat to urban expansion and crop cultivation; losses due to these factors and invasion by alien plants are ongoing.

[F] **Moraea vespertina** Goldblatt & J.C.Manning

Status: **Rare**

D. Raimondo, S. Todd & E. Marinus

[e]**Distribution:** NC. Bokkeveld Escarpment.

Habitat: Heavy red dolerite clay soil in low rocky outcrops of dolerite, restricted to seasonally moist soils.

Rationale: A range-restricted species (EOO 24 km^2), known from four subpopulations. Occurs amongst dolerite boulders that cannot be ploughed.

Moraea villosa (Ker Gawl.) Ker Gawl. subsp. **elandsmontana** Goldblatt

Status: **VU** D1

P. Goldblatt & D. Raimondo

[e]**Distribution:** WC. Foot of the Elandskloof Mountains.

Habitat: Stony granite and clay soils and flats.

Rationale: This taxon is likely to have lost habitat to wheat cultivation. It is known from one site where there are less than 350 mature individuals. It is not currently threatened as it occurs in a well-managed private nature reserve.

Moraea villosa (Ker Gawl.) Ker Gawl. subsp. **villosa**

Status: **VU** B1ab(i,ii,iii,iv,v)

D. Raimondo & P. Goldblatt

[e]**Distribution:** WC. Piketberg to Gordon's Bay and Ceres.

Habitat: Clay flats and lower slopes.

Rationale: EOO 11 650 km^2. This taxon was once a common lowland endemic, but crop cultivation and urban expansion have reduced its range. Over 80% of its habitat has been lost. It is probably extant at 16 of the 62 historical locations. Large colonies still exist below Gydo Pass and on the Piketberg where hundreds of thousands of plants occur. All other extant subpopulations are severely fragmented (occurring between wheat fields that are seldom burnt), small (typically less than 20 plants) and declining as a result of habitat degradation caused by eutrophication and invasion by alien plants.

Moraea virgata Jacq. subsp. **karooica** (Goldblatt) Goldblatt

Status: **Rare**

P. Goldblatt, J.C. Manning & K. Naidoo

[e]**Distribution:** NC. Roggeveld Escarpment.

Habitat: Moist sites, among large rocks near seepage zones.

Rationale: A Roggeveld Escarpment endemic (EOO 140 km^2), known from two subpopulations and not threatened.

Moraea vlokii Goldblatt

Status: **Rare**

P. Goldblatt, D. Raimondo & K. Naidoo

[e]**Distribution:** WC. Montagu to Swartberg Mountains.

Plate 27


C. Paterson-Jones

Moraea elegans EN


C. Paterson-Jones

Moraea aristata CR


C. Paterson-Jones

Moraea barnardiella EN


J.H. Vlok

Moraea regalis CR


C. Paterson-Jones

Moraea calcicola EN


C. Paterson-Jones

Moraea kamiesensis EN


C. Paterson-Jones

Moraea barnardii CR


C. Paterson-Jones

Moraea tulbaghensis EN


C. Paterson-Jones

Moraea atropunctata CR

Plate 28



C. Paterson-Jones

Romulea sabulosa VU



N.A. Helme

Romulea maculata EN



C. Paterson-Jones

Romulea hantamensis Rare



N.A. Helme

Romulea elliptica CR



N.A. Helme

Romulea rupestris EN



N.A. Helme

Romulea singularis VU



C. Paterson-Jones

Romulea barkerae EN



C. Paterson-Jones

Romulea komsbergensis NT



C. Paterson-Jones

Romulea namaquensis NT



C. Paterson-Jones

Romulea eximia EN

Habitat: Rocky sandstone slopes in arid fynbos.
Rationale: Known from two subpopulations, with less than 100 plants in total. However, large tracts of untransformed habitat still exist and it is highly likely that more subpopulations exist and hence this species cannot be listed as threatened.

Moraea worcesterensis Goldblatt

Status: **CR** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)
D. Raimondo & I. Ebrahim

[e]**Distribution:** WC. Worcester.
Habitat: Mixed fynbos and renosterveld transitional vegetation in rocky, sandstone-derived soil.
Rationale: This species was previously known from the type collection made in 1983 on the stony flats west of Worcester in the Worcester–Robertson Karoo. This area has subsequently been developed for suburban housing and the species is now extinct at this location. It has been discovered at three other locations, all close to Worcester (EOO < 5 km^2). These locations are all under severe, ongoing threats from urban and vineyard expansion.

Nivenia Vent.

Nivenia concinna N.E.Br.

Status: **VU** D2
P. Goldblatt, J.C. Manning & D. Raimondo

[e]**Distribution:** WC. Groenland Mountains.
Habitat: Rocky soil with root stocks wedged into weathered Cape sandstone.
Rationale: Known from one location above Viljoen's Pass near Caledon. Potentially threatened by invasive alien plants.

Nivenia dispar N.E.Br.

Status: **VU** D1
P. Goldblatt, J.C. Manning & D. Raimondo

[e]**Distribution:** WC. Riviersonderend Mountains.
Habitat: Base of cliffs in rock crevices and along streams.
Rationale: Known from one small subpopulation of less than 1 000 plants.

Nivenia fruticosa (L.f.) Baker

Status: **Rare**
P. Goldblatt, J.C. Manning & D. Raimondo

[e]**Distribution:** WC. Langeberg Mountains, Swellendam to Grootvadersbosch.
Habitat: Open fynbos in shallow stony soil in exposed situations above 1 000 m.
Rationale: Endemic to South Langeberg Sandstone Fynbos (EOO < 385 km^2), known from fewer than 10 sites. Not threatened.

Nivenia levynsiae Weim. Plate 20

Status: **Rare**
P. Goldblatt, J.C. Manning & D. Raimondo

[e]**Distribution:** WC. Kogelberg.
Habitat: Dry, exposed rocky outcrops above 500 m.
Rationale: Known from fewer than 10 sites within the greater Kogelberg area (EOO < 200 km^2). Occurs on rocky outcrops, can resprout after fire and is therefore not threatened.

[F] **Nivenia parviflora** Goldblatt Plate 20

Status: **Rare**
D. Raimondo & P. Goldblatt
[e]**Distribution:** WC. Lower southern slopes of the Klein Swartberg Mountains near Ladismith.
Habitat: Rock outcrops on sandstone slopes.
Rationale: Known from three subpopulations within a restricted range (EOO 38 km^2). Occurs within a protected area and is not threatened.

Nivenia stenosiphon Goldblatt

Status: **Rare**
P. Goldblatt, J.C. Manning & D. Raimondo

[e]**Distribution:** WC. Klein Swartberg Mountains west of Ladismith and on the adjacent Touwsberg.
Habitat: South-facing slopes on open, level sites in rocky places, 1 000–1 500 m.
Rationale: Known from three subpopulations, one on the Touwsberg and two from the Klein Swartberg Mountains (EOO 385 km^2). Not threatened.

Nivenia stokoei (L.Guthrie) N.E.Br. Plate 20

Status: **Rare**
P. Goldblatt, J.C. Manning & D. Raimondo

[e]**Distribution:** WC. Kogelberg, Betty's Bay and Kleinmond to Highlands Forest Reserve.
Habitat: Open rocky sites in nutrient-poor, sandstone-derived soil.
Rationale: Kogelberg endemic (EOO < 140 km^2), known from fewer than 10 subpopulations, all occurring within the Kogelberg Biosphere Reserve. Not threatened.

Romulea Maratti

[F] **Romulea albiflora** J.C.Manning & Goldblatt

Status: **CR** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v); C2a(ii)
N.A. Helme & D. Raimondo

[e]**Distribution:** NC. Roggeveld Escarpment.
Habitat: Shale flats on edge of escarpment.
Rationale: EOO and AOO < 5 km^2. Known from three collections from one continuous subpopulation. Part of the subpopulation was lost to cereal cultivation and the rest occurs on the edge of a ploughed field. There are less than 250 extant mature individuals; decline due to crop cultivation is continuing.

Romulea albomarginata M.P.de Vos

Status: **VU** B1ab(ii,iii,iv,v)
D. Raimondo & N.A. Helme

[e]**Distribution:** WC. Kouebokkeveld and Hex River Mountains.
Habitat: Shale bands and loam soils associated with river systems.
Rationale: Known from five collections, four are from the Kouebokkeveld and are likely to be lost to deciduous fruit cultivation. A recent collection from the Hex River Valley indicates that it may also occur on shale bands in mountainous habitats. We assume that more subpopulations exist in the Hex River Mountains (estimate 5–10 locations). Decline of habitat due to agriculture is ongoing in the Kouebokkeveld.

Romulea amoena Schltr. ex Bég.

Status: **VU** B1ab(ii,iii,v)
N.A. Helme & D. Raimondo

[e]**Distribution:** NC. Bokkeveld Mountain Plateau.
Habitat: Stony, red, clay soils derived from Dwyka tillite and dolerite and on sandy soils derived from sandstone.
Rationale: EOO 180 km^2. Extant at six locations. It has lost habitat to wheat cultivation. Subpopulations occurring on sandstone-derived sands are declining because of rooibos tea cultivation.

Romulea aquatica G.J.Lewis

Status: **EN** B1ab(iii)+2ab(iii)

J.C. Manning & D. Raimondo

e**Distribution:** WC. Piketberg to Malmesbury.

Habitat: Seasonal pools on clay flats.

Rationale: EOO < 2 400 km², AOO < 2 km². Endemic to vernal pools. It has lost much habitat to wheat cultivation in the past. There are fewer than five locations (possibly only two), all of which are severely threatened by further expansion of wheat cultivation and by trampling by livestock.

Romulea barkerae M.P.de Vos **Plate 28**

Status: **EN** B1ab(i,ii,iii,iv,v)+2ab(ii,iii,iv,v)

J.C. Manning, K. Naidoo & N.A. Helme

e**Distribution:** WC. Paternoster to Saldanha Bay.

Habitat: Coastal limestone.

Rationale: EOO 54 km²,AOO < 5 km². Known from four locations. Declining as a result of coastal development and industrial expansion at Saldanha Steel.

Romulea cedarbergensis M.P.de Vos

Status: **Rare**

J.C. Manning & D. Raimondo

e**Distribution:** WC. Cederberg.

Habitat: Shallow, wet, sandy soil on sandstone pavements, 1 500 m.

Rationale: High-altitude species from the Cederberg (EOO < 170 km²), known from four subpopulations. Not threatened.

F **Romulea collina** J.C.Manning & Goldblatt

Status: **VU** D2

P. Goldblatt, J.C. Manning & K. Naidoo

e**Distribution:** NC. Hantamsberg Mountain.

Habitat: Seasonally moist, dolerite clays in open renosterveld.

Rationale: Known from one location. Potentially threatened by grazing and trampling by livestock and by road works.

F **Romulea discifera** J.C.Manning & Goldblatt

Status: **CR** B1ab(iii,v)+2ab(iii,v)

P. Goldblatt, J.C. Manning & D. Raimondo

e**Distribution:** NC. Nieuwoudtville.

Habitat: Renosterveld, sandy clay that may become waterlogged in particularly wet years.

Rationale: Known from one location (EOO and AOO < 10 km²). It has lost most of its habitat to wheat cultivation and road construction in the past. The single remaining subpopulation is on a tiny roadside fragment and is being continually degraded by livestock and invasive alien grasses; it is also declining because of low numbers of individuals.

F **Romulea eburnea** J.C.Manning & Goldblatt

Status: **VU** D2

P. Goldblatt, J.C. Manning & K. Naidoo

e**Distribution:** NC. Klein Roggeveld.

Habitat: Shale soils.

Rationale: Recently described, known from one location. It has lost habitat to road construction in the past and is potentially threatened by grazing by livestock.

Romulea elliptica M.P.de Vos **Plate 28**

Status: **CR** B1ab(ii,iii,v)+2ab(ii,iii,v); C2a(i,ii); D1

J.C. Manning & D. Raimondo

e**Distribution:** WC. Vredenburg to Saldanha Bay.

Habitat: White sandy flats.

Rationale: EOO < 10 km², AOO < 1 km². Known from one location and less than 50 plants. Declining because of crop cultivation and a potential threat of housing development.

Romulea eximia M.P.de Vos **Plate 28**

Status: **EN** B1ab(ii,iii,v)

D. Raimondo, N.A. Helme & J.C. Manning

e**Distribution:** WC. Vredenburg to Melkbos.

Habitat: Sandy and granitic flats.

Rationale: Once common between Mamre, Darling and Malmesbury (EOO < 650 km²) and frequently collected by early collectors. It has declined significantly and is now known from five subpopulations that are severely fragmented as a result of wheat cultivation and dense invasions of alien plants.

Romulea hallii M.P.de Vos

Status: **VU** D2

J.C. Manning, K. Naidoo & N.A. Helme

e**Distribution:** WC. Roggeveld Plateau southwest of Sutherland.

Habitat: Shale soils, 1 500 m.

Rationale: Known from the type locality (EOO < 20 km²). Potentially threatened by road works and agriculture.

Romulea hantamensis (Diels) Goldblatt **Plate 28**

Status: **Rare**

N.A. Helme & J.C. Manning

e**Distribution:** NC. Hantamsberg Mountain.

Habitat: Damp dolerite flats, 1 500 m.

Rationale: A range-restricted species (EOO 85 km²) that is not threatened.

Romulea jugicola M.P.de Vos

Status: **VU** B1ab(ii,iii,v)

N.A. Helme & D. Raimondo

e**Distribution:** WC. Kammanassie and Outeniqua Mountains to Potberg.

Habitat: Stony foothills on clay soils in renosterveld.

Rationale: EOO < 7 400 km². Known from fewer than 10 locations. Declining because of crop cultivation. Large areas of renosterveld in the Little Karoo have been ploughed since 1996.

Romulea komsbergensis M.P.de Vos **Plate 28**

Status: **NT** B1ab(ii,iii,iv,v)

J.C. Manning, D. Raimondo & N.A. Helme

e**Distribution:** NC. Komsberg Pass to Middelpos.

Habitat: Seasonally damp clay flats, 1 400 m.

Rationale: EOO 2 500 km². Known from seven locations. Much unexplored habitat exists between the known locations, and more subpopulations are likely to occur (at least 10 more are likely). Restricted to seasonally moist clays, a habitat that is undergoing ongoing loss as a result of crop cultivation.

F **Romulea lilacina** J.C.Manning & Goldblatt

Status: **VU** D2

N.A. Helme & D. Raimondo

e**Distribution:** WC. Kouebokkeveld.

Habitat: Deep, sandy soils along riverbanks.

Rationale: Known from the type locality from the banks of the Riet River, where it occurs on deep sands. Some 40% of this habitat within the immediate area of the type locality has been transformed by crop cultivation. This is a potential threat to the only known subpopulation.

[F] **Romulea maculata** J.C.Manning & Goldblatt

Plate 28

Status: **EN** D

N.A. Helme

[e]Distribution: WC. Knersvlakte and Komaggas.

Habitat: Stony quartzite slopes with underlying shales.

Rationale: Known from two subpopulations, one with less than 20 mature individuals. The other subpopulation was last recorded in the 1980s and the exact site and subpopulation size are unknown, but it probably consists of less than 100 plants.

Romulea malaniae M.P.de Vos

Status: **VU** D2

J.C. Manning, K. Naidoo & N.A. Helme

[e]Distribution: WC. Matroosberg to Koo.

Habitat: Sandy pockets at the foot of a stony ridge.

Rationale: Known from one location. Not currently declining, although a large portion of its habitat is under cultivation. Crop cultivation, grazing and trampling by livestock remain potential threats.

Romulea membranacea M.P.de Vos

Status: **VU** B1ab(ii,iii,iv,v)

D. Raimondo

[e]Distribution: NC WC. Gifberg, southern Bokkeveld and Roggeveld Escarpments.

Habitat: Sandy flats.

Rationale: EOO 4 650 km^2. Known from six locations, five of which are threatened by rapidly expanding rooibos tea cultivation.

Romulea monticola M.P.de Vos

Status: **VU** B1ab(ii,iii,v)

N.A. Helme & D. Raimondo

[e]Distribution: NC WC. Bokkeveld Mountains to Gifberg.

Habitat: Sandy loam in fynbos, 700–800 m.

Rationale: EOO 800 km^2. Known from eight locations. Experiencing an ongoing habitat loss to rapidly expanding rooibos tea cultivation.

Romulea multifida M.P.de Vos

Status: **VU** D2

J.C. Manning, K. Naidoo & N.A. Helme

[e]Distribution: NC. Roggeveld Plateau.

Habitat: Damp clay flats, 1 500 m.

Rationale: AOO $<$ 10 km^2. Known from three locations. Potentially threatened by crop cultivation.

Romulea multisulcata M.P.de Vos

Status: **VU** B1ab(iii)

D. Raimondo & N.A. Helme

[e]Distribution: EC WC. Bokkeveld Mountains, Gifberg flats and Namaqualand.

Habitat: Seasonal pools.

Rationale: EOO 7 500 km^2. Known from seven locations. The vernal pool habitat of this species is being degraded by crop cultivation and by grazing and trampling by livestock.

Romulea namaquensis M.P.de Vos

Plate 28

Status: **NT** B1ab(ii,iii,v)

D. Raimondo

[e]Distribution: NC. Steinkopf to Kamiesberg.

Habitat: Sandy or stony soil, in succulent karoo shrubland.

Rationale: EOO 620 km^2. Known from nine locations, of which five occur in areas where crop cultivation takes place. A continuing decline is therefore inferred. As there is still habitat available within the range of this species, it is likely that there are around 15 locations.

Romulea neglecta (Schult.) M.P.de Vos

Status: **VU** D2

P. Goldblatt, J.C. Manning & K. Naidoo

[e]Distribution: NC. Namaqualand, Kamiesberg.

Habitat: Moist granitic sands at ± 1 200 m.

Rationale: Known from one location. Potentially threatened by crop cultivation.

Romulea pearsonii M.P.de Vos

Status: **VU** D2

N.A. Helme & J.C. Manning

[e]Distribution: NC. Namaqualand, Kamiesberg.

Habitat: Sandy granitic slopes and flats.

Rationale: A range-restricted Kamiesberg endemic (EOO 420 km^2), known from five locations. Potentially threatened by crop cultivation.

[F] **Romulea rupestris** J.C.Manning & Goldblatt

Plate 28

Status: **EN** D

N.A. Helme & D. Raimondo

[e]Distribution: NC. Richtersveld and Kamiesberg.

Habitat: Sandy loams derived from granite, upper slopes.

Rationale: Known from three subpopulations, one with less than 15 plants. It is likely that other subpopulations are equally small. We estimate that there are less than 250 mature individuals.

[F] **Romulea sabulosa** Schltr. ex Bég.

Plate 28

Status: **VU** D2

D. Raimondo, S. Todd & E. Marinus

[e]Distribution: NC. Bokkeveld Escarpment.

Habitat: Tillite clays in renosterveld.

Rationale: AOO 15 km^2. Known from five locations. It has lost 80% of its habitat to wheat cultivation over the past 60 years, but is not currently declining. Potentially threatened by further crop cultivation and encroachment from invasive alien grasses.

Romulea saldanhensis M.P.de Vos

Status: **EN** B1ab(i,ii,iii,iv,v)

C. Boucher & D. Raimondo

[e]Distribution: WC. St Helena Bay to Darling.

Habitat: Seasonally wet granitic soils near the coast.

Rationale: EOO 793 km^2. Known from eight locations. Declining because of crop cultivation and coastal development.

Romulea sanguinalis M.P.de Vos

Status: **VU** D2

N.A. Helme

[e]Distribution: NC WC. Bokkeveld Mountains.

Habitat: On clay soils in mountain renosterveld.

Rationale: Known from one location at Menzieskraal south of Nieuwoudtville. Potentially threatened by crop cultivation.

[F] **Romulea singularis** J.C.Manning & Goldblatt **Plate 28**

Status: **VU** D1

N.A. Helme & D. Raimondo

[e]**Distribution:** NC. Bokkeveld Escarpment.

Habitat: Seasonally wet, shallow sands and moss, in semishade.

Rationale: An extremely narrow endemic, known from a single population that occurs in an area smaller than 1 ha. There are 300 mature individuals known.

Romulea sinispinosensis M.P.de Vos

Status: **EN** B1ab(iii,v)

J.C. Manning, P. Goldblatt & K. Naidoo

[e]**Distribution:** WC. Doringbaai and Velddrif.

Habitat: Deep sands on the coastal plain.

Rationale: EOO 760 km^2. Known from two locations. Threatened by diamond and heavy-metal mining. It is also threatened by proposed plans for the development of tourist facilities along the Doringbaai stretch of coast.

Romulea sladenii M.P.de Vos

Status: **VU** D2

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Gifberg plateau.

Habitat: Moist areas on rocky sandstone pavement.

Rationale: EOO < 200 km^2. Known from two locations. Potentially threatened by expansion of rooibos cultivation on the Gifberg.

[F] **Romulea stellata** M.P.de Vos

Status: **VU** D2

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Gifberg and Pakhuis Mountains.

Habitat: Shallow, seasonally wet sands on sandstone pavements.

Rationale: AOO < 10 km^2. Known from five locations. Potentially threatened by trampling by livestock and tourists, off-road vehicles and alteration of water flow patterns due to transformation of surrounding vegetation for rooibos cultivation.

Romulea subfistulosa M.P.de Vos

Status: **NT** B1ab(ii,iii)

N.A. Helme

[e]**Distribution:** NC. Calvinia to Roggeveld Escarpment at Sutherland.

Habitat: Dolerite flats.

Rationale: A Roggeveld endemic (EOO < 2 500 km^2) known from 11 locations. Threatened by ongoing but slow conversion of habitat for crop cultivation.

Romulea sulphurea Bég.

Status: **VU** D2

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Pakhuis Mountains.

Habitat: Sandstone pavement.

Rationale: Known from one location. Potentially threatened by road works or road expansion projects.

Romulea syringodeoflora M.P.de Vos

Status: **VU** D2

J.C. Manning, P. Goldblatt & D. Raimondo

[e]**Distribution:** NC. Roggeveld Plateau.

Habitat: Stony shale flats and slopes.

Rationale: A range-restricted species (EOO < 300 km^2), known from four locations. Potentially threatened by soil erosion and overgrazing and trampling by livestock.

Romulea tortilis Baker var. **tortilis**

Status: **DD**

J.C. Manning, P. Goldblatt & K. Naidoo

[e]**Distribution:** WC. Porterville.

Habitat: Sandstone slopes.

Rationale: A poorly known taxon, last collected in 1897.

Romulea toximontana M.P.de Vos

Status: **VU** B1ab(ii,iv,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** NC WC. Bokkeveld Mountains to Gifberg.

Habitat: Deep sands, usually on seasonally moist alluvial sediments.

Rationale: EOO 850 km^2. Known from six locations. A few more subpopulations are likely to occur in the mountains between the Gifberg and the Bokkeveld Escarpment. Experiencing rapid and ongoing loss of its habitat to rooibos tea cultivation. Two subpopulations were lost on the Bokkeveld to rooibos between 2001 and 2006.

Romulea unifolia M.P.de Vos

Status: **NT** B1ab(ii,iii)

J.C. Manning, P. Goldblatt & N.A. Helme

[e]**Distribution:** NC. Roggeveld.

Habitat: Dolerite flats.

Rationale: EOO < 2 500 km^2. Known from seven locations, but at least five more are likely as this is a poorly explored area with much intact habitat. We estimate that less than 15 locations exist. Subpopulations are declining in some areas as a result of trampling by livestock and habitat loss to wheat cultivation.

Romulea vinacea M.P.de Vos

Status: **Rare**

J.C. Manning & N.A. Helme

[e]**Distribution:** WC. Pakhuis Pass and Oorlogskloof.

Habitat: Sandy soils on upper plateaus.

Rationale: A range-restricted species (EOO < 500 km^2) with no known threats. At present only two disjunct subpopulations are known, but it is likely to occur in intervening mountainous areas.

Romulea viridibracteata M.P.de Vos

Status: **Rare**

D. Raimondo & J.C. Manning

[e]**Distribution:** WC. Bokkeveld Mountains to Pakhuis Pass.

Habitat: Shale band on sandstone slopes.

Rationale: All collections, except an old one from Nieuwoudtville, come from Pakhuis Pass (EOO < 500 km^2). Pakhuis Pass occurs within a conservation area, hence this species is not currently threatened. It lost 50% of its habitat to cultivation before the protected area was declared.

Romulea vlokii M.P.de Vos

Status: **VU** D1+2

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Kammanassie, Swartberg, Gamkaberg and Langeberg Mountains.

Habitat: Moist sandy soils.

Rationale: Known from five locations and a total of 650 mature individuals. It has lost subpopulations to crop cultivation in the past and remains potentially threatened by invading alien plants.

Sparaxis Ker Gawl.

[F] **Sparaxis auriculata** Goldblatt & J.C.Manning

Status: **EN** B1ab(i,ii,iii,iv,v)

D. Raimondo & N.A. Helme

[e] **Distribution:** WC. Gifberg.

Habitat: Transition soils between clay and sandstone.

Rationale: EOO < 100 km². Known from three locations and threatened by the expansion of rooibos tea and tomato cultivation.

Sparaxis caryophyllacea Goldblatt

Status: **CR** B1ab(iii)+2ab(iii); C2a(ii)

P. Goldblatt & D. Raimondo

[e] **Distribution:** WC. Nardous Mountain.

Habitat: Rocky slopes, western aspect.

Rationale: EOO and AOO < 10 km². A very localised species, known from one subpopulation with less than 200 mature individuals on the western slopes of the Nardous Mountain along the Olifants River Valley. Declining in habitat quality as a result of overgrazing and trampling by livestock and resulting soil erosion.

Sparaxis elegans (Sweet) Goldblatt **Plate 29**

Status: **VU** D2

D. Raimondo

[e] **Distribution:** NC. Bokkeveld plateau and Koebee Valley.

Habitat: Bokkeveld shale, on clay soils derived from Dwyka tillite and dolerite.

Rationale: AOO 16 km². Although it has lost 77% of its habitat over the past 70 years, most of this loss occurred in the 1950s, which is longer than three generations (generation length ± 10 years). Agricultural expansion remains a potential threat.

Sparaxis fragrans (Jacq.) Ker Gawl. **Plate 29**

Status: **VU** C2a(i)

D. Raimondo & I. Ebrahim

[e] **Distribution:** WC. Bot River to Napier.

Habitat: Clay flats and slopes, usually waterlogged in the winter months.

Rationale: Less than 20 subpopulations of this species are known. Many herbarium collections note that it is uncommon, and recent observations suggest there are often less than 20 plants in a subpopulation. Hence we estimate conservatively that the total population is less than 10 000 individuals and on average each population has less than 1 000 individuals. It has lost over 80% of its habitat to wheat cultivation. Experiencing continuous habitat degradation because of invasion by alien plants and grazing by livestock.

Sparaxis galeata Ker Gawl.

Status: **VU** B1ab(ii,iii,iv,v)

D. Raimondo & N.A. Helme

[e] **Distribution:** NC WC. Bokkeveld Mountains to lower Olifants River Mountains.

Habitat: Dry, stony clay flats and slopes and on seasonally moist sands.

Rationale: EOO 2 000 km². Known from fewer than 10 locations. Experiencing ongoing habitat loss because of ploughing for rooibos tea and tomato cultivation.

Sparaxis grandiflora (D.Delaroche) Ker Gawl. subsp. **grandiflora** **Plate 29**

Status: **EN** B1ab(ii,iii,v)

D. Raimondo & I. Ebrahim

[e] **Distribution:** WC. Tulbagh Valley.

Habitat: Clay flats and slopes.

Rationale: EOO < 1 000 km². Now known from eight severely fragmented subpopulations. This taxon has lost over 50% of its habitat to wheat and vineyard expansion over the past 100 years. Declining in occupancy, habitat quality and number of mature individuals as a result of expanding viticulture and invasion by alien plants.

Sparaxis maculosa Goldblatt **Plate 29**

Status: **CR** B1ab(iii)+2ab(iii)

P. Goldblatt, C. von Witt, D. Raimondo & J.E. Victor

[e] **Distribution:** WC. Villiersdorp.

Habitat: Wet clay flats.

Rationale: EOO < 33 km², AOO < 5 km². Known from two severely fragmented subpopulations where it is declining as a result of invasive annual grasses.

[F] **Sparaxis parviflora** (G.J.Lewis) Goldblatt

Status: **NT** B1ab(ii,iii,iv,v)

N.A. Helme, D. Raimondo & P.A. Manyama

[e] **Distribution:** WC. Saldanha to Darling.

Habitat: Occurs in sandy, granite-derived soils, often in rock outcrops.

Rationale: EOO 874 km². Extant at 15–20 locations. Over 80% of its habitat has been lost to wheat and vineyard expansion. Loss to viticulture and urban development around Langebaan and Darling is continuing.

Sparaxis pillansii L.Bolus **Plate 29**

Status: **Rare**

D. Raimondo & J.S. Donaldson

[e] **Distribution:** NC. Nieuwoudtville to Calvinia.

Habitat: Dolerite-derived clay that is waterlogged for most of the growing season, often in standing pools.

Rationale: EOO 1 375 km². Known from 15 sites. It has lost a small proportion (15%) of its habitat to wheat cultivation in the past, but dolerite clays are no longer cultivated and this species is not declining.

Sparaxis roxburghii (Baker) Goldblatt

Status: **CR** B1ab(iii,v)+2ab(iii,v); C2a(ii)

P. Goldblatt & D. Raimondo

[e] **Distribution:** WC. Citrusdal to Clanwilliam.

Habitat: Shale-derived, stony clay soils.

Rationale: EOO, AOO < 1 km². Known from one location where there are less than 250 mature individuals. It has lost habitat to crop cultivation and decline is ongoing as the only remaining population is in the middle of fruit orchards. Plants are not recruiting as their seeds are being eaten by antelope.

Sparaxis tricolor (Schneev.) Ker Gawl. **Plate 29**

Status: **VU** D2

P. Goldblatt & D. Raimondo

[e] **Distribution:** NC. Bokkeveld Plateau.

Habitat: Tillite-sandstone transition soils in seasonally moist sites.

Rationale: AOO < 5 km². Known from three locations. It has lost habitat to wheat cultivation in the past. Although not currently declining, it remains potentially threatened by crop cultivation.

Syringodea Hook.f.

Syringodea derustensis M.P.de Vos

Status: **VU** B1ab(ii,iii,iv,v)
J.H. Vlok & D. Raimondo
eDistribution: WC. Dysselsdorp to De Rust.
Habitat: Stony hills in succulent karoo vegetation.
Rationale: A range-restricted species (EOO 400 km^2) known from fewer than 10 locations. It has experienced past loss to urban expansion and crop cultivation around De Rust and to dam construction in Dysselsdorp. Decline is ongoing as a result of informal housing expansion around De Rust. This species is also potentially threatened by ostrich farming.

Syringodea flanaganii Baker

Status: **DD**D
J.E. Victor
eDistribution: EC. Gonubie Hill and Komga.
Habitat: Unknown.
Rationale: Poorly known; all collections made before 1933. Its distribution, habitat and population status are all unknown.

Syringodea pulchella Hook.f.

Status: **Rare**
J.E. Victor
eDistribution: EC. Sneeuberg Mountains.
Habitat: Karoo Escarpment Grassland.
Rationale: A range-restricted species (EOO < 200 km^2), known from one extended subpopulation. It has lost part of the subpopulation to road construction in the past. It is not currently declining.

Syringodea saxatilis M.P.de Vos

Status: **VU** B1ab(ii,iii,iv,v)
J.H. Vlok, R.C. Turner & D. Raimondo
eDistribution: WC. Ladismith.
Habitat: Low rocky hills on shale.
Rationale: EOO 300 km^2. Known from a collection on Ladismith commonage which is declining and currently has less than 50 plants, and from a second collection from the foothills of Anysberg in an area that is not threatened. It is likely that quite a few more subpopulations exist as this is a small, cryptic, autumn-flowering species. We suspect that there are 5–10 locations. Habitat is being lost to crop cultivation and urban and industrial development.

Thereianthus G.J.Lewis

[F] **Thereianthus longicollis** (Schltr.) G.J.Lewis

Status: **Rare**
N.A. Helme & D. Raimondo
eDistribution: WC. Winterhoek Mountains to Tulbagh Waterfall and possibly Wemmershoek.
Habitat: Rocky sandstone slopes.
Rationale: A range-restricted species (EOO < 450 km^2) known from five subpopulations. Occurs within protected areas and is not threatened.

Thereianthus montanus J.C.Manning & Goldblatt

Status: **Critically Rare**
N.A. Helme & D. Raimondo
eDistribution: WC. Riviersonderend Mountains.
Habitat: Steep, south-facing slopes at 1 500 m, in short, grassy fynbos.
Rationale: Known from one subpopulation within a reserve. Not threatened.

Thereianthus racemosus (Klatt) G.J.Lewis

Status: **Rare**
N.A. Helme & D. Raimondo
eDistribution: WC. Piketberg to Porterville Mountains.
Habitat: Rocky sandstone slopes.
Rationale: A range-restricted species (EOO < 258 km^2) known from two subpopulations. Not threatened because of the inaccessibility of its habitat.

Tritonia Ker Gawl.

Tritonia atrorubens (N.E.Br.) L.Bolus

Status: **DD**D
D. Raimondo
eDistribution: EC. Komga to Kei Mouth.
Habitat: Low-altitude grasslands.
Rationale: A poorly known species last collected in 1903. Old herbarium records indicate that it occurred in heavily populated areas of the former Transkei in the Eastern Cape. It is highly likely to be threatened by afforestation, overgrazing by livestock and associated soil erosion.

Tritonia delpierrei M.P.de Vos

Status: **VU** D2
P. Goldblatt, J.C. Manning, J.E. Victor & R.C. Turner
eDistribution: NC. Richtersveld.
Habitat: Loamy slopes with scattered quartzite.
Rationale: Known from fewer than five locations and potentially threatened by overgrazing by livestock.

[F] **Tritonia dubia** Eckl. ex Klatt

Status: **NT** B1ab(ii,iii,iv,v)
D. Raimondo
eDistribution: EC. Humansdorp to Port Elizabeth.
Habitat: Clay slopes in renosterveld.
Rationale: Known from 12 locations in a restricted area of 770 km^2 between Port Elizabeth, Uitenhage and Jeffreys Bay. It has lost > 50% of its habitat to urban expansion and crop cultivation over the past 150 years and these threats are ongoing. In addition, invasion by alien plants is causing ongoing degradation to remaining habitat.

Tritonia flabellifolia (D.Delaroche) G.J.Lewis var. **thomasiae** M.P.de Vos

Status: **CR** PE
P. Goldblatt, J.C. Manning, K. Naidoo & R.C. Turner
eDistribution: WC. Between Hawston and Bot River.
Habitat: Aeolian sands.
Rationale: Known from one site in the Bot River vicinity that has been transformed by invasive alien plants and crop cultivation, this taxon has not been collected since 1968 and is possibly extinct.

Tritonia florentiae (Marloth) Goldblatt **Plate 29**

Status: **Rare**
P. Goldblatt, J.C. Manning, K. Naidoo & R.C. Turner
eDistribution: NC WC. Roggeveld to Prince Albert and Beaufort West.
Habitat: In a variety of vegetation types on dry stony clay flats.
Rationale: Known from nine sites, this species occurs as small subpopulations and is always scarce where found.

Plate 29



C. Paterson-Jones

Sparaxis grandiflora subsp. *grandiflora* EN



C. Paterson-Jones

Tritonia florentiae Rare



C. Paterson-Jones

Tritonia pallida subsp. *taylorae* VU



C. von Witt

Sparaxis maculosa CR



C. Burgers

Sparaxis fragrans VU



C. Paterson-Jones

Sparaxis pillansii Rare



C. Paterson-Jones

Sparaxis elegans VU



C. Paterson-Jones

Sparaxis tricolor VU

Plate 30



C. Paterson-Jones

Dierama grandiflorum Rare



C. Paterson-Jones

Tritoniopsis bicolor VU



C. Paterson-Jones

Tritoniopsis toximontana Critically Rare



C. Paterson-Jones

Tritoniopsis elongata EN

Tritonia kamisbergensis Klatt

Status: **Rare**

J.E. Victor, K. Naidoo & R.C. Turner

e**Distribution:** NC. Namaqualand, Kamiesberg.

Habitat: Rock fissures in granite outcrops.

Rationale: A range-restricted species (EOO < 50 km^2), known from three sites but it flowers at an unusual time of year, so more subpopulations are likely to exist. Its habitat is not threatened.

F **Tritonia lancea** (Thunb.) N.E.Br.

Status: **EN** B1ab(iii)

R.C. Turner, P.A. Manyama & D.A. Kamundi†

e**Distribution:** WC. Piketberg.

Habitat: Sandstone slopes and plateaus.

Rationale: A Piketberg endemic (EOO < 75 km^2) known from two locations where it is threatened by fruit and protea orchards on the plateau and by invasive alien pines on the slopes.

F **Tritonia pallida** Ker Gawl. subsp. **taylorae** (L.Bolus) M.P.de Vos **Plate 29**

Status: **VU** B1ab(ii,iii,iv,v)

R.C. Turner & D. Raimondo

e**Distribution:** WC. Montagu to Ladismith and Caledon to Riversdale.

Habitat: Gentle hill slopes.

Rationale: EOO 6 300 km^2. Known from seven locations. It is potentially extinct at three locations as a result of ongoing expansion of orchards and vineyards. It is likely that a few more subpopulations exist, but we estimate that there are fewer than 10 locations.

Tritonia securigera (Aiton) Ker Gawl. subsp. **watermeyeri** (L.Bolus) J.C.Manning & Goldblatt

Status: **Rare**

P. Goldblatt, J.C. Manning, K. Naidoo & R.C. Turner

e**Distribution:** WC. Montagu to Barrydale to Anysberg.

Habitat: Stony clay flats and lower slopes in succulent karoo.

Rationale: EOO 2 070 km^2. Known from fewer than 10 sites. A naturally rare taxon that occurs as localised subpopulations with few individuals. A small proportion of habitat (less than 10%) has been lost to crop cultivation, but most of the habitat is not threatened.

F **Tritonia squalida** (Aiton) Ker Gawl.

Status: **NT** B1ab(ii,iii,v)

D. Raimondo

e**Distribution:** WC. Riversdale to Albertinia and Still Bay.

Habitat: Limestone outcrops and calcareous sands.

Rationale: EOO < 500 km^2. Known from less than 20 locations. Declining as a result of agricultural activities around Albertinia and dense encroachment from invasive alien acacias throughout its range. There is also a slow but continuing decline as a result of urban expansion around Albertinia and Still Bay.

Tritoniopsis L.Bolus

F **Tritoniopsis bicolor** J.C.Manning & Goldblatt **Plate 30**

Status: **VU** B1ab(ii,iii)

P. Goldblatt, J.C. Manning, D. Raimondo & R.C. Turner

e**Distribution:** WC. Bredasdorp Mountains.

Habitat: Mountain plateaus in seasonally waterlogged flats, growing in deep, humic clay.

Rationale: EOO 120 km^2. Known from fewer than 10 locations. Threatened by expanding vineyards and invasive alien plants.

F **Tritoniopsis caledonensis** (R.C.Foster) G.J.Lewis

Status: **VU** B1ab(iii)

D. Raimondo & R.C. Turner

e**Distribution:** WC. Houwhoek to Shaw's Mountain.

Habitat: Rocky sandstone slopes.

Rationale: EOO 1 051 km^2. Known from six locations. It has lost habitat to afforestation in the past and occurs mostly at low to medium altitudes in areas threatened by invasive alien plants.

Tritoniopsis elongata (L.Bolus) G.J.Lewis **Plate 30**

Status: **EN** B1ab(ii,iii,iv,v); C2a(i)

D. Raimondo, P. Goldblatt & J.C. Manning

e**Distribution:** WC. Elandsberg Mountains to Caledon.

Habitat: Sandy loam at low elevations.

Rationale: EOO 3 613 km^2. Known from 10 severely fragmented subpopulations. All subpopulations are small and most occur on tiny, isolated fragments. No subpopulation has more than 100 plants. Declining as a result of crop cultivation and urban expansion around Paarl and Wellington.

F **Tritoniopsis flava** J.C.Manning & Goldblatt

Status: **Critically Rare**

P. Goldblatt, J.C. Manning, L. von Staden & D. Raimondo

e**Distribution:** WC. Kogelberg.

Habitat: Seasonally damp soils along a stream.

Rationale: This enigmatic species is known from a single collection made during a survey of the flora of the Kogelberg Biosphere Reserve in 1999. The plants appeared along a small tributary of the Palmiet River following a fire and have not been recorded since. The vegetation across the Palmiet River burnt in the summer of 2000 but several visits to apparently similar streams opposite the original site failed to locate it.

Tritoniopsis flexuosa (L.f.) G.J.Lewis

Status: **EN** B1ab(ii,iii,iv,v)

P. Goldblatt, J.C. Manning, K. Naidoo & R.C. Turner

e**Distribution:** WC. Shaw's Mountain to Agulhas Plain.

Habitat: Hard, ferruginous, gravelly soil with clay in renosterveld.

Rationale: EOO 434 km^2. Known from three locations at the base of Shaw's and Bredasdorp Mountains. Declining as a result of crop cultivation and invasion by alien plants.

Tritoniopsis latifolia G.J.Lewis

Status: **Rare**

J.C. Manning, K. Naidoo & R.C. Turner

e**Distribution:** WC. Northern Cederberg Mountains.

Habitat: Rocky sandstone slopes.

Rationale: A range-restricted species (EOO 20 km^2) known from two subpopulations. Not threatened as it occurs within a protected area.

F **Tritoniopsis lesliei** L.Bolus

Status: **Rare**

D. Raimondo, R.C. Turner & P.A. Manyama

e**Distribution:** WC. Skurweberg.

Habitat: Marshy ground near streams on lower mountain slopes.

Rationale: Known from two sites on the lower slopes of the mountains northwest of Ceres (EOO 24 km^2). Not threatened as it occurs in a nonarable habitat.

F **Tritoniopsis toximontana** J.C.Manning & Goldblatt **Plate 30**

Status: **Critically Rare**
D. Raimondo

e**Distribution:** WC. Gifberg and Matsikamma Mountains.
Habitat: Sandstone mountain plateaus, tightly wedged among sandstone boulders in sheltered situations, often on cooler slopes.
Rationale: A range-restricted species (EOO 82 km^2) limited to a small proportion of one vegetation type (Bokkeveld Sandstone Fynbos). It is fairly common in suitable habitat and is not threatened as it occurs in a rocky, nonarable habitat.

F **Tritoniopsis williamsiana** Goldblatt

Status: **Critically Rare**
D. Raimondo & R.C. Turner

e**Distribution:** WC. Kleinrivier Mountains, near Hermanus.
Habitat: Seepage zones on peaty sandstone soil, 425 m.
Rationale: Known from the Vogelgat Nature Reserve (EOO < 2 km^2). It blooms only after fire. Not threatened.

Watsonia Mill.

F **Watsonia aletroides** (Burm.f.) Ker Gawl.

Status: **NT** A2cb
N.A. Helme & D. Raimondo

e**Distribution:** WC. Bot River to Knysna and Uniondale.
Habitat: Clay flats.
Rationale: A widely distributed species (EOO 21 600 km^2) occurring on clay soils throughout the Overberg, the Riversdale Plain, the Little Karoo and Upper Breede River Valley. It has lost habitat throughout its range to crop cultivation (> 70% over the past 80 years). At least 50% of the 112 known subpopulations has been lost to crop cultivation. It is still found on renosterveld fragments in the Overberg. We suspect that at least 25% of its habitat has been lost over the past 30 years, corresponding to three generations (generation length 10–15 years). There is a linear relationship between habitat availability and the number of subpopulations of this species.

F **Watsonia amabilis** Goldblatt

Status: **CR** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)
C. Dorse, D. Gibbs, R. Koopman & D. Raimondo

e**Distribution:** WC. Paarl to Sir Lowry's Pass.
Habitat: Granite-derived, gritty clay in renosterveld.
Rationale: Due to rampant urban and agricultural development, this species was suspected to be extinct. However, it was recently rediscovered on a farm near Stellenbosch. There is one other location in the Bottelary Hills where this species may be extant, even though it was last recorded here in 1973. EOO 20 km^2, AOO less than 2 km^2. Extant as severely fragmented subpopulations, this species continues to decline as a result of invasive alien plants and a deleterious fire regime.

F **Watsonia amatolae** Goldblatt

Status: **Rare**
F. Cholo & D. Raimondo

e**Distribution:** EC. Amathole Mountains.
Habitat: Wet, sometimes rocky sites and in montane grassland.
Rationale: A range-restricted species (EOO 417 km^2) from the Amathole Mountains of the Eastern Cape, extends from the Katberg and Gaika's Kop in the west to Hogsback and Dohne Mountains in the east. Known from five collections and not threatened.

Watsonia bachmannii L.Bolus **Plate 25**

Status: **VU** B1ab(iii,v)+2ab(iii,v)
D. Raimondo, C.R. Scott-Shaw & L. von Staden

e**Distribution:** EC KZN. Umtamvuna to Mkweni River.
Habitat: Pondoland coastal grassland, Msikaba Formation Sandstone, in seepages and vleis, but also in open grassland and among rocks, 50–500 m.
Rationale: EOO 400 km^2. Known from 5–10 locations. A rare species that occurs in very small subpopulations, often as single individuals. Continuing decline in habitat quality is mainly due to overgrazing and subsistence agriculture as well as afforestation and commercial crop cultivation altering water flow dynamics.

Watsonia borbonica (Pourr.) Goldblatt subsp. **ardernei** (Sander) Goldblatt

Status: **VU** B1ab(ii,iii,iv,v)
D. Raimondo & R.C. Turner

e**Distribution:** WC. Paarl to Rawsonville.
Habitat: Lower and mid-elevation rocky sandstone slopes.
Rationale: EOO 875 km^2. Known from six locations. The three mountain locations are relatively safe but are threatened by invading alien plants, while the three lowland locations are declining as a result of vineyard expansion in the Breede River Valley and invasive alien plants in the Stellenbosch region.

Watsonia canaliculata Goldblatt

Status: **EN** B1ab(iii)
C.R. Scott-Shaw & D. Raimondo

e**Distribution:** KZN. KwaZulu-Natal Midlands.
Habitat: Mistbelt Grassland.
Rationale: EOO 950 km^2. Known from fewer than five locations. It has lost over 80% of its habitat to commercial forestry plantations and is declining in habitat quality as a result of invasion by alien plants.

Watsonia distans L.Bolus

Status: **EN** D
P. Goldblatt, J.C. Manning, D. Raimondo & R.C. Turner

e**Distribution:** WC. Franschhoek to Villiersdorp.
Habitat: Mountain marshes.
Rationale: Historically known from nine locations, EOO 750 km^2. Eight of these have been lost over the past 150 years to crop cultivation, dam construction and afforestation. The remaining site, discovered in 1997, is on the top of the Stettynsberg where we estimate there are less than 250 mature individuals.

Watsonia dubia Eckl. ex Klatt

Status: **EN** D
I. Ebrahim & D. Raimondo

e**Distribution:** WC. Citrusdal to Wellington.
Habitat: Granite and clay on lowland slopes in renosterveld.
Rationale: This Northern Swartland endemic has lost over 80% of its habitat to crop cultivation over the past 120 years. There are only three remaining lowland locations where this species occurs and less than 250 mature individuals are extant.

F **Watsonia elsiae** Goldblatt

Status: **VU** D2
L. Potter, J.E. Victor & R.C. Turner

e**Distribution:** WC. Uniondale to Joubertina.
Habitat: Arid fynbos slopes.
Rationale: Three known locations are potentially threatened by invading alien plants.

Watsonia emiliae L.Bolus

Status: **Rare**

J.E. Victor, P. Goldblatt & K. Naidoo

e**Distribution:** WC. Swartberg and Langeberg Mountains.

Habitat: Rocky sandstone slopes at high altitudes.

Rationale: A range-restricted (EOO 400 km^2), relatively poorly known species that flowers only after fire. It is currently known from only two sites. Both fall within protected areas and this species is not suspected to be threatened.

Watsonia fergusoniae L.Bolus **Plate 25**

Status: **VU** B1ab(ii,iii,iv)

P. Goldblatt, J.C. Manning, K. Naidoo & R.C. Turner

e**Distribution:** WC. Agulhas Plain to Gourits River.

Habitat: Shallow pockets of sandy soil between limestone boulders.

Rationale: EOO 2 498 km^2. Known from fewer than 10 locations. Declining as a result of crop cultivation and invasion by alien plants.

Watsonia humilis Mill. **Plate 25**

Status: **CR** B1ab(iii,v); C2a(i,ii); D

P. Goldblatt, J.C. Manning & D. Raimondo

e**Distribution:** WC. Malmesbury to Gordon's Bay.

Habitat: Seasonally wet sandy flats and slopes.

Rationale: Only one subpopulation remains in an area of 9 ha. It has experienced severe declines as a result of crop cultivation and the urban expansion of Cape Town, Stellenbosch, Somerset West and Gordon's Bay. This last remaining location is being severely degraded by invasive alien grasses and acacias and too frequent fires. There are less than 50 extant mature individuals.

Watsonia hysterantha J.W.Mathews & L.Bolus **Plate 25**

Status: **NT** D2

P. Goldblatt, J.C. Manning & D. Raimondo

e**Distribution:** WC. Saldanha to Langebaan.

Habitat: Coastal granite outcrops.

Rationale: This species is known from eight locations and is potentially threatened by urban and industrial development.

Watsonia inclinata Goldblatt

Status: **VU** D2

D. Raimondo

e**Distribution:** EC KZN. Umtamvuna River to Mkweni River. Old herbarium records may indicate occurrence near Kokstad.

Habitat: Low, open and often stony grassland on Msikaba Formation Sandstone.

Rationale: Known from fewer than five locations and potentially threatened by crop cultivation and overgrazing by livestock at locations outside reserves.

F **Watsonia minima** Goldblatt

Status: **VU** D2

N.A. Helme

e**Distribution:** WC. Riviersonderend Mountains.

Habitat: Marshy montane fynbos slopes.

Rationale: Known from one location. Potentially threatened by encroachment from invasive alien pines.

Watsonia mtamvunae Goldblatt **Plate 25**

Status: **VU** D2

D. Raimondo & L. von Staden

e**Distribution:** EC KZN. Umtamvuna Nature Reserve.

Habitat: Pondoland coastal grassland, Msikaba Formation Sandstone, near, but not in seepage sites.

Rationale: EOO 190 km^2. Known from 3–6 subpopulations. A rare species that occurs as single or scattered individuals within a specialised habitat. AOO estimated < 20 km^2. Known from within the Umtamvuna Nature Reserve, but quite likely occurred at least within the immediate surrounding areas in the past, now extensively transformed by agriculture and timber plantations. The former range and timing of declines are unknown and this species cannot be listed using Criterion A. Although the population is protected from further habitat destruction, a potential threat stems from excessive extraction of water by gum plantations outside the reserve boundaries affecting its moist seepage habitats.

Watsonia pondoensis Goldblatt

Status: **EN** B1ab(iii)

C.R. Scott-Shaw, J.E. Victor & L. von Staden

e**Distribution:** EC KZN. Umtamvuna Nature Reserve and Port Grosvenor.

Habitat: Pondoland coastal grassland, Msikaba Formation Sandstone, in standing water of permanent vleis.

Rationale: EOO 129 km^2. Known from two subpopulations. One subpopulation is protected in the Umtamvuna Nature Reserve, the other from a herbarium collection made in 1956. Although the Pondoland region south of the Umtamvuna River is quite poorly explored, this species has not been recorded at some well-collected sites such as Mkambati Nature Reserve and around Port St Johns, and it is therefore considered extremely rare and appears to be restricted to a rare, specialised habitat. Although there may be other unknown subpopulations, it is estimated that there are no more than five. There is ongoing decline in the quality of habitat outside protected areas as a result of overgrazing by livestock, too frequent fires and crop cultivation.

Watsonia rogersii L.Bolus **Plate 25**

Status: **NT** B1ab(ii,iii)

D. Raimondo & R.C. Turner

e**Distribution:** WC. Hottentots Holland and Kogelberg, eastwards to Hermanus, and the Riviersonderend Mountains near Villiersdorp.

Habitat: Lower slopes or flats at the foot of mountains in rocky sand or clay.

Rationale: EOO 4 700 km^2. Known from 10 locations but suspected to occur at a few more. Four of the 10 known locations are within reserves, but subpopulations outside the reserves are still declining as a result of invasion by alien plants and urban and agricultural development. This species occurs only on shale bands, a habitat that is particularly threatened by aliens and agriculture.

Watsonia rourkei Goldblatt

Status: **Critically Rare**

P. Goldblatt, J.C. Manning, L. von Staden & R.C. Turner

e**Distribution:** NC. Namaqualand, Kamiesberg.

Habitat: Seasonal watercourses in montane renosterveld, 600 m.

Rationale: Known from one subpopulation that has no current threats.

Watsonia strictiflora Ker Gawl.

Status: **CR** B1ab(iii)+2ab(iii)

D. Raimondo & R.C. Turner

[e]**Distribution:** WC. Klapmuts to Joostenberg and Paarl.

Habitat: Clay flats.

Rationale: EOO 20 km^2, AOO < 2 km^2. Known from two severely fragmented subpopulations. It has lost 98% of its habitat to vineyard and wheat cultivation and urban expansion over the past 200 years. Declining in habitat quality owing to invasion by alien plants and potentially threatened by urban expansion.

Watsonia versfeldii J.W.Mathews & L.Bolus

Status: **NT** B1ab(ii,iii)

P. Goldblatt, J.C. Manning, K. Naidoo & R.C. Turner

[e]**Distribution:** WC. Piketberg and Porterville Mountains.

Habitat: Open, stony slopes and plateaus.

Rationale: EOO 1 350 km^2. Known from less than 15 locations. Some Piketberg subpopulations are experiencing ongoing habitat loss to protea and fruit cultivation.

Witsenia Thunb.

Witsenia maura Thunb.

Status: **Declining**

J.C. Manning, D. Raimondo & K. Naidoo

[e]**Distribution:** WC. Southern Cape Peninsula through the Hottentots Holland and Kogelberg to the eastern end of the Riviersonderend Mountains.

Habitat: Marshy fynbos, occurring mostly at low elevations.

Rationale: EOO 3 500 km^2 known from more than 35 sites. Decline due to coastal development, incorrect fire regime and invasive alien plants is ongoing.

Xenoscapa (Goldblatt) Goldblatt & J.C.Manning

Xenoscapa uliginosa Goldblatt & J.C.Manning

Status: **Critically Rare**

P. Goldblatt & L. von Staden

[e]**Distribution:** NC. Namaqualand, Kamiesberg.

Habitat: Wet crevices of huge granite boulders, wedged between damp, shady overhangs.

Rationale: Known from one subpopulation. Occurs in a very specific habitat that is nonarable and inaccessible to livestock and therefore not threatened.

JUNCACEAE

Juncus L.

Juncus obliquus Adamson

Status: **DD**D

J.E. Victor

[e]**Distribution:** WC. Kouebokkeveld Mountains.

Habitat: Streamsides.

Rationale: A poorly known species recorded from one site in 1940. Not enough is known about the range and population size of this species to determine its conservation status.

LEMNACEAE

Wolffiella (Hegelm.) Hegelm.

[F]**Wolffiella denticulata** (Hegelm.) Hegelm.

Status: **VU** D2

C.R. Scott-Shaw & L. von Staden

Distribution: KZN. Northern KwaZulu-Natal between Mtunzini and Kosi Bay and in Mozambique.

Habitat: Floating in coastal freshwater marshes, lakes or slow-moving streams.

Rationale: Known from four locations. Potentially threatened by habitat degradation caused by extraction of water, pollution and urban development.

ORCHIDACEAE

Acrolophia (Lindl.) Pfitzer

Acrolophia barbata (Thunb.) H.P.Linder

Status: **EN** B1ab(ii,iii,v); D

J.H. Vlok & D. Raimondo

[e]**Distribution:** EC WC. Swellendam to Kouga Mountains.

Habitat: Mesic fynbos from sea level to 750 m.

Rationale: EOO 4 260 km^2. Extant at fewer than five locations. Declining because of invasive alien plant encroachment. Subpopulations are typically small and the total population is suspected to consist of less than 250 mature individuals.

Acrolophia bolusii Rolfe

Status: **VU** B1ab(ii,iii,v)

H. Kurzweil & D. Raimondo

[e]**Distribution:** WC. Hopefield to Bredasdorp.

Habitat: Coastal sandy flats, usually below 50 m.

Rationale: EOO < 18 200 km^2. Fewer than 10 known locations continue to decline owing to invasion by alien plants.

Acrolophia ustulata (Bolus) Schltr. & Bolus **Plate 31**

Status: **VU** D1+2

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Cape Peninsula to Robinson Pass.

Habitat: Arid fynbos on rocky acidic sandstone-derived soil.

Rationale: This species appears to be highly sensitive to fire intensity and has been lost from a number of known sites owing to incorrect fire intensity. It is known from five locations, which all have small subpopulations. The total population is estimated to be 1 000 mature individuals. Although not currently declining, it remains potentially threatened by a deleterious fire regime and harvesting for horticultural purposes.

Angraecum Bory

Angraecum stella-africae P.J.Cribb **Plate 34**

Status: **Rare**

H. Kurzweil & J.E. Victor

Distribution: LM. Rare in South Africa, where it is known from the Wolkberg Mountains. Also occurs in Malawi and Zimbabwe.

Habitat: Woodland, rarely riverine forest 1 250–1 500 m.

Rationale: This species is extremely rare throughout its known range in southern Africa. In South Africa the known sites are inaccessible in a protected wilderness area and not threatened.

Ansellia Lindl.

Ansellia africana Lindl.

Status: **Declining**

V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter, A.M. Ngwenya, J.E. Victor, D. McMurtry, L. Grobler & S. Burns

Distribution: KZN LM MP. Widespread in tropical Africa, in South Africa confined to northern KwaZulu-Natal and Mpumalanga and Limpopo lowveld.

Habitat: In hot, dry, mixed deciduous woodlands at medium to low altitudes, in riverine vegetation and miombo woodlands near rivers, on species of *Hyphaene*, *Adansonia*, *Colophospermum, Ficus, Brachystegia, Parinari, Terminalia, Uapaca* and *Albizia*, sometimes also on rocks in shade, rarely in forest, 0–2 200 m.

Rationale: Local extirpations have been observed in some subpopulations and it has a constant presence in the markets. An overall continuing decline is suspected.

Bonatea Willd.

Bonatea lamprophylla J.L.Stewart

Status: **VU** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

J.E. Victor, C.R. Scott-Shaw, B. Church, D. McMurtry, L. Grobler & S. Burns

[e]**Distribution:** KZN. Northern KwaZulu-Natal, from Richards Bay northwards. Also occurs in southern Mozambique.

Habitat: Deeply shaded areas in coastal dune forest.

Rationale: This species has a restricted range in South Africa. EOO 3 142 km^2. There are seven known locations. There is ongoing decline in the number of individuals as a result of harvesting for horticultural purposes and in subpopulations because of habitat loss for industrial development.

Brachycorythis Lindl.

[F] **Brachycorythis conica** (Summerh.) Summerh. subsp. **transvaalensis** Summerh.

Status: **VU** B2ab(ii,iii,iv,v)

L. von Staden & M.F. Pfab

[e]**Distribution:** G LM MP NW. Highveld grasslands.

Habitat: Short grasslands, hillsides, on sandy gravel overlying dolomite, sometimes also on quartzite. Has also occasionally been collected in open woodland, 1 000–1 705 m.

Rationale: An extremely rare taxon known from nine locations, eight of which are known through historical records and their present existence is uncertain. The AOO has been estimated to be less than 2 000 km^2, and there have been known past declines in Gauteng as a result of urban development. The threat of development has not ceased and there is a continuing decline in the habitat of this taxon.

Ceratandra Eckl. ex F.A.Bauer

Ceratandra venosa (Lindl.) Schltr.

Status: **NT** D2

H. Kurzweil, W.R. Liltved & J.E. Victor

[e]**Distribution:** WC. Tulbagh to Kleinmond.

Habitat: A mixture of peaty organic material and inclusions of milky-quartzite rocks on relatively dry slopes, sea level to 1 000 m.

Rationale: Known from six locations. Potentially threatened by crop cultivation, invasive alien plants and loss of specialist pollinators.

Corycium Sw.

Corycium bifidum Sond. **Plate 31**

Status: **CR** C2a(i); D

L. von Staden, A. Pauw, W.R. Liltved, E.G.H. Oliver & T.A. Oliver

[e]**Distribution:** WC. Kogelberg to Pearly Beach.

Habitat: South-facing slopes and ridge summits in fynbos, and well-drained Table Mountain Sandstone-derived sand near limestone outcrops.

Rationale: Like most lowland Cape species, it has declined owing to habitat destruction in the past. It is hard to quantify the extent of the decline as this species is extremely rare and flowers only sporadically after fire. There are currently only two known subpopulations, one with 10 mature individuals, the other with around 30. Declining as a result of alien plant infestation at one of the sites.

Corycium ingeanum E.G.H.Oliv. **Plate 31**

Status: **EN** C2a(i,ii)

D. Raimondo, S. Todd, E. Marinus & A. Pauw

[e]**Distribution:** NC. Bokkeveld Escarpment.

Habitat: Seasonally moist to wet, clay loam soils of Dwyka tillite.

Rationale: Endemic to the Bokkeveld Escarpment (EOO 189 km^2); 85% of its habitat has been ploughed for wheat cultivation. It typically occurs as small stands of individuals that have two or three plants on average. However, one subpopulation is large, consisting of 100–200 individuals. There are only 10 known subpopulations and the total population is suspected to consist of less than 300 mature individuals. Decline is ongoing owing to invasive alien grass encroachment and loss of pollinators caused by habitat fragmentation.

Corycium microglossum Lindl. **Plate 31**

Status: **CR** A3c; B1ab(iv,v)+2ab(iv,v); C2a(i,ii); D

L. von Staden, W.R. Liltved, E.G.H. Oliver & T.A. Oliver

[e]**Distribution:** WC. Malmesbury.

Habitat: Sandy soils, on the edge of seasonally wet pans or watercourses on low mountains and flats below 600 m.

Rationale: This species used to occur on the Cape Flats and in Tulbagh, it is now extinct in these areas because of urban expansion and crop cultivation. A single remaining subpopulation of 37 individuals is surviving near Malmesbury solely by vegetative reproduction as its pollinator has disappeared from the habitat fragment of ± 10 km^2 where the population remains. This species is expected to decline to extinction within less than three generations as a result of lack of recruitment (45 years).

Corycium tricuspidatum Bolus

Status: **DD**

L. von Staden & J.E. Victor

Distribution: EC KZN. Montane grasslands of the Eastern Cape, Lesotho and KwaZulu-Natal.

Habitat: Montane grassland, 1 400–1 600 m.

Rationale: Known from two collections, not collected for over 30 years. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Cynorkis Thouars

Cynorkis compacta (Rchb.f.) Rolfe

Status: **VU** B1ab(ii,iii,v)

J.E. Victor & C.R. Scott-Shaw

[e]**Distribution:** KZN. Karkloof to the sandstone plateau between Pietermaritzburg and Durban.

Habitat: Ngongoni and mistbelt grassland. Rocky crevices, cliffs and outcrops, 700–1 500 m.

Rationale: EOO 10 643 km^2. Known from fewer than 10 locations. Declining as a result of urban development, alien plant encroachment, and a deleterious fire regime due to habitat fragmentation caused by afforestation.

Diaphananthe Schltr.

Diaphananthe millarii (Bolus) H.P.Linder

Status: **VU** B1ab(iii,v)

V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter, A.M. Ngwenya, P.J.H. Hurter & J.E. Victor

e**Distribution:** EC KZN. East London and Durban.

Habitat: Scarp forest. It is a low-level epiphyte in kloof forests and dry scrub, usually in light shade on the underside of branches, 300–700 m.

Rationale: EOO 7 900 km^2. Fewer than 10 known locations continue to decline as a result of urban development, invasion by alien plants and opportunistic harvesting for the muthi trade.

Didymoplexis Griff.

Didymoplexis verrucosa J.Stewart & Hennessy

Status: **VU** D2

J.E. Victor, D. McMurtry, L. Grobler & S. Burns

e**Distribution:** KZN. Mtunzini.

Habitat: Coastal dune forest, grows in leaf litter on forest floor.

Rationale: Known from one location. Potentially threatened by mining.

Disa P.J.Bergius

Disa alticola H.P.Linder **Plate 33**

Status: **VU** D2

J.E. Victor, D. McMurtry, L. Grobler, S. Burns & B. Bytebier

e**Distribution:** MP. Steenkampsberg and Long Tom Pass.

Habitat: In seepages and wet hollows among dolerite boulders and bedrock, in short and heavily grazed grassland, 2 000 m.

Rationale: Known from five locations in high mountains around Sabie and Lydenburg. Potentially threatened by overgrazing and trampling.

Disa amoena H.P.Linder **Plate 33**

Status: **VU** D2

D. McMurtry, L. Grobler, S. Burns & L. von Staden

e**Distribution:** MP. Lydenburg, between Mauchsberg and Mount Anderson.

Habitat: Well-drained gravelly soil, gentle to moderate slopes, in fairly short grassland, and on mountain plateaus.

Rationale: Known from a very small area (EOO 34.3 km^2, AOO $<$ 20 km^2) where it is quite abundant. Potentially threatened by afforestation, infrastructure development and invasion by alien plants.

Disa arida Vlok

Status: **EN** B1ab(ii,iii,v)

L. von Staden, D. Raimondo, W.R. Liltved & S.D. Johnson

e**Distribution:** WC. Outeniqua, Rooiberg and Gamka Mountains.

Habitat: Soil pockets or crevices in rocky outcrops of Table Mountain Sandstone on steep south-facing slopes, in arid fynbos.

Rationale: EOO 1 295 km^2. Known from four locations, one of which has been lost as a result of severe infestations of alien species of *Hakea*. The remaining three locations are declining because of a deleterious fire regime and spreading dense stands of hakeas.

F **Disa aristata** H.P.Linder **Plate 33**

Status: **VU** D2

D. McMurtry, L. Grobler, J. Grobler, S. Burns & L. von Staden

e**Distribution:** LM. Wolkberg Mountain and The Downs.

Habitat: Rock crevices on cliffs in mistbelt grassland, 1 500 m.

Rationale: EOO 25 km^2, AOO 1 km^2. Occurs on cliffs amidst extensive pine plantations. Although the habitat is unsuitable for the establishment of pine plantations and this species is therefore unlikely to have lost much habitat, cliffs are prone to invasion by escaping pine seedlings from surrounding plantations which may potentially threaten the two or three known existing locations.

F **Disa atrorubens** Schltr.

Status: **VU** B1ab(iii)

L. von Staden, B. Bytebier, W.R. Liltved, E.G.H. Oliver & T.A. Oliver

e**Distribution:** WC. Cape Peninsula and Cape Hangklip to Nieuwoudtville.

Habitat: Seasonally wet areas on sandy flats, sea level to 1 000 m.

Rationale: EOO 19 970 km^2. Known from between six and ten locations. There is a continuing decline as a result of crop cultivation, urban expansion and encroachment by invasive alien plants.

F **Disa aurata** (Bolus) L.Parker & Koop.

Status: **Rare**

B. Bytebier & J.E. Victor

e**Distribution:** WC. Langeberg Mountains.

Habitat: Restricted to southern slopes and perennial watercourses along plateaus, 500–1 000 m.

Rationale: A Langeberg endemic (EOO $<$ 500 km^2) restricted to a specific habitat, perennial streams, this species has no significant threats.

Disa barbata (L.f.) Sw. **Plate 32**

Status: **CR** C2a(ii)

L. von Staden, B. Bytebier, W.R. Liltved, E.G.H. Oliver & T.A. Oliver

e**Distribution:** WC. Malmesbury.

Habitat: Marshy areas on acid sand flats below 200 m.

Rationale: This species used to occur on the Cape Flats and on the Peninsula around Cape Town but has been lost as a result of urban development. It is now reduced to a single surviving subpopulation in the Malmesbury area. Annual monitoring between 2001 and 2006 indicated that there are ± 15 extant mature individuals of this species. Continuing decline is occurring because of invasion by alien acacias and loss of pollinators as a result of incorrect fire management.

Disa begleyi L.Bolus

Status: **Rare**

H. Kurzweil, B. Bytebier, W.R. Liltved & J.E. Victor

e**Distribution:** WC. Jonkershoek and Elgin.

Habitat: Bare stony slopes at 1 200 m. Substrate consists of varying mixture of sand and peaty material.

Rationale: A range-restricted species (EOO $<$ 500 km^2), known from three subpopulations, this species has no recorded threats.

Disa bodkinii Bolus

Status: **Rare**

H. Kurzweil, B. Bytebier & J.E. Victor

e**Distribution:** WC. Cape Peninsula to Riversdale.

Habitat: Rocky south-facing slopes and mountain summits on well-drained peaty sandstone soils.

Rationale: This montane species has been recorded only eight times. Its apparent scarcity may be due to its flowering only after fire. All herbarium records refer to subpopulations being small, consisting of a handful of plants. This indicates that the species is naturally scarce and has a low density of individuals.

Disa brachyceras Lindl. **Plate 33**

Status: **EN** B1ab(i,iii,iv)

L. von Staden

e**Distribution:** WC. Hex River to Riviersonderend Mountains.

Habitat: Fynbos and renosterveld, on mountain foothills, gravelly plains and alluvial flats, sandy and clay soils.

Rationale: EOO < 1 000 km^2. This lowland species has lost six of the nine recorded locations to urban and agricultural development. It is known from three small locations in remnant vegetation. As this species is dependent on fire for flowering, it is declining because of lack of fire on remnants and habitat loss due to further crop cultivation.

Disa cardinalis H.P.Linder

Status: **Rare**

H. Kurzweil & J.E. Victor

e**Distribution:** WC. Langeberg between Barrydale and Gourits River Gorge.

Habitat: Banks of perennial streams, north-facing mountain slopes, up to 600 m.

Rationale: A Langeberg endemic restricted to a specific habitat, perennial streams. No known threats.

Disa cedarbergensis H.P.Linder

Status: **Critically Rare**

L. von Staden & D. Raimondo

e**Distribution:** WC. Cederberg.

Habitat: Black peaty soil, on the banks of a small stream, 2 000 m.

Rationale: A single plant was collected in 1987 on Sneeukop in the Cederberg, two years after a fire. It is thought that the species probably flowers only after fire and that more populations could be found once the habitat is burnt again; it has not been recorded again but is probably a naturally very rare species.

Disa cephalotes Rchb.f. subsp. **frigida** (Schltr.) H.P.Linder

Status: **Rare**

J.E. Victor

Distribution: KZN. Sehlabathebe to Mont-aux-Sources.

Habitat: Coarse basalt sand, in boggy soils, either in alpine grassland or high-altitude ericoid vegetation above 2 500 m.

Rationale: A high-altitude habitat specialist known from six subpopulations. No recorded threats.

F **Disa cernua** (Thunb.) Sw.

Status: **VU** B2ab(ii,iii,iv,v)

L. von Staden, W.R. Liltved & H. Kurzweil

e**Distribution:** EC WC. Cape Peninsula to Humansdorp.

Habitat: Sodden marsh environments on peaty soil derived from a combination of blackened organic material and soils derived from Table Mountain Sandstone, below 300 m.

Rationale: This lowland species is specific to a very limited habitat and has an AOO of < 2 000 km^2. Known from nine locations, it is experiencing severe ongoing habitat loss due to coastal development, crop cultivation, invasion by alien plants and lack of fire as a result of habitat fragmentation. This species is dependent on fire for flowering.

Disa clavicornis H.P.Linder

Status: **EN** D

L. Grobler, D. McMurtry, S. Burns, J. Grobler & L. von Staden

e**Distribution:** MP. Mount Anderson.

Habitat: Grasslands above 2 000 m, in well-drained soils between rocks and in marshy areas.

Rationale: Occurs as very small, scattered individuals within a limited area centred around Mount Anderson (EOO < 100 km^2). Less than 250 mature individuals exist. It is potentially threatened by invasive alien plants and mining.

Disa cochlearis S.D.Johnson & Liltved

Status: **Critically Rare**

L. von Staden, W.R. Liltved & J.E. Victor

e**Distribution:** WC. Elandsberg Mountain.

Habitat: South-facing slope, at interface between shale and quartzite. Soil sandy, rocky, in arid fynbos dominated by grasses, restios and ericoid shrubs.

Rationale: Discovered in 1997. Occurs in remote mountain range in the Little Karoo, only one site known. It has no recorded threats.

Disa draconis (L.f.) Sw.

Status: **EN** A3ce; B1ab(i,iii,iv,v)+2ab(ii,iii,iv,v)

L. von Staden, B. Bytebier & S.D. Johnson

e**Distribution:** WC. Yzerfontein to Cape Peninsula.

Habitat: Well-drained, deep sandy soils up to 150 m in strandveld coastal scrub.

Rationale: EOO < 1 000 km^2, AOO < 100 km^2. A lowland West Coast species, known from five subpopulations. More than 80% of its habitat has been transformed over the past 100 years as a result of urban and agricultural development. Only two subpopulations are in reserves. The largest subpopulation, which constitutes over 50% of the individuals in the total population, is highly likely to be lost to urban development in the near future (eight years, three generations). Loss to coastal development and invading alien plants is ongoing.

Disa ecalcarata (G.J.Lewis) H.P.Linder

Status: **DD**D

L. von Staden

e**Distribution:** WC. Cape Peninsula.

Habitat: Damp, rocky, north-facing slope, 450–600 m.

Rationale: Known from one plant collected in 1947 and never recorded again. It is not known whether this is a good species, an incidental aberrant form or a hybrid.

F **Disa esterhuyseniae** Schelpe ex H.P.Linder

Status: **Rare**

L. von Staden, B. Bytebier, W.R. Liltved, E.G.H. Oliver & T.A. Oliver

e**Distribution:** WC. Franschhoek to the Cederberg.

Habitat: Damp, stony or gravelly slopes, 1 000–1 200 m.

Rationale: A poorly known species because of its cryptic, grass-like appearance and remoteness of the habitat. Known from seven subpopulations, this montane species has no recorded threats.

Disa extinctoria Rchb.f. Plate 33

Status: **NT** B1ab(iii,iv,v)

J.E. Victor, D. McMurtry, L. Grobler & S. Burns

Distribution: LM MP. Swaziland to Tzaneen.

Habitat: Crest of the escarpment in damp grassland and swamps, 1 000–1 300 m.

Rationale: EOO < 16 000 km^2. Suspected to occur at 10–15 locations. It has been collected numerous times but is rarely seen today, an indication that the population has declined. Loss has been the result of afforestation, urban expansion and invasion by alien plants; decline is ongoing.

Disa forcipata Schltr.

Status: **EX**

W.R. Liltved, S.D. Johnson, B. Bytebier & J.E. Victor

[e]**Distribution:** WC. Knysna.

Habitat: Unknown.

Rationale: Known from a single specimen collected in 1870. The site of the collection was not given, but it is believed to have come from the Knysna area. Despite the area being intensively explored since then, the species has never been recorded again and is considered extinct.

Disa forficaria Bolus

Status: **DD**D

L. von Staden, B. Bytebier, W.R. Liltved, E.G.H. Oliver & T.A. Oliver

[e]**Distribution:** WC. Cape Peninsula, and Du Toit's Kloof, Hottentots Holland, Houwhoek and Groenland Mountains.

Habitat: Possibly damp, sandy areas on mountain slopes, 100–1 000 m.

Rationale: Known from five herbarium records, all collected before 1966. Concerted efforts to find this species at known and potential sites have failed to relocate it, and it may be exceedingly rare. Not enough is known about the current population status of this species to determine its status.

Disa galpinii Rolfe

Status: **Rare**

D. Raimondo

[e]**Distribution:** EC KZN. Between Ramatsiliso Gate and Naude's Nek Pass.

Habitat: High-altitude grasslands near streams, 2 000 m.

Rationale: A habitat specialist known from two subpopulations from the southern Drakensberg. The area in which the species occurs has not been thoroughly explored, and it is quite possible that it may be more common than the few herbarium records suggest. Not threatened.

Disa hallackii Rolfe Plate 32

Status: **EN** C2a(i)

L. von Staden

[e]**Distribution:** EC WC. Port Elizabeth to Cape Peninsula.

Habitat: Lowland fynbos on sandy flats, stabilised dunes and coastal rock promontories.

Rationale: A lowland species that has lost most historical sites to urban expansion and crop cultivation. Known from five subpopulations, the total population is estimated to number less than 500 individual as no subpopulation has more than 100 individuals. Declines in the remnant fragments where it persists, is ongoing because of invasion by alien plants and clearing of road verges.

Disa introrsa Kurzweil, Liltved & H.P.Linder

Status: **Rare**

L. von Staden, W.R. Liltved, E.G.H. Oliver & T.A. Oliver

[e]**Distribution:** WC. Skurweberge.

Habitat: Mountain slopes, near running water, 1 000–1 190 m.

Rationale: Recently described, rarely seen and dependent on fire for flowering, known from two subpopulations. It is very small and seems to occur only in very small subpopulations and so can easily be overlooked. More populations may exist, and the full extent of its distribution and total population size are unknown. Not threatened.

[F] **Disa karooica** S.D.Johnson & H.P.Linder

Status: **VU** D2

L. von Staden, B. Bytebier, W.R. Liltved, E.G.H. Oliver & T.A. Oliver

[e]**Distribution:** NC. Roggeveld Plateau to Kamiesberg.

Habitat: Granite and shale substrates in arid areas, up to 1 200 m.

Rationale: Known from five locations. Potentially threatened by overgrazing.

[F] **Disa lineata** Bolus

Status: **Rare**

J.E. Victor

[e]**Distribution:** WC. Cederberg to Kleinrivier Mountains.

Habitat: Drier parts of southern mountain slopes and rock ledges that do not receive direct water runoff.

Rationale: A rare species growing as isolated plants and occasionally in small subpopulations, this species has no recorded threats.

[F] **Disa longicornu** L.f. Plate 32

Status: **VU** B1ab(v)

L. von Staden

[e]**Distribution:** WC. Table Mountain and Hottentots Holland Mountains.

Habitat: Grows among moist mosses on rock ledges and cliffs in partly shaded areas, near waterfalls or other permanent water sources, 600–1 000 m.

Rationale: Endemic to two mountains, EOO 895 km^2, AOO < 421 km^2. Known from seven locations. Declining as a result of harvesting for horticultural purposes at all locations.

Disa longifolia Lindl.

Status: **VU** D2

L. von Staden

[e]**Distribution:** WC. Piketberg to Outeniqua Mountains.

Habitat: Typically peaty margins of seasonal streams, but also occurs on well-drained, gravelly sandy soils on south-facing slopes, 450 to 1 520 m.

Rationale: A rare species known from fewer than five locations. It has experienced losses of subpopulations as a result of dam construction and agriculture in the past. Although not currently declining, this species is potentially threatened by invasive alien plants and wetland drainage.

Disa lugens Bolus var. **lugens**

Status: **EN** C2a(i)

L. von Staden, W.R. Liltved, E.G.H. Oliver & T.A. Oliver

e**Distribution:** EC WC. Cape Peninsula to Albertinia, Groot Swartberg, Kammanassie and Kouga Mountains, Cold-stream, Humansdorp, Suurberg Mountains, Grahams-town, Somerset East and Cathcart.

Habitat: Variable, in acidic an alkaline sands, on coastal lowlands and mountain slopes and plateaus. Near coast often in association with restios.

Rationale: A wide distribution along the southeastern coastline. Subpopulations are scattered and typically small. The largest subpopulation (at Humansdorp) consists of only 100 plants. Others are generally less than 50 plants. Known from no more than 25 subpopulations, the population size is therefore estimated to be under 2 500 mature individuals. Undergoing a rapid decline along the Cape coast as a result of urban and coastal development and invasion by alien plants.

Disa lugens Bolus var. **nigrescens** (H.P.Linder) H.P.Linder **Plate 32**

Status: **CR** B1ab(iii,v)+2ab(iii,v)

L. von Staden & W.R. Liltved

e**Distribution:** EC. Oyster Bay near Humansdorp.

Habitat: Coastal dunes, in grassy fynbos.

Rationale: EOO and AOO < 5 km^2. Known from one location. Declining in habitat quality because of invasion by alien plants, and in the number of mature individuals because of illegal harvesting for the specialist horticultural trade.

Disa macrostachya (Lindl.) Bolus

Status: **CR** B1ab(iii)+2ab(iii); C2a(i,ii); D

W.R. Liltved, N.A. Helme & J.E. Victor

e**Distribution:** NC. Namaqualand, Kamiesberg.

Habitat: Shallow, moist soils, on granitic ledges beside ephemeral streams, northeast-facing slopes.

Rationale: EOO, AOO < 1 km^2. A very rare species known from one subpopulation of 40–50 mature individuals. There is an ongoing degradation of its habitat because of overgrazing. It is also potentially threatened by drought events and soil erosion.

Disa maculomarronina McMurtry **Plate 33**

Status: **NT** B2ab(iii)

J.E. Victor, D. McMurtry, L. Grobler & S. Burns

e**Distribution:** KZN MP. KwaZulu-Natal Midlands and Graskop.

Habitat: Swamps, montane grassland on the edges of Black Reef Quartzite, 1 500–1 700 m.

Rationale: Specific to a specialised habitat (AOO $<$ 10 km^2), known from fewer than 10 locations, but suspected to occur at 10–15 locations. Declining as a result of afforestation and trampling and harvesting by tourists.

Disa marlothii Bolus

Status: **Rare**

W.R. Liltved, B. Bytebier & J.E. Victor

e**Distribution:** WC. Hex River Valley, Kouebokkeveld, central Cederberg and Tsitsikamma Mountains.

Habitat: Rocky places along streams, 600–1 300 m.

Rationale: Specific to streamsides, known from six widely disjunct subpopulations. Subpopulations are typically small, consisting of less than 20 plants. It has no recorded threats.

Disa minor (Sond.) Rchb.f.

Status: **Rare**

H. Kurzweil & J.E. Victor

e**Distribution:** WC. Worcester, Ceres and Tulbagh.

Habitat: Margins of ephemeral watercourses, swampy mountain slopes, 1 000–2 000 m.

Rationale: A naturally rare, high-altitude, fire-dependent habitat specialist known from five subpopulations. Subpopulations are typically small, consisting of less than 20 plants. It has no known threats.

Disa montana Sond.

Status: **VU** D2

D. Raimondo & C.R. Scott-Shaw

e**Distribution:** EC KZN. Ramatsiliso Gate to Elliot.

Habitat: Dry rocky grassland slopes, 1 000–2 400 m.

Rationale: A high-altitude species known from four disjunct locations. Potentially threatened by habitat degradation because of overgrazing and by future afforestation in the Eastern Cape.

Disa newdigateae L.Bolus

Status: **CR** PE

L. von Staden

e**Distribution:** WC. Plettenberg Bay.

Habitat: Stony slopes near the coast, in short fynbos.

Rationale: Known from one subpopulation near the Crags, Plettenberg Bay, where six plants were collected between 1895 and 1931. It has not been recorded since. The area around the Crags is threatened by housing development and encroachment from invasive alien species, but since information on the precise site is not known, it is hard to say whether or not habitat destruction has led to the extinction of this species.

F **Disa nubigena** H.P.Linder

Status: **CR** D

B. Bytebier, W.R. Liltved & J.E. Victor

e**Distribution:** WC. Cape Peninsula.

Habitat: Peninsula Sandstone Fynbos, 1 000 m.

Rationale: Discovered by Peter Linder (Orchidaceae systematist) on the summit of a peak of Table Mountain, after a fire in 1997. In 2002 and 2003, the area was searched for more individuals after fire, but none were found. Less than 50 mature individuals were recorded after the 1997 fire. The biology of this species is still poorly understood.

Disa ocellata Bolus

Status: **Rare**

L. von Staden & H. Kurzweil

e**Distribution:** WC. Table Mountain to Kammanassie.

Habitat: In moss banks or stony soil in the zone of the southeaster clouds 1 000–1 500 m.

Rationale: A rare species that occurs as small, disjunct subpopulations on mountain summits. No threats are known.

F **Disa oligantha** Rchb.f.

Status: **Rare**

L. von Staden, B. Bytebier, W.R. Liltved, E.G.H. Oliver & T.A. Oliver

e**Distribution:** WC. Table Mountain and Hottentots Holland Mountains.

Habitat: Stony soil, on sandstone slopes in montane fynbos, above 1 000 m.

Rationale: Restricted to the summits of the highest peaks on Table Mountain and the Hottentots Holland Mountains, east of Stellenbosch (EOO 350 km²). Known from five subpopulations and has no known threats.

Disa oreophila Bolus subsp. **erecta** H.P.Linder

Status: **Rare**

J.E. Victor

Distribution: EC KZN. Eastern Cape, KwaZulu-Natal and Lesotho Drakensberg mountain range.

Habitat: Mostly grassland, rarely among rocks or on rocky ledges, on sandstone and basalt substrates, generally on or near seepages, 2 250–2 700 m.

Rationale: A high-altitude habitat specialist, known from six widely scattered subpopulations. No known threats.

Disa ovalifolia Sond. **Plate 32**

Status: **NT** A4c; B1ab(iii)

B. Bytebier, L. von Staden & J.E. Victor

[e]**Distribution:** WC. Montagu to Clanwilliam and Darling.

Habitat: Seasonally wet, deep sandy soils, 400–1 300 m.

Rationale: EOO 9 264 km². Known from 10–15 locations. Rooibos tea cultivation threatens the northern populations around the Nardous Pass, and 10% of its habitat has been transformed over the last 10 years. If this decline continues, it could reach 30% within three generations. However, rooibos tea cultivation only affects the northern parts of the range, where most collections have been made. We therefore predict an overall 25–30% decline in the total population over a moving time frame of three generations (30 years).

Disa physodes Sw. **Plate 32**

Status: **CR** C2a(i)

L. von Staden, B. Bytebier, W.R. Liltved, E.G.H. Oliver & T.A. Oliver

[e]**Distribution:** WC. Sir Lowry's Pass to Cape Peninsula to Piketberg.

Habitat: Well-drained soils at the interface between fynbos and renosterveld, on shales as well as sandstone, 0–1 000 m. Most records from below 200 m.

Rationale: A predominantly lowland species that has lost most of its recorded sites to urban and agricultural development. Known from four subpopulations, all with less than 50 mature individuals. The total population is estimated to be under 250 mature individuals. Continuing declines due to habitat fragmentation as a result of agricultural transformation and associated decline in fire frequency (this species requires fire to flower), and invasion by alien plants.

[F] **Disa procera** H.P.Linder

Status: **CR** D

W.R. Liltved & J.E. Victor

[e]**Distribution:** WC. Sedgefield.

Habitat: Fynbos, sand dunes.

Rationale: A very rare species, known from a single subpopulation near Sedgefield with less than 50 mature individuals.

[F] **Disa purpurascens** Bolus **Plate 32**

Status: **NT** B1ab(ii,iii,v)

L. von Staden, B. Bytebier, W.R. Liltved, E.G.H. Oliver & T.A. Oliver

[e]**Distribution:** WC. Cape Point to Still Bay.

Habitat: Well-drained, sandy or rocky flats, 0–300 m. Occasionally on south-facing slopes.

Rationale: EOO < 10 800 km². Known from 10–13 locations. There is a continuing decline due to agriculture, coastal development and invasion by alien plants.

Disa pygmaea Bolus

Status: **Rare**

L. von Staden, B. Bytebier, W.R. Liltved, E.G.H. Oliver & T.A. Oliver

[e]**Distribution:** WC. Cape Peninsula to Elim and Pilaarkop.

Habitat: Sandy areas, flats and mountain slopes, up to 1 000 m.

Rationale: Although lowland subpopulations of this species have declined in the past, it is now known from seven subpopulations. Enough subpopulations remain in protected mountain habitats and it is not expected to decline further. Subpopulations are typically small.

Disa sabulosa Bolus **Plate 32**

Status: **CR** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

H. Kurzweil, J.E. Victor & B. Bytebier

[e]**Distribution:** WC. Pringle Bay and Betty's Bay.

Habitat: Restricted to lower slopes and sandy flats, often in seasonally damp sand, 18–80 m.

Rationale: A range-restricted species (EOO < 15 km², AOO < 10 km²) known from one location. Its lowland coastal habitat has been and continues to be transformed for coastal housing developments.

Disa sanguinea Sond.

Status: **Rare**

J.E. Victor

[e]**Distribution:** EC KZN. Amathole and Winterberg Mountains and Sani Pass.

Habitat: Montane grasslands, in seasonally damp sites.

Rationale: A rare, high-altitude species known from six disjunct subpopulations. Subpopulations consist of a few mature individuals each. It has no known threats.

Disa sankeyi Rolfe

Status: **Rare**

H. Kurzweil & J.E. Victor

Distribution: EC KZN. Drakensberg mountain range, from the Eastern Cape through Lesotho and KwaZulu-Natal to Swaziland.

Habitat: Damp to dry grassland on basalt or sandstone, from 2 400–3 000 m.

Rationale: Known from five widely distributed subpopulations. No known threats.

[F] **Disa schizodioides** Sond.

Status: **Rare**

L. von Staden, B. Bytebier, W.R. Liltved, E.G.H. Oliver & T.A. Oliver

[e]**Distribution:** EC WC. Langeberg, Touwsberg, Rooiberg, Groot Swartberg, Outeniqua and Kouga Mountains.

Habitat: Damp rock crevices on high mountain peaks, 1 000–2 000 m.

Rationale: A high-altitude habitat specialist, known from seven subpopulations. No known threats.

Disa schlechteriana Bolus

Status: **VU** D2

L. von Staden, B. Bytebier & D. Raimondo

[e]**Distribution:** WC. Langeberg near Riversdale.

Habitat: Tall proteoid fynbos, on well-drained sandstone slopes, 300–1 000 m.

Rationale: EOO and AOO < 20 km². Known from four locations. It has lost habitat to agriculture in the past and although not declining, it remains potentially threatened by vegetation destruction due to protea harvesting and invasion by alien plants.

Disa scullyi Bolus

Status: **EN** A2ac; B2ab(i,ii,iii,iv,v); C2a(i)

L. von Staden, D. Raimondo, S.D. Johnson & B. Bytebier

Distribution: EC KZN. Amathole Mountains to KwaZulu-Natal Drakensberg foothills.

Habitat: Wetlands, seepages or stream edges in high-altitude grassland, 1 500–2 000 m.

Rationale: One of the rarest southern African orchids, recorded from only seven subpopulations, most (over 50%) of them have been extirpated by overgrazing and trampling by livestock over the past 20 years (generation length 7–10 years). AOO less than 100 km². We suspect that there are less than 1 000 mature individuals and that no extant subpopulation has more than 250 individuals. Decline due to overgrazing is continuing.

Disa spathulata (L.f.) Sw. subsp. **spathulata** Plate 32

Status: **DDD**

L. von Staden, B. Bytebier & D. Raimondo

Distribution: NC WC. From Nieuwoudtville southwards to Bredasdorp, eastwards to Touwsrivier.

Habitat: Fynbos and renosterveld, sandstone or shale soil. Subpopulations on clay soils occur on cooler south-facing slopes; sandstone habitats vary from well-drained to vlei margins.

Rationale: Surveys are urgently needed to determine how many subpopulations of this taxon remain. Herbarium collections indicate that it was quite common in the past, but it is rarely recorded nowadays because its renosterveld habitat has been extensively transformed for wheat cultivation. There are, however, no data to support a threatened assessment as this is a very wide-ranging taxon and very little population data are available. It is also a very variable taxon that may represent a species complex.

Disa spathulata (L.f.) Sw. subsp. **tripartita** (Lindl.) H.P.Linder

Status: **EN** A2c

J.H. Vlok & D. Raimondo

Distribution: EC WC. Uniondale and Worcester.

Habitat: Renosterveld on shale, 1 000 m.

Rationale: EOO 9 000 km². Only three of the seven recorded subpopulations are still extant, three have been lost to crop cultivation, and one for unknown reasons, possibly because of overgrazing by livestock. Loss has taken place over the past 60 years (generation length 20 years).

Disa subtenuicornis H.P.Linder

Status: **Rare**

B. Bytebier, W.R. Liltved, S.D. Johnson & J.E. Victor

Distribution: WC. Langeberg, near Riversdale.

Habitat: Damp, peaty soil, 700–1 200 m.

Rationale: A range-restricted species (EOO < 100 km²), known from two subpopulations. No recorded threats.

[F] **Disa tenella** (L.f.) Sw. subsp. **pusilla** H.P.Linder

Status: **Rare**

L. von Staden

Distribution: WC. Mountains from Ceres to the Gifberg.

Habitat: Shady, damp areas in clay or sandy soils, 300–1 200 m.

Rationale: A habitat specialist, known from 10 subpopulations. No significant threats.

Disa tenella (L.f.) Sw. subsp. **tenella** Plate 33

Status: **EN** B1ab(iii,iv,v)+2ab(iii,iv,v)

L. von Staden, I. Ebrahim, C. von Witt, B. Bytebier & W.R. Liltved

Distribution: WC. Cape Town, Stellenbosch and Hopfield.

Habitat: Damp, seasonally wet depressions in sand or clay, 0–200 m.

Rationale: EOO 2 300 km². Now known from 3–5 locations. More than 50% of historical records (1950s and earlier) are from locations that have been lost to urban development. Declining as a result of agriculture and invasion by alien plants.

Disa tenuis Lindl.

Status: **Rare**

D. Raimondo & H. Kurzweil

Distribution: WC. Cape Peninsula and Betty's Bay to Tulbagh and Franschhoek.

Habitat: Stony soil, well drained, occasionally on sandy flats, 0–1 000 m.

Rationale: Fairly widespread, occurs singly or in small subpopulations.

Disa tysonii Bolus

Status: **Rare**

J.E. Victor & C.R. Scott-Shaw

Distribution: EC KZN. Underberg, Tsehlanyana Valley (Lesotho), Hogsback, Dohne Peak and Port St Johns.

Habitat: Damp, rocky grasslands, 100–3 000 m.

Rationale: Although widespread (EOO > 20 000 km²), it is known from only six subpopulations. Two are in an area affected by afforestation but are not currently losing habitat. Monitored subpopulations are small, consisting of less than 50 individuals.

Disa venusta Bolus

Status: **EN** B1ab(ii,iii,iv,v)

L. von Staden & D. Raimondo

Distribution: WC. Cape Peninsula to Bredasdorp.

Habitat: Damp, sandy areas mostly below 450 m.

Rationale: EOO 2 000 km². Six of 11 recorded locations have been lost to urban development on the Cape Flats. Development of suburbs, and rapid coastal development around Betty's Bay, Kleinmond and Hermanus are causing ongoing decline. This species is also threatened by invasive alien acacias.

[F] **Disa vigilans** McMurtry, T.J.Edwards & B.Bytebier Plate 33

Status: **EN** D

D. McMurtry, S. Burns, L. Grobler & L. von Staden

Distribution: MP. Lydenburg.

Habitat: Northeastern mountain sourveld between Black Reef Quartzite boulders, at the edge of the escarpment in exposed, windswept sites, 2 100–2 150 m.

Rationale: A recently described species, known from two subpopulations on the Drakensberg Escarpment near Lydenburg. Its habitat is extensively transformed by pine plantations, and both subpopulations occur in small, remnant grassland fragments in firebreaks between plantations. It has probably declined in the past, but since its discovery in 2000, it has not declined. Less than 120 mature individuals of this species are known.

Disa virginalis H.P.Linder

Status: **Rare**

J.E. Victor & B. Bytebier

[e]**Distribution:** WC. Piketberg, Limietberg and Groot Winterhoek Mountains.

Habitat: South-facing rock ledges, 1 000 m.

Rationale: A habitat specialist known from three subpopulations. No recorded threats.

Disa zuluensis Rolfe **Plate 33**

Status: **EN** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

L. von Staden, D. McMurtry, L. Grobler, S. Burns & J.E. Victor

[e]**Distribution:** KZN MP. Dundee, Roossenekal and Dullstroom.

Habitat: Swampy areas, vleis in grassland, 1 500–2 000 m.

Rationale: EOO < 100 km^2, AOO < 10 km^2. Known from two locations. Mining is causing a continuing decline in habitat availability and quality as it affects the water table and therefore the quality of wetland habitats.

Disperis Sw.

Disperis bolusiana Schltr. ex Bolus subsp. **macrocorys** (Rolfe) J.C.Manning

Status: **Rare**

J.E. Victor

[e]**Distribution:** WC. Cederberg, Koudeberg and Pakhuis Mountains.

Habitat: Low renosterveld scrub, heavy, gravelly clay soil probably derived from shale.

Rationale: A range-restricted taxon (EOO 454 km^2), known from six subpopulations. No recorded threats.

[F] **Disperis cucullata** Sw.

Status: **NT** B1ab(i,ii,iii,iv,v)

L. von Staden

[e]**Distribution:** WC. Western Cape lowlands from Citrusdal to Sir Lowry's Pass.

Habitat: Sand Plain Fynbos and renosterveld, in seasonally damp areas on flats, 30–350 m.

Rationale: A formerly widespread and relatively common species that has suffered extensive habitat loss. Locally extinct on the Cape Peninsula. Only ± eight extant subpopulations have been recorded in the last 10 years, but there may be as many as 15 remaining, based on historical collections. Current EOO 7 800–11 780 km^2. Continuing to decline because of urban and agricultural expansion and invasion by alien plants.

[F] **Disperis johnstonii** Rchb.f. ex Rolfe

Status: **NT**[*] D2

H. Kurzweil & J.E. Victor

Distribution: KZN. KwaZulu-Natal coast, also widespread in tropical Africa.

Habitat: *Brachystegia* woodland, forest patches, usually in shelter of rocks, 1 050–1 350 m.

Rationale: Known from fewer than five locations on the KwaZulu-Natal coast. Potentially threatened by coastal development, subsistence agriculture, informal settlements and invasion by alien plants. Downgraded to NT as orchids have effective long-distance dispersal, allowing colonisation from subpopulations that occur outside South Africa's borders.

Disperis purpurata Rchb.f. subsp. **pallescens** Bruyns

Status: **VU** D2

L. von Staden, W.R. Liltved, E.G.H. Oliver & T.A. Oliver

[e]**Distribution:** NC. Richtersveld.

Habitat: High altitudes in enclaves of Stinkfonteinberge Quartzite Fynbos. Often found alongside or under bushes of small *Pteronia* species.

Rationale: A range-restricted taxon (EOO 10 km^2), known from two locations. Potentially threatened by grazing and trampling by livestock.

Disperis woodii Bolus

Status: **Declining**

H. Kurzweil & J.E. Victor

[e]**Distribution:** EC KZN. Coastal Eastern Cape and KwaZulu-Natal.

Habitat: Damp grassland, usually sandy soils, sometimes within grass tussocks, from sea level to 800 m.

Rationale: EOO 42 700 km^2. Although widespread, its habitat in KwaZulu-Natal is threatened by urban expansion and sugarcane cultivation. This is a tiny orchid, plants are ± 15 cm high, and it is likely to be under-collected.

Eulophia R.Br. ex Lindl.

Eulophia chlorantha Schltr.

Status: **DD**D

J.E. Victor, D. McMurtry, L. Grobler & S. Burns

Distribution: MP. Northwestern Swaziland and adjacent area in Mpumalanga.

Habitat: Grassy places in bushveld.

Rationale: All herbarium records from Mpumalanga predate 1950. Not enough is known about the distribution, specific habitat or population status of this species within South Africa to determine its status.

Eulophia coddii A.V.Hall **Plate 34**

Status: **VU** B1ab(iii); D1

M.F. Pfab & J.E. Victor

[e]**Distribution:** G LM. Heidelberg, Magaliesberg and Waterberg.

Habitat: Steep slopes, growing on sandstone-derived soils in grassland or bushveld.

Rationale: Known from a restricted range (EOO 7 000–9 000 km^2) and only five locations. Declining as a result of urban expansion in Gauteng. Total population size estimated to be 240–1 000 mature individuals.

Eulophia litoralis Schltr.

Status: **EN** B1ab(iii)

L. von Staden, W.R. Liltved, E.G.H. Oliver & T.A. Oliver

[e]**Distribution:** WC. Kleinmond to Plettenberg Bay, Jonkershoek and Langeberg Mountains.

Habitat: Well-drained, coarse sandy soils or coastal dunes, typically near sea level, with inland populations occurring at altitudes of ± 360 m.

Rationale: EOO ± 2 000 km^2. Destruction of coastal fynbos habitats by urban expansion and invasion by the alien acacias along its entire distribution have resulted in the decline of subpopulations; it is now known from 3–5 locations. Decline is continuing.

Eulophia platypetala Lindl.

Status: **VU** A2c

J.H. Vlok & D. Raimondo

[e]**Distribution:** EC WC. Riversdale to Port St Johns.

Plate 31



H. Stärker

Corycium ingeanum EN



A. Pauw

Pterygodium cruciferum EN



A. Pauw

Pterygodium newdigateae var. *cleistogamum* VU



W.R. Liltved

Corycium bifidum CR



W.R. Liltved

Corycium microglossum CR



A. Pauw

Pterygodium inversum EN



J.H. Vlok

Acrolophia ustulata VU

Plate 32



W.R. Liltved

Disa sabulosa CR



W.R. Liltved

Disa ovalifolia NT



H. Stärker

Disa purpurascens NT



W.R. Liltved

Disa lugens var. *nigrescens* CR



W.R. Liltved

Disa barbata CR



H. Stärker

Disa longicornu VU



W.R. Liltved

Disa hallackii EN



W.R. Liltved

Disa physodes CR



H. Stärker

Disa spathulata subsp. *spathulata* DD

Plate 33


L. Grobler

Disa maculomaronina NT


L. Grobler

Disa alticola VU


W.R. Liltved

Disa tenella subsp. *tenella* EN


T. Oliver

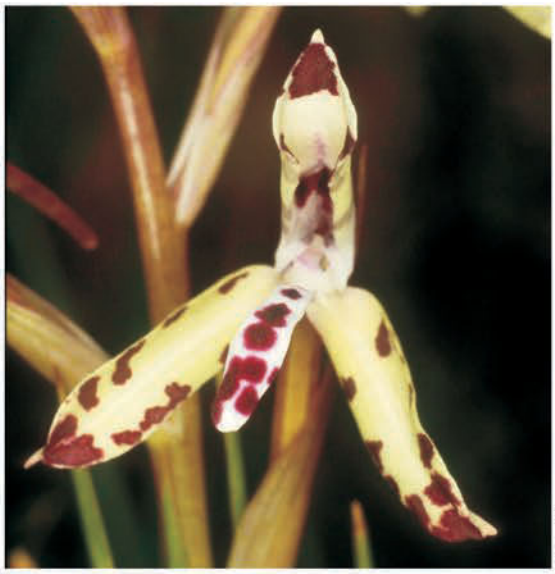
Disa brachyceras EN


L. Grobler

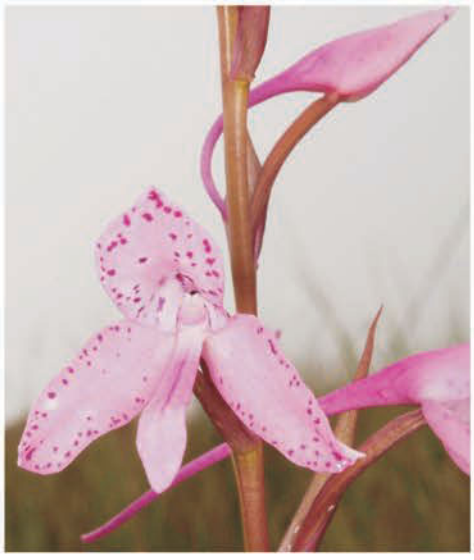
Disa extinctoria NT


L. Grobler

Disa zuluensis EN


L. Grobler

Disa vigilans EN


L. Grobler

Disa amoena VU


S. Burns

Disa aristata VU

Plate 34



L. Grobler

Holothrix randii NT



L. Grobler

Habenaria culveri Rare



D. McMurtry

Eulophia coddii VU



L. Grobler

Angraecum stella-africae Rare



L. Grobler

Schizochilus crenulatus VU



L. Grobler

Huttonaea oreophila Rare



D. McMurtry

Habenaria kraenzliniana NT

Plate 35



J.H. Vlok

Satyrium muticum CR



W.R. Liltved

Satyrium striatum VU



L. Grobler

Platycoryne mediocris EN



L. Grobler

Satyrium microrrhynchum Rare



H. Stärker

Satyrium hallackii subsp. *hallackii* EN



J.H. Vlok

Satyrium carneum NT



W.R. Liltved

Satyrium foliosum VU



H. Stärker

Satyrium princeps VU

Habitat: Dry coastal renosterveld and grassy places in coastal forest.

Rationale: A long-lived species (generation length 50 years). At least 30% of sites have been lost as a result of orchard and pasture cultivation and severe infestations of invasive alien plants over the past 100 years. Loss has been particularly severe in the southern Cape.

Eulophia speciosa (R.Br. ex Lindl.) Bolus

Status: **Declining**

V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya

Distribution: EC KZN LM MP WC. Western Cape to tropical East Africa and Sudan.

Habitat: Occupies various habitats such as sand dunes, bushveld, thornveld and montane grasslands.

Rationale: Declines in wild subpopulations have been observed as a result of harvesting for the medicinal trade. It is common on muthi markets and we suspect an overall, continuing decline. It is still too common to list as NT.

Evotella Kurzweil & H.P.Linder

Evotella rubiginosa (Sond. ex Bolus) Kurzweil & H.P.Linder

Status: **Rare**

L. von Staden & D. Raimondo

[e]**Distribution:** WC. Groot Winterhoek to Soetanysberg.

Habitat: Seepages, marsh edges and ephemeral streambanks, in shallow peaty deposits on Table Mountain Sandstone, 20–1 300 m.

Rationale: A habitat specialist with a natural low density of individuals. All subpopulations that have been recorded consist of only a handful of individuals. This species flowers only after fire.

Habenaria Willd.

[F] **Habenaria barbertoni** Kraenzl. & Schltr.

Status: **NT** B1ab(ii,iii,iv,v)

J.E. Victor, D. McMurtry, L. Grobler & S. Burns

[e]**Distribution:** G MP.

Habitat: Rocky hillsides, in bushveld in association with acacias, 1 000–1 500 m.

Rationale: EOO 46 300 km^2. Known from nine locations. Declining as a result of urban expansion in Gauteng.

Habenaria bicolor Conrath & Kraenzl.

Status: **NT** B1ab(iii)+2ab(iii)

J.E. Victor

Distribution: G MP. Gauteng and near Middelburg in Mpumalanga. Also known from two records from Zimbabwe.

Habitat: Well-drained grasslands at around 1 600 m in South Africa.

Rationale: It has a restricted range within South Africa (EOO < 1 200 km^2, AOO < 500 km^2). There are 10–20 locations, with a continuing decline in habitat due to urban expansion in Gauteng.

[F] **Habenaria culveri** Schltr. Plate 34

Status: **Rare**

J.E. Victor, D. McMurtry, L. Grobler & S. Burns

Distribution: NW. Rare in KwaZulu-Natal, extending inland to Swaziland, Mpumalanga and North West.

Habitat: Deep shade in subtropical forest, 150–1 000 m.

Rationale: Although very widespread, this species is known from only four highly disjunct subpopulations (EOO 112 000 km^2). It has no recorded threats.

Habenaria kraenzliniana Schltr. Plate 34

Status: **NT** B1ab(iii)

L. von Staden, J.E. Victor, D. McMurtry, L. Grobler & S. Burns

[e]**Distribution:** G KZN LM. Mainly in Gauteng, with a few isolated records from the Wolkberg Mountains in Limpopo and northern KwaZulu-Natal.

Habitat: Stony, grassy hillsides, 1 000–1 400 m.

Rationale: A rare orchid that occurs mainly within the densely populated province of Gauteng. It is declining or locally extinct at many locations in Gauteng as a result of urban development, and this threat is ongoing. Between one and five of the known locations in Gauteng remain, but it is widespread (EOO estimated 62 800 km^2) and its rarity makes estimating an AOO difficult. It is listed as NT as there are fewer than 10 locations.

Habenaria mossii (G.Will.) J.C.Manning

Status: **EN** C2a(i); D

M.F. Pfab & J.E. Victor

[e]**Distribution:** G. Johannesburg, Pretoria and Krugersdorp.

Habitat: Open grassland on dolomite or in black, sandy soil.

Rationale: Surveys of remaining habitat within Gauteng Province revealed that there are only ± 230 mature individuals. They occur as six scattered subpopulations, the largest of which has only 70–80 mature individuals, but there are generally less than 40 mature individuals per subpopulation. There is a continuing decline due to the rapid urban expansion.

Habenaria woodii Schltr.

Status: **VU** B2ab(iii)

J.E. Victor & L. von Staden

[e]**Distribution:** KZN. Umtamvuna River to Kosi Bay.

Habitat: Marshy ground in grassland below 600 m.

Rationale: AOO < 2 000 km^2. Known from fewer than 10 locations. About half its range has been transformed by agriculture (subsistence farming and commercial sugarcane cultivation) and urban development, or has been degraded as a result of overgrazing, erosion and encroachment from invasive alien species. Decline throughout its range is continuing.

Holothrix Rich. ex Lindl.

Holothrix culveri Bolus

Status: **CR** D

D. McMurtry, L. Grobler, S. Burns & L. von Staden

[e]**Distribution:** MP. Barberton.

Habitat: Rocky slopes at ± 650 m.

Rationale: Known from the type collection, collected in 1890. Although the type locality is now transformed (a road was built right across the site) and the habitat is generally degraded as a result of the spread of informal settlements, members of the Mpumalanga Plant Specialist Group believe that this species is not extinct. It was searched for repeatedly between 2002 and 2006, and a single plant was found of what could possibly be this species, but confirmation is dependent on flowering.

Holothrix grandiflora (Sond.) Rchb.f.

Status: **DD**D

J.E. Victor & A.P. Dold

[e]**Distribution:** EC WC. Mouth of the Olifants River, Lambert's Bay, Ladismith and Port Elizabeth.

Habitat: Cracks and crevices on sandstone quartz

conglomerate outcrops along the coast in strandveld vegetation.
Rationale: There is too much uncertainty to make a proper assessment. Misidentifications of the similar *H. schlechteriana* may have led to inaccurate descriptions of its distribution.

Holothrix longicornu G.J.Lewis

Status: **CR** D
L. von Staden, W.R. Liltved, E.G.H. Oliver & T.A. Oliver
[e]**Distribution:** EC WC. Port Elizabeth and Cape Peninsula.
Habitat: Lower sandstone slopes.
Rationale: Known from the type locality, collected near Port Elizabeth in 1937, and thought extinct for a long time. Bill Liltved (Cape Orchidaceae expert) recently discovered a subpopulation on the Cape Peninsula where there are fewer than 10 mature individuals.

Holothrix macowaniana Rchb.f.

Status: **DD**D
L. von Staden & J.E. Victor
[e]**Distribution:** EC. Grahamstown, Stockenström, Bedford, Katberg and Zimbabwe.
Habitat: Forest ravines.
Rationale: Known from three collections in South Africa, all made before 1900. Some sites are now under pine plantations. Not enough is known about the distribution, specific habitat or population status of this species within South Africa to make a national assessment.

Holothrix majubensis C. & R.H.Archer

Status: **VU** D2
C.R. Scott-Shaw & J.E. Victor
[e]**Distribution:** KZN. Amajuba Mountains.
Habitat: Montane grassland, cracks in sandstone cliffs, 2 200 m.
Rationale: A high-altitude habitat specialist, known from one location where it is potentially threatened by soil erosion.

Holothrix micrantha Schltr.

Status: **EN** B1ab(iii)
J.E. Victor
[e]**Distribution:** G. Gauteng.
Habitat: Grassy cliffs, 1 500–1 800 m.
Rationale: It has a restricted range (EOO 300 km^2), known from 1–3 locations. Declining as a result of urban development and encroachment from invasive alien vegetation.

Holothrix pilosa (Burch. ex Lindl.) Rchb.f.

Status: **NT** B1ab(ii,iii)
D. Raimondo & L. von Staden
[e]**Distribution:** EC WC. Bredasdorp to Port Elizabeth.
Habitat: Semi-arid, stony habitats, 35–600 m.
Rationale: EOO 9 000–36 000 km^2. Known from four locations but may still occur at up to 14 locations. Crop cultivation has caused declines around Albertinia, Swellendam, Montagu and Bonnievale; loss is ongoing. Coastal subpopulations are also threatened by coastal development and invasion by alien plants.

Holothrix randii Rendle **Plate 34**

Status: **NT** B1ab(iii)+2ab(iii); C2a(i)
M.F. Pfab & J.E. Victor
Distribution: G LM. Also in Zimbabwe, Tanzania and Kenya.
Habitat: Grassy slopes and rock ledges, usually southern aspects.
Rationale: In South Africa, known from 12 locations, EOO 4 400 km^2, AOO < 10 km^2. The total population is estimated to be ± 4 000–6 000 individuals and two subpopulations consist of over 1 000 individuals (maximum 1 500 and 1 200 individuals, respectively). There is a continuing decline as a result of habitat loss within Gauteng.

Huttonaea Harv.

[F] **Huttonaea oreophila** Schltr. **Plate 34**

Status: **Rare**
L. von Staden
[e]**Distribution:** EC KZN. Drakensberg mountain range.
Habitat: High-altitude, damp grasslands, 1 300–2 200 m.
Rationale: A habitat specialist known from five subpopulations. No recorded threats.

Huttonaea woodii Schltr.

Status: **VU** D2
L. von Staden & J.E. Victor
[e]**Distribution:** KZN. KwaZulu-Natal Midlands and Giant's Castle Game Reserve.
Habitat: Damp to marshy grasslands, 1 200–2 100 m.
Rationale: Known from 1–5 locations. Potentially threatened by crop cultivation and afforestation, especially in the Midlands.

Microcoelia Lindl.

[F] **Microcoelia obovata** Summerh.

Status: **DD**D
L. von Staden
Distribution: KZN. Widespread in eastern Africa, including Kenya, Tanzania and Mozambique, possibly also occurs in northern KwaZulu-Natal.
Habitat: Woodland, wooded grassland and riverine forest, growing in exposed places and often in the crowns of trees, 10–1 100 m.
Rationale: One unconfirmed record for South Africa, from somewhere in far northern KwaZulu-Natal. There are no herbarium specimens of South African origin cited in the literature. Too little is known about the distribution of this species within South Africa to determine its status nationally.

Mystacidium Lindl.

[F] **Mystacidium aliceae** Bolus

Status: **VU** D2
L. von Staden & J.E. Victor
[e]**Distribution:** EC KZN. Coastal forests.
Habitat: Occurs in thick scrub in hilly regions as a low-level epiphyte in shady conditions.
Rationale: Known from two or three locations, but probably locally extinct at one location in KwaZulu-Natal that has been extensively transformed by sugarcane plantations. Potentially threatened in the Eastern Cape by clearing of forests for subsistence agriculture and collecting of wood for fuel.

[F] **Mystacidium brayboniae** Summerh.

Status: **NT** D2
L. von Staden
[e]**Distribution:** LM. Soutpansberg Mountains.
Habitat: Epiphyte in moist, high-altitude mistbelt forests and woodland.

Rationale: EOO 1 050 km², AOO < 30 km². Known from fewer than 10 subpopulations. It is very popular with orchid collectors, possibly threatened by removal of mature individuals from the wild, but no evidence yet of declines.

Nervilia Comm. ex Gaudich.

Nervilia renschiana (Rchb.f.) Schltr.

Status: **DD**D

L. von Staden & J.E. Victor

Distribution: KZN. Widespread in central and eastern tropical Africa, known from Malawi, Mozambique, Zambia, Zimbabwe, Burundi, Tanzania, DRC and also in Madagascar. In South Africa known from one site on the KwaZulu-Natal coast.

Habitat: *Brachystegia* woodland and riverine forest fringes, often on termite mounds, 100–900 m.

Rationale: Last collected in 1909 at Dumisa Station, not recorded since. Not enough is known about the distribution, specific habitat or population status of this species within South Africa to determine its status nationally. It is widespread in tropical Africa.

Oberonia Lindl.

Oberonia disticha (Lam.) Schltr.

Status: **CR** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

J.E. Victor, S. Krynauw, P.J.H. Hurter & L. von Staden

Distribution: LM MP. Isolated sites in South Africa including the Wolkberg Mountains and near Nelspruit. Widespread in tropical Africa and also occurs on Indian Ocean Islands (Madagascar, Reunion, Mauritius and Comoros).

Habitat: Epiphytic, on tree trunks in evergreen forest or high-rainfall *Brachystegia* woodland.

Rationale: Known historically from three locations in South Africa, with a disjunct distribution in Limpopo and Mpumalanga Provinces. Subpopulations in Mpumalanga went locally extinct when the habitat was transformed for agriculture. Now possibly confined to only a small area in Limpopo Province (EOO estimated 95 km²). Recent searches have failed to locate individuals at one of the two remaining locations. Searches for and monitoring of remaining suitable habitat are required to establish the population status. However, since there is still habitat available in fairly inaccessible areas around the known locations in Limpopo Province, it is likely that at least one location still exists, and this species is not yet listed as extinct in South Africa.

Pachites Lindl.

Pachites appressa Lindl.

Status: **Rare**

H. Kurzweil & J.E. Victor

[e]**Distribution:** WC. Langeberg between Swellendam and Riversdale.

Habitat: Fynbos, on mountain slopes and summits, in seasonally damp, acidic, peaty Table Mountain Sandstone soils, 450–1 400 m.

Rationale: A range-restricted habitat specialist (EOO 360 km²), known from five subpopulations. No known threats.

Pachites bodkinii Bolus

Status: **Rare**

L. von Staden & W.R. Liltved

[e]**Distribution:** WC. Cape Peninsula and Groot Winterhoek to as far east as the Outeniqua Mountains near Mossel Bay.

Habitat: Fynbos, on mountain summits and moist south-facing slopes along marsh edges, on fibrous peaty acidic sandstone soils, 275–1 300 m.

Rationale: EOO 40 235 km². Widespread, occurs as highly disjunct subpopulations in a specialised marshy habitat. This species has no recorded threats.

Platycoryne Rchb.f.

[F] **Platycoryne mediocris** Summerh. **Plate 35**

Status: **EN*** B2ab(iii); C2a(i,ii); D

M. Lötter, J.E. Burrows & J.E. Victor

Distribution: MP. Nelspruit and widespread in tropical Africa.

Habitat: Mixed deciduous woodland, in shallow peaty soils over granite sheet rock, growing in a seasonally wet drainage line. Elsewhere it occurs in poorly drained grassland, 700–1 750 m.

Rationale: Known from one location in South Africa where there are ± 20 mature individuals. Urban expansion has disrupted the drainage of its seasonally moist habitat, causing continuing decline. This species is downgraded from CR to EN as per the regional guidelines, because orchids have tiny seeds that are able to disperse over long distances.

Polystachya Hook.

Polystachya zuluensis L.Bolus

Status: **DD**

J.E. Victor

Distribution: KZN. Lebombo Mountains.

Habitat: Thicket and woodland, lithophyte or epiphyte on *Xerophyta retinervis*, 1 200 m.

Rationale: The type collection was made in 1967 in the Lebombo Mountains, on the border between Swaziland and KwaZulu-Natal, but the exact site was not given. Not enough is known about the distribution or population status of this species within South Africa to determine its status nationally.

Pterygodium Sw.

Pterygodium connivens Schelpe

Status: **CR** PE

L. von Staden, A. Pauw, W.R. Liltved, E.G.H. Oliver & T.A. Oliver

[e]**Distribution:** WC. Cape Peninsula.

Habitat: Seepage in fynbos, on peaty Table Mountain Sandstone soils, 60 m.

Rationale: Discovered at a site in the Cape Point Nature Reserve, but disappeared the following year, has not been recorded for over 30 years despite regular searches.

Pterygodium cruciferum Sond. **Plate 31**

Status: **EN** B1ab(i,ii,iii,iv,v)

A. Pauw, I. Ebrahim, L. von Staden & J.E. Victor

[e]**Distribution:** WC. Darling to Bredasdorp.

Habitat: Edges of lowland wetlands, in clay or sandy soils, renosterveld or fynbos, 10–240 m.

Rationale: EOO 2 005–6 604 km². Known from four sites. It has lost most of its habitat to urban expansion on the Cape Flats and to crop cultivation around Darling and Bredasdorp. Declining because of eutrophication and invasion by alien plants. There is a complete lack of reproduction at one of the locations as a result of the loss of its pollinator.

[F] **Pterygodium inversum** (Thunb.) Sw. **Plate 31**

Status: **EN** C2a(i)

L. von Staden

[e]**Distribution:** WC. Gifberg to Bot River and Montagu Pass in the Outeniqua Mountains.

Habitat: Renosterveld. Well-drained clay, loam soils on lower slopes and hills, sometimes in rocky areas, 90–1 000 m.

Rationale: This renosterveld species has lost over 80% of its habitat in the past and is still declining across its range owing to habitat loss to crop cultivation. Loss of pollinators and natural fire cycles as a result of habitat fragmentation also threaten this species. Subpopulations are generally small (largest known subpopulation ± 50 mature individuals), and the total population is estimated to be between 300 and 1 000 mature individuals.

Pterygodium newdigateae Bolus var. **newdigateae**

Status: **DD**

L. von Staden

[e]**Distribution:** WC. Plettenberg Bay.

Habitat: Stony slopes near sea level.

Rationale: Known only from collections made before 1923. Not enough is known about the distribution, specific habitat or population status of this taxon to determine its status.

Pterygodium newdigateae Bolus var. **cleistogamum** Bolus **Plate 31**

Status: **VU** B1ab(ii,iii)

L. von Staden

[e]**Distribution:** EC WC. Knysna to Grahamstown.

Habitat: Fynbos, stony slopes in sandstone-derived soils, from sea level to 340 m.

Rationale: EOO 5 950 km^2. Known from 10 locations, but recently recorded at only three. Experiencing ongoing habitat loss as a result of coastal development.

Satyrium Sw.

Satyrium carneum (Dryand.) Sims **Plate 35**

Status: **NT** B1ab(ii,iii,iv,v)

H. Kurzweil & J.E. Victor

[e]**Distribution:** WC. Cape Peninsula to Still Bay.

Habitat: In dune bush vegetation, in fynbos on coastal hills and on ridges on moist to dry sands and limestone, 10–300 m.

Rationale: EOO 15 538 km^2. Known from 15–20 locations. More than 40% of habitat and subpopulations have been lost as a result of urban and coastal development. Loss due to harvesting for horticultural purposes, urban development, invasion by alien plants and crop cultivation, is ongoing.

Satyrium foliosum Sw. **Plate 35**

Status: **VU** D1+2

L. von Staden, W.R. Liltved, E.G.H. Oliver & T.A. Oliver

[e]**Distribution:** WC. Table Mountain, Hottentots Holland Mountains and Kogelberg.

Habitat: Black peaty soil, 900–1 300 m.

Rationale: Known from three locations, its population is estimated to be less 1 000 mature individuals. Potentially threatened by invading alien plants, flower-picking and collecting of plants and a deleterious fire regime.

Satyrium hallackii Bolus subsp. **hallackii** **Plate 35**

Status: **EN** A2c; B2ab(i,ii,iii,iv,v)

L. von Staden, W.R. Liltved & T.A. Oliver

[e]**Distribution:** EC WC. Betty's Bay, Pearly Beach, Cape St Francis, Komga and Kentani.

Habitat: Moist, sometimes brackish soils, in dune slacks immediately inland from the shoreline.

Rationale: EOO 14 000 km^2, AOO < 50 km^2. Confined to coastal flats, with a disjunct distribution in the Western and Eastern Cape as far as Kei Mouth/Kentani district. A 600 km distance separates the Western and Eastern Cape subpopulations. The taxon is extinct or endangered throughout its range as a result of coastal and urban development. In the Western Cape, subpopulations at Hout Bay, Zeekoevlei, Muizenberg and the Cape Flats are now extinct. We suspect that there has been a 50% habitat loss over the past 15 years (three generations). Currently extant at only three sites. Those surviving at Betty's Bay and southeast of Pearly Beach are severely threatened by urban expansion and encroachment from invasive alien vegetation.

Satyrium microrrhynchum Schltr. **Plate 35**

Status: **Rare**

J.E. Victor, D. McMurtry, L. Grobler & S. Burns

Distribution: EC KZN MP. Drakensberg mountain range from Mpumalanga through Lesotho and KwaZulu-Natal to the Eastern Cape.

Habitat: Montane and subalpine grassland, 1 600–3 000 m, on grassy and sometimes stony or moist slopes.

Rationale: A high-altitude habitat specialist, known from fewer than 10 subpopulations and has no significant threats.

Satyrium muticum Lindl. **Plate 35**

Status: **CR** C2a(ii)

H. Kurzweil, W.R. Liltved, S.D. Johnson, J.H. Vlok & L. von Staden

[e]**Distribution:** WC. Riversdale to Knysna and northern slopes of Langeberg Mountains.

Habitat: Relatively dry to moist slopes, up to 200 m.

Rationale: EOO < 5 000 km^2. A naturally very rare species known from three locations. Extinct at one site as a result of coastal development. Loss to urban development and agriculture is ongoing. There are less than 250 mature individuals, and one subpopulation has 90% of the total population.

Satyrium princeps Bolus **Plate 35**

Status: **VU** B1ab(i,ii,iii,iv,v)

L. von Staden, W.R. Liltved, E.G.H. Oliver & T.A. Oliver

[e]**Distribution:** EC WC. Wilderness to Port Alfred.

Habitat: Among bushes in open places on fixed dunes close to the shoreline, 0–150 m.

Rationale: EOO 3 400 km^2. Known from 3–6 locations. It has lost ± 50% of its habitat to coastal development, crop cultivation and infestations of alien plants. This loss is ongoing, but the decline has happened over a period of more than 10 years or three generations (generation length is probably ± five years). Coastal development threatens remaining subpopulations around Wilderness, Knysna and Cape St Francis.

Satyrium pulchrum S.D.Johnson & Kurzweil

Status: **VU** D2

H. Kurzweil, W.R. Liltved, S.D. Johnson & J.E. Victor

[e]**Distribution:** NC. Knersvlakte, north of Vanrhynsdorp.

Habitat: Crevices among granite slabs and boulders, 750 m.
Rationale: Described in 1998 and known from the type locality. Potentially threatened by trampling and grazing by livestock.

Satyrium rhodanthum Schltr.

Status: **CR** B1ab(i,ii,iii)
C.R. Scott-Shaw & J.E. Victor
e**Distribution:** KZN. Ixopo and Dumisa.
Habitat: Mistbelt, damp grassland.
Rationale: A very rare species that has lost most of its habitat to forestry plantations, afforestation has probably led to the demise of the subpopulation at the type locality, sometime between 1980–1994. It is currently known from one location where it is threatened by housing development.

F **Satyrium striatum** Thunb. Plate 35

Status: **VU** B1ab(iii,v)
L. von Staden
e**Distribution:** WC. Cape Peninsula to Cederberg.
Habitat: Moist flats and slopes in coarse, often stony, sandstone-derived soils, 100–800 m.
Rationale: EOO 9 863 km^2. Known from 7–9 locations. Declining as a result of invading alien plants, crop cultivation and harvesting for horticultural purposes.

Schizochilus Sond.

F **Schizochilus bulbinella** (Rchb.f.) Bolus

Status: **Rare**
J.E. Victor
Distribution: EC KZN. Griqualand East and southern Drakensberg Mountains including Lesotho.
Habitat: Montane and alpine grassland, on shallow soil over rock, 1 500–2 500 m.
Rationale: A habitat specialist that occurs in mountainous areas and has no known threats.

Schizochilus cecilii Rolfe subsp. **culveri** (Schltr.) H.P.Linder

Status: **Rare**
L. von Staden, D. McMurtry, L. Grobler & S. Burns
Distribution: MP. Barberton to Mbabane.
Habitat: Damp rock ledges on steep slopes, grassland.
Rationale: EOO 1 885 km^2. The 9–11 small, scattered subpopulations of this taxon have no recorded threats.

Schizochilus crenulatus H.P.Linder Plate 34

Status: **VU** D2
L. von Staden, D. McMurtry, L. Grobler & S. Burns
e**Distribution:** EC. Graskop.
Habitat: Edges of flat Black Reef Quartzite rock flushes, in damp to wet conditions, and often in moss, substrate rarely deeper than 10 mm.
Rationale: EOO 6.5 km^2, AOO $<$ 3 km^2. A range-restricted habitat specialist potentially threatened by mining.

Schizochilus gerrardii (Rchb.f.) Bolus

Status: **EN** B1ab(iii)+2ab(iii)
C.R. Scott-Shaw & J.E. Victor
e**Distribution:** KZN. Ngome, KwaCeza Highlands and Louwsburg Plateau.
Habitat: Mistbelt grassland, around margins of rock outcrops in shallow soil, frequently in slight seepages, 1 200 m.
Rationale: EOO 850 km^2. Known from four locations. Pine plantations have destroyed much of its habitat, only very small grassland fragments remain. Declining because of frequent fires and severe overgrazing by cattle.

Schizochilus lilacinus Schelpe ex H.P.Linder

Status: **Rare**
D. McMurtry, L. Grobler, S. Burns & L. von Staden
e**Distribution:** MP. Between Lydenburg and Graskop.
Habitat: Occurs among rocks or on narrow ledges on steep rocky slopes in damp areas, 1 600–2 300 m.
Rationale: A range-restricted species (EOO 130 km^2) that is locally abundant. It occurs on shallow rocky soils unsuitable for plantations and is therefore not threatened.

Schizodium Lindl.

F **Schizodium flexuosum** (L.) Lindl.

Status: **NT** B1ab(ii,iii,v)
L. von Staden
e**Distribution:** NC WC. Western Cape lowlands, from Nieuwoudtville southwards to Caledon and eastwards to Hex River Valley. Extinct on the Cape Peninsula.
Habitat: Seasonally moist, sandy flats, sometimes along streams.
Rationale: Of the 36 collecting localities recorded in herbaria, 10 are old and have locality descriptions that are too vague for determining whether subpopulations are still extant. Of the 16 precise locations, 50% have been lost to urban development and agriculture over the past 70 years. The generation length of this species is unfortunately not known. EOO is between 9 065–34 970 km^2. There are between three and 16 extant locations. Decline due to further crop cultivation, invasive alien plants and eutrophication of wetlands is continuing.

Schizodium longipetalum Lindl.

Status: **CR** C2a(ii)
L. von Staden & B. Bytebier
e**Distribution:** WC. Paarl and Piketberg.
Habitat: Fynbos, in gravel derived from Table Mountain Sandstone, also occurs on ecotones between fynbos and renosterveld on clay, 500 m.
Rationale: Over 80% of its habitat and known sites have been lost to crop cultivation and urban expansion over the past 100 years. Now known from one subpopulation where ± 100 individuals occur on private land.
A second subpopulation may exist (10 individuals were last recorded at this subpopulation in the 1980s and it may recover if the site is burnt in the near future).
Threatened by a deleterious fire regime, trampling and by invasive alien plants.

F **Schizodium satyrioides** (L.) Garay

Status: **Declining**
L. von Staden, W.R. Liltved, E.G.H. Oliver & T.A. Oliver
e**Distribution:** NC WC. From Hangklip to Nieuwoudtville. Extinct on the Cape Peninsula.
Habitat: Lowland, sand plains and alluvial sand derived from Table Mountain Sandstone. Mostly found below 900 m, but on drier edges of the range it has also been collected at up to 1 500 m.
Rationale: EOO 24 138 km^2. It has probably declined extensively across its range owing to crop cultivation. Urban expansion has led to this species going extinct on the Cape Peninsula. In the northern parts of the range, there is ongoing expansion of rooibos tea cultivation on sandy areas. The timing and extent of decline and generation length are not known.

Solenangis Schltr.

[F] **Solenangis aphylla** (Thouars) Summerh.

Status: **DD**D

J.E. Victor

Distribution: KZN. Maputaland, Mozambique and Zimbabwe to East Africa and Madagascar.

Habitat: Low altitude, evergreen riverine and coastal forests, also on shrubs and low trees in riverine and acacia thickets, 0–300 m.

Rationale: Widespread in eastern tropical Africa, with one unconfirmed record from northern KwaZulu-Natal.

Vanilla Mill.

[F] **Vanilla roscheri** Rchb.f.

Status: **NT**[*] D2

L. von Staden & J.E. Victor

Distribution: KZN. Widespread in eastern tropical Africa, from Kenya, Tanzania and Mozambique. One record from South Africa from Maputaland, near Lake Sibaya.

Habitat: Coastal bush and forest, and in grassy fields with scattered trees 1–100 m.

Rationale: Known from one location in South Africa. Potentially threatened by subsistence agriculture, expanding informal settlements and invasion by alien plants. The national assessment is downgraded from VU to NT as other subpopulations just across the border in Mozambique could serve as sources of propagules to South African locations.

Zeuxine Lindl.

Zeuxine africana Rchb.f.

Status: **EN**[*] D

J.E. Victor & L. von Staden

Distribution: KZN. Nigeria, Angola, Botswana and Durban, mouth of the Umgeni River.

Habitat: Moist sand in grassland or mud in shade, prefers to colonise recently disturbed habitats.

Rationale: Although very little is known about the global distribution and status of this species, it seems that the single known subpopulation in South Africa (with less than 50 mature individuals) was established as a result of immigration from another subpopulation outside the borders of South Africa. This species favours disturbed areas and the site where it occurs was bulldozed ± eight years before the discovery of the South African subpopulation. From this we infer immigration has taken place. The species is therefore downgraded from CR to EN based on the regional criteria.

POACEAE

Colpodium Trin.

Colpodium drakensbergense Hedberg & I.Hedberg

Status: **VU** B2ab(iii)

E. Sieben & L. Fish

Distribution: KZN. Drakensberg and Maluti Mountains (mainly in Lesotho).

Habitat: Wet places, in streams and moors at high altitudes, 2 000–3 500 m.

Rationale: AOO < 2 000 km^2. Known from fewer than 10 locations. Most locations are from Lesotho, where overgrazing and trampling by livestock is a serious threat to wetlands and a cause of habitat erosion.

Dregeochloa Conert

Dregeochloa calviniensis Conert

Status: **Rare**

J.E. Victor, R.P. Ellis & L. Fish

[e]**Distribution:** NC. Loeriesfontein and Van Wyksvlei.

Habitat: Limestone outcrops in arid succulent karoo shrubland.

Rationale: A habitat specialist, occurring as localised subpopulations. No known threats.

Ehrharta Thunb.

Ehrharta eburnea Gibbs Russ.

Status: **NT** D2

G.A. Verboom, D. Raimondo, J.E. Victor & L. Fish

[e]**Distribution:** NC. Calvinia, Sutherland and Montagu.

Habitat: Rocky places in mountain renosterveld.

Rationale: Known from six locations from two disjunct areas: from the Calvinia, Sutherland and Montagu districts. Subpopulations are highly localised. Potentially declining as a result of grazing by livestock.

[F] **Ehrharta setacea** Nees subsp. **uniflora** (Burch. ex Stapf) Gibbs Russ.

Status: **VU** B1ab(ii,iii,iv,v)

G.A. Verboom & D. Raimondo

[e]**Distribution:** WC. Betty's Bay to Simon's Town.

Habitat: Seepage areas and marshy places and along watercourses, mostly at low altitudes.

Rationale: EOO < 2 000 km^2. Known from nine locations, many of which occur at low altitudes and are experiencing ongoing decline owing to coastal development.

Elytrophorus P.Beauv.

Elytrophorus globularis Hack.

Status: **VU** D2

J.E. Victor & L. Fish

Distribution: LM. Nylsvley in South Africa. Also in tropical Africa, extending south to Namibia and Botswana and east to Tanzania.

Habitat: Wet depressions and vleis, seasonally submerged. Bottom-rooted or floating at edge of vleis and pans.

Rationale: A highly disjunct distribution that might not easily be recolonised from non-South African subpopulations. Potentially threatened in South Africa by invading alien plants and changes in hydrology associated with upstream extraction of water for agriculture as well as by an application for mining.

Eulalia Kunth

[F] **Eulalia aurea** (Bory) Kunth

Status: **NT**[*] D2

P.A. Manyama & D. Raimondo

Distribution: LM. Waterberg in Limpopo, widespread in southern and eastern Africa, from Botswana to Kenya.

Habitat: In water, along rivers and in occasionally inundated soils.

Rationale: Known from two locations in South Africa. Potentially threatened by agriculture and the associated extraction of water. There are over 30 specimens in South African herbaria collected from other wetlands throughout southern and eastern Africa. As it has effective long-distance dispersal, the national assessment is downgraded from VU to NT.

Festuca L.

Festuca dracomontana H.P.Linder

Status: **VU** D2

P.A. Manyama

Distribution: LM. Haenertsburg and in Lesotho.

Habitat: Damp sites, especially sedge meadows.

Rationale: Known from two disjunct locations. The one that occurs in South Africa is potentially threatened by afforestation.

[F] **Festuca vulpioides** Steud.

Status: **DD**D

J.E. Victor & L. Fish

[e]**Distribution:** EC. Eastern Cape Drakensberg Mountains, near Barkly East.

Habitat: High-altitude sourveld.

Rationale: Known only from the type, collected in 1959. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Helictotrichon Besser

Helictotrichon barbatum (Nees) Schweick.

Status: **VU** D2

J.E. Victor & L. Fish

[e]**Distribution:** NC. Kamiesberg, Hantamsberg Mountain and Roggeveld.

Habitat: Lower rocky slopes in mountain renosterveld on clays.

Rationale: Known from three disjunct locations and potentially threatened by overgrazing.

Helictotrichon namaquense Schweick.

Status: **VU** B1ab(iii,v)

J.E. Victor, D. Raimondo & L. Fish

[e]**Distribution:** NC. Roggeveld and Hantamsberg Mountain.

Habitat: Sandy flats in mountain renosterveld.

Rationale: EOO < 6 600 km^2. Locations suspected to be fewer than 10. For a long time known only from the type collected in the Kamiesberg in 1835. In 1948 it was rediscovered at De Hoop in the Calvinia district. Acocks (1990) indicated that this taxon had a very similar distribution to *H. barbatum* occurring on all the Karoo mountains, i.e. Bokkeveld, Kamiesberg, Roggeveld and Hantamsberg, but stated that it had disappeared from much of its range because of overgrazing. Acocks recorded this species only from the Roggeveld. The species was rediscovered in 1986 in the Roggeveld where it was common along the roadside verges but declining as a result of heavy grazing.

Helictotrichon quinquesetum (Steud.) Schweick.

Status: **CR** PE

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Cape Peninsula.

Habitat: Unknown.

Rationale: Known from two collections on Table Mountain made during the 1800s, but not recorded since despite numerous searches. It is likely to be extinct.

Merxmuellera Conert

[F] **Merxmuellera cincta** (Nees) Conert subsp. **sericea** N.P.Barker

Status: **VU** B1ab(i,iii,iv,v)

J.E. Victor, A.P. Dold & L. Fish

[e]**Distribution:** EC. Cape St Francis to Kei Mouth.

Habitat: Coastal dunes, in sandy seeps underlain by rock shelf.

Rationale: EOO < 700 km^2. Known from fewer than 10 locations. Declining as a result of invasion by alien plants and coastal housing developments.

[F] **Merxmuellera papposa** (Nees) Conert

Status: **VU** B1ab(ii,iii,iv,v)

L. Fish, N.P. Barker, N.A. Helme & D. Raimondo

[e]**Distribution:** EC. Uitenhage and Baviaanskloof.

Habitat: Transition between mountain renosterveld and fynbos on alluvial soils and along streams in flat, well-drained, pebbly river washes.

Rationale: EOO 19 700 km^2. Known from fewer than 10 locations. Declining as a result of invasion by alien plants in the Baviaanskloof and along the Van Stadens and Swartkops Rivers, and quarrying and urban expansion around Uitenhage.

Merxmuellera setacea N.P.Barker

Status: **Rare**

L. Fish, N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Groot Winterhoek Mountains and Skurweberge.

Habitat: Seepage areas and seasonally waterlogged, shallow soils overlying bedrock.

Rationale: A range-restricted habitat specialist (EOO < 400 km^2), known from two subpopulations. No known threats.

Oryza L.

[F] **Oryza longistaminata** A.Chev. & Roehr.

Status: **VU** D2

J.E. Victor, L. Fish & P.A. Manyama

Distribution: LM. In South Africa only near Mookgophong, widespread across tropical Africa.

Habitat: Seasonally flooded areas, wetlands, 900–1 000 m.

Rationale: The South African subpopulation may actually be a single clonal individual. This 'subpopulation' is potentially threatened by water pollution and upstream extraction of water. It is unknown whether the other African subpopulations are also clonal.

Oxyrhachis Pilg.

[F] **Oxyrhachis gracillima** (Baker) C.E.Hubb.

Status: **NT**[*] D2

J.E. Victor & L. Fish

Distribution: EC KZN. Port Edward and Mkambati Game Reserve, Tanzania, Sierra Leone, Cameroon, Zambia and Madagascar.

Habitat: Along streams and in wet grassland.

Rationale: In South Africa, known from fewer than five locations. Potentially threatened by mining and changing hydrodynamics caused by the removal of vegetation. However, its range extends throughout Africa, and since it is a highly mobile species the regional assessment is downgraded from VU to NT.

Panicum L.

Panicum dewinteri J.G.Anderson

Status: **NT** B1ab(iii)

J.E. Victor & L. Fish

[e]**Distribution:** LM. Soutpansberg and Blouberg Mountains.

Habitat: Rocky outcrops and rock crevices, 1 070–1 830 m.

Rationale: EOO < 5 700 km². Known from 11 locations and declining at a slow rate because of human trampling, invasive alien plants and infrastructure development.

Pentameris P.Beauv.

[F] **Pentameris glacialis** N.P.Barker

Status: **Rare**
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Swartberg Mountains.
Habitat: South-facing gullies at high altitudes.
Rationale: A range-restricted species (EOO < 100 km²), known from one subpopulation but likely to occur at a few more undiscovered sites. No known threats.

[F] **Pentameris hirtiglumis** N.P.Barker

Status: **Rare**
J.E. Victor & L. Fish
[e]**Distribution:** WC. Hottentots Holland Mountains.
Habitat: Moderate to high-altitude shale bands.
Rationale: A range-restricted species (EOO < 50 km²), known from three subpopulations. No recorded threats.

Pentameris longiglumis (Nees) Stapf subsp. **gymnocolea** N.P.Barker

Status: **Rare**
N.A. Helme, L. Fish & D. Raimondo
[e]**Distribution:** WC. Kogelberg.
Habitat: Seepage areas on southern slopes.
Rationale: A range-restricted taxon (EOO < 20 km²), known from fewer than five subpopulations. No recorded threats.

Pentameris longiglumis (Nees) Stapf subsp. **longiglumis**

Status: **VU** D2
N.A. Helme, L. Fish & D. Raimondo
[e]**Distribution:** WC. Cape Peninsula, Table Mountain.
Habitat: Seepage areas on gentle slopes.
Rationale: EOO and AOO < 10 km². Known from one location. Potentially threatened by a deleterious fire regime and invasion by alien plants.

[F] **Pentameris swartbergensis** N.P.Barker

Status: **Rare**
J.E. Victor & L. Fish
[e]**Distribution:** WC. Klein Swartberg Mountains.
Habitat: Deep shade at foot of cliffs or rock walls.
Rationale: A range-restricted species (EOO 60 km²), known from two sites. It has no recorded threats.

[F] **Pentameris uniflora** N.P.Barker

Status: **Rare**
J.E. Victor & L. Fish
[e]**Distribution:** WC. Riviersonderend Mountains to Robinson Pass.
Habitat: Damp, rocky, south-facing mountain slopes.
Rationale: A habitat specialist known from three subpopulations. Not threatened.

Pentaschistis (Nees) Spach

[F] **Pentaschistis aspera** (Thunb.) Stapf

Status: **NT** B1ab(ii,iii,iv,v)
N.A. Helme
[e]**Distribution:** WC. Cape Peninsula and Betty's Bay to Kleinmond.
Habitat: Stony lower sandstone slopes.
Rationale: EOO < 900 km². Known from less than 15 locations. Declining as a result of coastal development and invasion by alien plants.

Pentaschistis barbata (Nees) H.P.Linder subsp. **orientalis** H.P.Linder

Status: **CR** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v); D
D. Raimondo & A.L. Schutte-Vlok
[e]**Distribution:** WC. Goukamma Nature Reserve.
Habitat: Coastal dunes.
Rationale: A highly range-restricted taxon (EOO < 6 km², AOO < 1 km²), known from two subpopulations in the Knysna area. The subpopulation inside the Goukamma Reserve disappeared over the past 10 years, most likely as a result of incorrect fire management. The second subpopulation (outside the reserve) is severely threatened by invasive alien plants and urban development. There are less than 50 extant mature individuals of this taxon.

[F] **Pentaschistis calcicola** H.P.Linder var. **calcicola**

Status: **NT** B1ab(ii,iii,iv,v)
J.E. Victor & N.A. Helme
[e]**Distribution:** WC. Gansbaai to Mossel Bay.
Habitat: Limestone pavements.
Rationale: EOO 2 350 km². Known from 15 locations. Declining because of invasive alien acacias, coastal development and lack of fire associated with coastal development.

Pentaschistis calcicola H.P.Linder var. **hirsuta** H.P.Linder

Status: **VU** B1ab(iii)+2ab(iii)
D. Raimondo & N.A. Helme
[e]**Distribution:** WC. Bredasdorp to Riversdale.
Habitat: Limestone outcrops.
Rationale: EOO 826 km², AOO < 825 km². Habitat quality at six known locations continues to decline as a result of invading alien acacias.

[F] **Pentaschistis caulescens** H.P.Linder

Status: **Rare**
D. Raimondo
[e]**Distribution:** WC. Mountains around Ceres.
Habitat: High-altitude shale bands and dry stony slopes.
Rationale: Known from two subpopulations (EOO < 300 km²). This alpine habitat specialist has no recorded threats.

[F] **Pentaschistis clavata** C.A.Galley

Status: **Rare**
P.A. Manyama
[e]**Distribution:** WC. Kouebokkeveld.
Habitat: Damp sand derived from Table Mountain Sandstone as well as streambanks in wet moss, 1 270 m.
Rationale: This recently described species is known from a single site above the farm De Boom in the Kouebokkeveld (EOO < 10 km²). No known threats.

Pentaschistis ecklonii (Nees) McClean

Status: **EN** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)
D. Raimondo & N.A. Helme
[e]**Distribution:** WC. Hopefield to Cape Flats and Wolseley.
Habitat: Seasonally waterlogged sands and shales on lowlands.
Rationale: EOO 3 445 km², AOO less than 3 km². A low-

land species that occurs only on seasonally waterlogged areas. Some 75% of known locations have gone extinct as a result of urban development and crop cultivation. This species remains extant at only five locations where it is threatened by invasive alien plants and continuing urban and agricultural expansion.

Pentaschistis elegans (Nees) Stapf

Status: **CR** B1ab(i,ii,iii,iv)+2ab(i,ii,iii,iv)
J.E. Victor, L. Fish & D. Raimondo

[e]**Distribution:** WC. Bredasdorp.

Habitat: Sand over laterite.

Rationale: EOO 41 km^2, AOO < 5 km^2. Known from a collection in 1943 and another in 1989, both from the Ratel River area on the Agulhas Plain. Much of its habitat has been transformed to crop cultivation and is infested by invasive alien acacias. A recent search at the 1989 location failed to relocate it. However, there is still suitable habitat at Ratel River and it is not yet considered CR PE.

[F] **Pentaschistis holciformis** (Nees) H.P.Linder

Status: **Rare**
N.A. Helme

[e]**Distribution:** WC. Hottentots Holland and Kogelberg Mountains.

Habitat: Sandstone mountain slopes, favouring lightly disturbed areas.

Rationale: A range-restricted species (EOO < 500 km^2), known from fewer than 10 subpopulations, not threatened.

[F] **Pentaschistis horrida** C.A.Galley

Status: **Rare**
P.A. Manyama

[e]**Distribution:** WC. Baviaansberg to Waboomsberg.

Habitat: Mountain summit plateaus and sometimes on steep slopes.

Rationale: A recently described species, known from a restricted range (EOO < 240 km^2), from two subpopulations. Not threatened.

Pentaschistis lima (Nees) Stapf

Status: **NT** D2
N.A. Helme, J.E. Victor & L. Fish

[e]**Distribution:** NC. Namaqualand, Kamiesberg.

Habitat: South-facing slopes in shallow soils at the base of granitic domes.

Rationale: Known from six locations in the Kamiesberg. Potentially threatened by crop cultivation and by grazing by livestock.

[F] **Pentaschistis longipes** Stapf

Status: **VU** D2
D. Raimondo, J.E. Victor & L. Fish

[e]**Distribution:** EC. Humansdorp.

Habitat: Stable dunes in association with thicket.

Rationale: EOO < 60 km^2, AOO < 20 km^2. Known from one location. Potentially threatened by coastal development, crop cultivation and invasive alien acacias.

[F] **Pentaschistis scandens** H.P.Linder

Status: **EN** B1ab(ii,iii,v)
D. Raimondo & N.A. Helme

[e]**Distribution:** WC. Ratel River to Potberg.

Habitat: Sandy soils on coastal flats.

Rationale: EOO 683 km^2. Occurring only on coastal sands in the Bredasdorp district. It has lost 40% of subpopulations to crop cultivation. The remaining five locations are threatened by encroachment from invasive alien acacias and ongoing agricultural expansion.

[F] **Pentaschistis trifida** C.A.Galley

Status: **VU** D2
P.A. Manyama

[e]**Distribution:** WC. Ceres district, Baviaansberg.

Habitat: Deep, sandy soil derived from Table Mountain Sandstone.

Rationale: A recently described species, EOO < 10 km^2. Known from one location along a disturbed pathway. Potentially threatened by trampling.

Prionanthium Desv.

Prionanthium dentatum (L.f.) Henrard

Status: **EN** B1ab(ii,iii)+2ab(ii,iii)
J.E. Victor & R.P. Ellis

[e]**Distribution:** NC. Bokkeveld Escarpment, Nieuwoudtville.

Habitat: Clay soils derived from Dwyka tillite in renosterveld.

Rationale: EOO 80 km^2, AOO 20 km^2. Known from fewer than five locations. This range-restricted species has lost 85% of its habitat to wheat cultivation. Its habitat is being degraded because of alien grass invasions and overgrazing by livestock. Olive cultivation and road construction projects are potential threats.

Prionanthium ecklonii (Nees) Stapf

Status: **EN** B1ab(ii,iii,iv,v)
J.E. Victor & L. Fish

[e]**Distribution:** WC. Olifants River Mountains and Piketberg.

Habitat: Sandy soils in arid fynbos.

Rationale: EOO 1 500 km^2. Most of its habitat has been lost to wheat and citrus cultivation and to the construction of the Clanwilliam Dam. Three remaining locations continue to decline as a result of ongoing habitat loss to road construction projects and the cultivation of rooibos tea.

Prionanthium pholiuroides Stapf

Status: **EN** B1ab(ii,iii,iv,v)
N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Malmesbury to Struisbaai.

Habitat: Sands overlying shales, seasonally waterlogged.

Rationale: EOO 4 000 km^2. This species has lost over 80% of its habitat to wheat and vineyard cultivation over the past 100 years. Extant at only four locations, it is declining as a result of invasive alien plants, crop cultivation and urban development.

Sartidia De Winter

Sartidia jucunda (Schweick.) De Winter

Status: **VU** D2
P.A. Manyama & D. Raimondo

[e]**Distribution:** LM. Blouberg.

Habitat: Stony slopes, 1 300–2 000 m.

Rationale: A range-restricted species, EOO 35 km^2, AOO < 20 km^2. Recorded from only one location. Potentially threatened by overgrazing by livestock.

Schismus P.Beauv.

[F] **Schismus pleuropogon** Stapf

Status: **CR** B1ab(iii)

D. Raimondo & R.C. Turner

[e]**Distribution:** WC. Riversdale district, Garcia's Pass.

Habitat: Damp places at low altitudes.

Rationale: EOO < 10 km^2. Recorded from two locations, one destroyed for crop cultivation, the remaining one declining because of invasive pines.

Secale L.

Secale strictum (J.Presl) J.Presl subsp. **africanum** (Stapf) K.Hammer

Status: **CR** D

D. Raimondo, J.C. Manning & L. Fish

[e]**Distribution:** NC. Roggeveld.

Habitat: Riverbanks.

Rationale: A range-restricted taxon that was once common on the Roggeveld, but is now known from one subpopulation on a farm, where there are less than 50 mature individuals. This taxon has experienced severe declines due to overgrazing and poor veld management. It is cultivated and several attempts are being made to reintroduce it to other properties on the Roggeveld.

Sporobolus R.Br.

[F] **Sporobolus oxyphyllus** L.Fish

Status: **NT** B2ab(ii,iii,iv,v)

P.A. Manyama

[e]**Distribution:** EC FS NC NW. Southern North West Province, western Free State and Eastern and Northern Cape Provinces bordering the Free State.

Habitat: Grows in areas of high 'sodic' soils, especially at the edge of salt pans and in saline vleis.

Rationale: A species with a restricted occupancy because of its specificity to sodic pans (AOO < 20 km^2). Known from 11 locations but likely to occur at a few more. Experiencing an ongoing degradation and alteration of its habitat as a result of crop cultivation.

Stipagrostis Nees

Stipagrostis proxima (Steud.) De Winter

Status: **Rare**

J.E. Victor & L. Fish

[e]**Distribution:** EC FS. Bethulie and Aliwal North.

Habitat: Sandy soils in disturbed areas.

Rationale: A range-restricted species (EOO < 500 km^2), known from two subpopulations. This species has no recorded threats.

Tribolium Desv.

[F] **Tribolium ciliare** (Stapf) Renvoize

Status: **VU** B1ab(ii,iii,iv,v)

D. Raimondo & L. Fish

[e]**Distribution:** WC. Agulhas Peninsula to De Hoop.

Habitat: Limestone slopes and flats.

Rationale: A coastal limestone endemic (EOO < 1 400 km^2) known from 5–10 locations. Subpopulations occurring outside De Hoop Nature Reserve are threatened by encroachment from invasive alien acacias, coastal housing developments, protea orchards and grazing by livestock.

PRIONIACEAE

Prionium E.Mey.

Prionium serratum (L.f.) Drège ex E.Mey.

Status: **Declining**

J.E. Victor

[e]**Distribution:** EC KZN WC. Western and Eastern Cape as far as Grahamstown and from Port St Johns to southern KwaZulu-Natal.

Habitat: An aquatic or semi-aquatic plant growing in marshy coastal areas, and along rivers.

Rationale: Declining in KwaZulu-Natal as a result of harvesting for medicinal purposes. Its wetland habitat is being degraded by overgrazing and frequent fires. The decline across its range is insufficient for listing as NT.

RESTIONACEAE

Anthochortus Nees

[F] **Anthochortus capensis** Esterh.

Status: **Rare**

H.P. Linder & D. Raimondo

[e]**Distribution:** WC. Cape Peninsula to Betty's Bay.

Habitat: Permanent seeps.

Rationale: A habitat specialist known from two sites on the Cape Peninsula (both protected) and one at Betty's Bay. It has no known threats.

[F] **Anthochortus graminifolius** (Kunth) H.P.Linder

Status: **Rare**

N.A. Helme

[e]**Distribution:** WC. Paarl to Caledon.

Habitat: Damp slopes and seeps.

Rationale: A rare mountain seepage species known from six subpopulations. Not threatened.

[F] **Anthochortus insignis** (Mast.) H.P.Linder

Status: **VU** D2

H.P. Linder, N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Mountains around Ceres.

Habitat: High-energy permanent streams.

Rationale: AOO < 20 km^2. Restricted to the lower reaches of a few streams and in some marshes in the Ceres basin. Potentially threatened by modification of water flow caused by damming and weir construction upstream of subpopulations.

[F] **Anthochortus singularis** Esterh.

Status: **VU** D2

H.P. Linder & N.A. Helme

[e]**Distribution:** WC. Southern Cederberg to Groot Winterhoek Mountains.

Habitat: Well-drained sandy plains, possibly waterlogged in winter, very dry in summer.

Rationale: Known from two or three widely separated subpopulations, one of which is potentially threatened by pine plantations.

Askidiosperma Steud.

[F] **Askidiosperma alticolum** (Esterh.) H.P.Linder

Status: **Rare**

D. Raimondo, P.A. Manyama & D.A. Kamundi†

[e]**Distribution:** WC. Hex River Mountains, Mostertshoek Twins to Milner Peak and Jan Du Toit's Pinnacles.

Habitat: Among rocks, on ledges with trickling water, on steep, south-facing, rocky slopes and along streams.
Rationale: A range-restricted species (EOO 112 km^2) known from three subpopulations. Occurs as localised patches among rocks in moist sites and has no known threats.

[F] **Askidiosperma delicatulum** H.P.Linder

Status: **Critically Rare**
L. von Staden, N.A. Helme & H.P. Linder
[e]**Distribution:** WC. Kouebokkeveld, Vleiberg.
Habitat: Fynbos, quartzite slopes, 1 300–1 600 m.
Rationale: Known from only one site in a remote mountainous area where it is not threatened.

Askidiosperma longiflorum (Pillans) H.P.Linder

Status: **NT** D2
H.P. Linder & D. Raimondo
[e]**Distribution:** WC. Kouebokkeveld and Hex River Mountains.
Habitat: Marshy places and dry, north-facing, stony slopes.
Rationale: Known from fewer than 10 locations. Potentially threatened by fires that are too frequent and in the wrong season and by invasive alien plants.

Calopsis P.Beauv. ex Desv.

[F] **Calopsis clandestina** Esterh.

Status: **Rare**
D. Raimondo, P.A. Manyama & D.A. Kamundi†
[e]**Distribution:** WC. Kogelberg and Kleinrivier Mountains.
Habitat: Marshes or in shallow sand over rock, 10–1 000 m.
Rationale: Known from 2–5 subpopulations (EOO 165 km^2), localised in seasonally wet areas. No known threats.

[F] **Calopsis dura** Esterh.

Status: **Rare**
D. Raimondo, P.A. Manyama & D.A. Kamundi†
[e]**Distribution:** WC. Southern Cederberg to Op-die-Berg.
Habitat: Sand on suurvlaktes, under well-drained conditions, or in stony, well-drained habitats, 1 000–1 500 m.
Rationale: It has a restricted range (EOO 353 km^2), known from three subpopulations. No known threats.

Calopsis impolita (Kunth) H.P.Linder **Plate 36**

Status: **VU** B1ab(ii,iii,iv,v)
H.P. Linder & J.E. Victor
[e]**Distribution:** WC. Cape Town to Leipoldtville.
Habitat: Leached, acid coastal sands, 50–200 m.
Rationale: EOO < 7 000 km^2. This species has lost most of its habitat to wheat cultivation over the past 100 years and is now known from 13 severely fragmented subpopulations. Continuing to decline as a result of vineyard, potato and rooibos tea cultivation and infestations of invasive alien plants.

Calopsis levynsiae (Pillans) H.P.Linder **Plate 36**

Status: **Rare**
H.P. Linder & D. Pillay
[e]**Distribution:** WC. Kouebokkeveld, Swartruggens and Watervalberg.
Habitat: Among rocks on sandy plains, prefers the shelter of large sandstone boulders or outcrops, but grows in deep sands, 1 000–1 400 m.
Rationale: A range-restricted species (EOO < 500 km^2), known from three sites. No known threats.

Calopsis monostylis (Pillans) H.P.Linder

Status: **Rare**
J.E. Victor
[e]**Distribution:** WC. Langeberg Mountains, between Misty Point and Garcia's Pass.
Habitat: Damp, peaty soil, on seeps and somewhat marshy places, 900–1 700 m.
Rationale: A range-restricted species (EOO < 500 km^2). Can be locally common in suitable habitat, it has no known threats.

[F] **Calopsis sparsa** Esterh.

Status: **VU** D2
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Kogelberg.
Habitat: Rocky sandstone slopes.
Rationale: EOO < 35 km^2, AOO < 10 km^2. Known from two locations. One location is potentially threatened by encroachment from invasive alien pines and hakeas.

Cannomois P.Beauv. ex Desv.

Cannomois aristata Mast.

Status: **Rare**
H.P. Linder & D. Pillay
[e]**Distribution:** WC. Cederberg and Kouebokkeveld Mountains.
Habitat: Dry, well-drained slopes on sandstones, generally between rock outcrops on deeper sands.
Rationale: EOO 2 500 km^2. Known from three sites: Wolfberg and the adjacent slopes to Eselsbank in the Cederberg, Baviaansberg, and the Bonteberg. Subpopulations are very localised, and have no known threats.

Ceratocaryum Nees

Ceratocaryum fistulosum Mast.

Status: **Rare**
H.P. Linder & D. Pillay
[e]**Distribution:** WC. Langeberg Mountains between Swellendam and Riversdale.
Habitat: Steep, upper, south-facing slopes, sometimes near rock outcrops, 600–1 300 m.
Rationale: A range-restricted species (EOO < 60 km^2), known from three subpopulations. No known threats.

[F] **Ceratocaryum persistens** H.P.Linder

Status: **Rare**
D. Raimondo, P.A. Manyama & D.A. Kamundi†
[e]**Distribution:** WC. Kogelberg and Franschhoek Mountains.
Habitat: Well-drained slopes, not in seepages or on rock ledges, 400–600 m.
Rationale: A range-restricted species (EOO 80 km^2), known from five subpopulations. No known threats.

Ceratocaryum pulchrum H.P.Linder

Status: **CR** A2a; B1ab(v)+2ab(v)
H.P. Linder, D. Raimondo & J.E. Victor
[e]**Distribution:** WC. Elim.
Habitat: On a sandstone ridge in well-drained sandy soils, in restioid/proteiod fynbos, 200 m.
Rationale: EOO and AOO < 2 km^2. Known from one subpopulation. Between 1995 and 2002 over 80% of the plants died. This decline took place in less than one generation. Generation length of this rhizomatous species is estimated to be 20 years. The reason for the death of individuals is unknown.

Elegia L.

Elegia acockii (Pillans) Moline & H.P.Linder

Status: **EN** B1ab(ii,iii,v)

D. Raimondo & J.E. Victor

e**Distribution:** WC. Cape Flats to Malmesbury.

Habitat: Acid coastal sandy flats, 100–200 m.

Rationale: EOO 425 km^2. Known from five historical locations. Definitely extinct at Kraaifontein and Stellenbosch and extant at Riverlands Nature Reserve, where it is experiencing slow but continuing decline in habitat quality as a result of invasion by alien plants. At Preekstoel and Kalbaskraal, small areas of intact habitat still remain between wheat fields. This species may still be extant in these fragments, but would also be experiencing an ongoing threat from invading alien plants, fertiliser runoff and too frequent fires.

Elegia altigena Pillans

Status: **VU** D2

J.E. Victor & R.C. Turner

e**Distribution:** WC. Kammanassie Mountains.

Habitat: Sandstone slopes, 1 800 m.

Rationale: Known from one location, (EOO 8 km^2). Potentially threatened by too frequent fires.

F **Elegia amoena** Pillans

Status: **Rare**

N.A. Helme

e**Distribution:** WC. Slanghoek Mountains, from Wellington Sneeukop to Witteberg.

Habitat: Dry fynbos slopes at higher altitudes, sometimes on shale bands, mostly on southern aspects, 1 400–1 600 m.

Rationale: Known from very high-altitude peaks (EOO < 20 km^2). It has no known threats.

Elegia extensa Pillans

Status: **EN** B1ab(ii,iii)

H.P. Linder, N.A. Helme, D. Raimondo & R.C. Turner

e**Distribution:** WC. Wolseley to Bredasdorp.

Habitat: Interface between renosterveld and fynbos, on sandstone gravel over shale, in loamy soils.

Rationale: EOO < 2 000 km^2. Known from three widely separated locations, none of which are conserved. Declining because of encroachment from invasive alien pines, as well as grazing by livestock and other factors associated with occurring in small fragments within highly transformed agricultural landscapes.

Elegia fenestrata Pillans

Status: **VU** B1ab(i,ii,iii,iv)

H.P. Linder, R.C. Turner & D. Pillay

e**Distribution:** EC WC. Cape Peninsula to Bredasdorp, and Humansdorp.

Habitat: Coastal marshy areas, and along the banks of small streams.

Rationale: EOO < 8 500 km^2. Known from nine locations. Its coastal habitat is threatened by invasive alien plants and coastal development.

F **Elegia fucata** Esterh.

Status: **Rare**

D. Raimondo, P.A. Manyama & D.A. Kamundi†

e**Distribution:** WC. Northern slopes of the Riviersonderend Mountains.

Habitat: In seeps and along streams, often in deeper soil, 1 500–1 600 m.

Rationale: Restricted to Jonaskop and the Wildepaardeberg, known from a single subpopulation (EOO 10 km^2). No known threats.

Elegia prominens Pillans

Status: **VU** B1ab(i,ii,iii,iv,v)

H.P. Linder, J.E. Victor & R.C. Turner

e**Distribution:** WC. Yzerfontein to Bredasdorp.

Habitat: Acid coastal sands in well-drained and damp sites, 50–200 m.

Rationale: EOO < 2 500 km^2. This coastal foreland species has lost at least nine historical locations to urban development and is now known from 5–10 locations. Threatened at all except the Cape Point subpopulation by invading alien plants and ongoing urban development.

Elegia recta (Mast.) Moline & H.P.Linder **Plate 36**

Status: **NT** B1ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

e**Distribution:** WC. Malmesbury to Agulhas Plain.

Habitat: Seasonally waterlogged habitats, over a wide range of soils including shale or acid coastal sands.

Rationale: EOO < 15 000 km^2. Known from less than 20 locations. Declining as a result of crop cultivation, coastal and urban development, invasion by alien plants and overgrazing by livestock.

Elegia verreauxii Mast. **Plate 36**

Status: **VU** B1ab(i,ii,iii,iv,v)

H.P. Linder, D. Raimondo & R.C. Turner

e**Distribution:** WC. Malmesbury to Bredasdorp.

Habitat: Seasonally waterlogged habitats, on the sand plains largely restricted to hollows, where it forms dense, monospecific mats.

Rationale: EOO < 5 600 km^2. Known from 11 severely fragmented subpopulations. Declining both within reserves as a result of severe invasion by alien plants and outside reserves owing to habitat loss to crop cultivation and urban development. There has been an overall loss of at least 70% of its habitat.

Hypodiscus Nees

Hypodiscus alternans Pillans

Status: **VU** D2

H.P. Linder, R.C. Turner & D. Raimondo

e**Distribution:** WC. Kleinmond to Elgin.

Habitat: Stony slopes in marshy as well as rocky areas.

Rationale: EOO 150 km^2. A Kogelberg endemic known from fewer than five locations and potentially threatened by too frequent fires.

F **Hypodiscus montanus** Esterh.

Status: **EN** D

R.C. Turner, P.A. Manyama & D.A. Kamundi†

e**Distribution:** WC. Langeberg, Goedgeloof Peak.

Habitat: Shallow soils along sandstone ridges.

Rationale: Known from one extremely localised subpopulation of less than 250 plants. Potentially threatened by frequent fires, as well as by encroachment from scattered invasive alien pines and hakeas.

F **Hypodiscus procurrens** Esterh.

Status: **EN** B1ab(ii,iii,v)

N.A. Helme

e**Distribution:** WC. Stanford to Mossel Bay.

Habitat: Deep sand associated with coastal limestone outcrops.
Rationale: EOO 4 665 km². Known from seven locations. Occurs as small, naturally fragmented subpopulations, with most of them declining as a result of either coastal development or invasion by alien plants.

F **Hypodiscus squamosus** Esterh.

Status: **VU** D2
N.A. Helme
e**Distribution:** WC. Riviersonderend Mountains.
Habitat: Gravelly sandstone slopes and flats.
Rationale: Known from two locations, potentially threatened by protea cultivation, encroachment from invasive alien pines and housing developments.

Hypodiscus sulcatus Pillans

Status: **EN** B1ab(ii,iii,v)
H.P. Linder, D. Raimondo & R.C. Turner
e**Distribution:** WC. Witteberg and Bonteberg Mountains.
Habitat: Heavy loamy soils, with renosterbos, absent from sandstone-derived soils.
Rationale: EOO 620 km². Known from three locations in close proximity to each other and all on rich soils suitable for cultivation. Declining as a result of crop cultivation and possibly incorrect fire regime.

Ischyrolepis Steud.

F **Ischyrolepis affinis** Esterh.

Status: **Rare**
H.P. Linder, D. Raimondo, P.A. Manyama & D.A. Kamundi†
e**Distribution:** WC. Langeberg Mountains.
Habitat: Moist areas on rocky, south-facing slopes.
Rationale: A range-restricted species (EOO < 20 km²) known from two collections from high-altitude slopes. It has no known threats.

F **Ischyrolepis arida** (Pillans) H.P.Linder

Status: **VU** B1ab(iii,v)
R.C. Turner
e**Distribution:** NC WC. Witteberg at Laingsburg, Touwsrivier Mountains, the Hex River Mountains and Lokenburg near Nieuwoudtville.
Habitat: Sandstone slopes.
Rationale: EOO < 13 000 km². Known from fewer than 10 locations, declining because of incorrect fire regime and overgrazing by livestock.

Ischyrolepis coactilis (Mast.) H.P.Linder

Status: **VU** D2
H.P. Linder & D. Pillay
e**Distribution:** WC. Tulbagh to Wellington.
Habitat: Slight seepage areas near sandstone outcrops, 400–600 m.
Rationale: Known from two locations, potentially threatened by invasive alien plants and incorrect fire regime.

Ischyrolepis duthieae (Pillans) H.P.Linder **Plate 36**

Status: **VU** B1ab(ii,iii,iv,v)
D. Raimondo & R.C. Turner
e**Distribution:** WC. Malmesbury to False Bay, and Worcester.
Habitat: Loamy soils derived from granites or coastal acid sand, often in slight seepages that are susceptible to drying out if rainfall is inadequate.
Rationale: EOO 5 520 km². A lowland species that has lost 96% of its habitat and several subpopulations to wheat cultivation; loss is continuing in many parts of its range. Remaining subpopulations are severely fragmented.

Ischyrolepis esterhuyseniae (Pillans) H.P.Linder

Status: **Rare**
H.P. Linder & D. Pillay
e**Distribution:** WC. Karoopoort and the mountains around Touwsrivier at the western end of the Great Karoo.
Habitat: Lower slopes, sandstone rubble overlying shale.
Rationale: Known from a restricted range (EOO < 500 km²). Common on the slopes of the Bonteberg. Not under threat from cultivation.

F **Ischyrolepis feminea** Esterh.

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)
R.C. Turner & D. Raimondo
e**Distribution:** WC. Western Agulhas coast.
Habitat: Coastal marshes, 5–15 m.
Rationale: A highly range-restricted coastal endemic (EOO < 20 km², AOO < 5 km²), known from two locations. Declining as a result of coastal housing development and draining of seasonal wetlands.

Ischyrolepis fuscidula (Pillans) H.P.Linder

Status: **Rare**
H.P. Linder & D. Pillay
e**Distribution:** WC. Audensberg.
Habitat: Dry, rocky mountain slopes, 900–1 700 m.
Rationale: A range-restricted species (EOO < 50 km²), known from one subpopulation. No known threats.

Ischyrolepis karooica Esterh.

Status: **Rare**
H.P. Linder & D. Pillay
e**Distribution:** WC. Karoopoort and Bonteberg Mountains.
Habitat: Well-drained, dry stony slopes, 900–1 100 m.
Rationale: A range-restricted species (EOO < 500 km²) known from fewer than five subpopulations. No recorded threats.

F **Ischyrolepis longiaristata** H.P.Linder

Status: **Rare**
N.A. Helme & D. Raimondo
e**Distribution:** NC WC. Matsikamma and Bokkeveld Escarpment.
Habitat: South- or east-facing shallow sands overlying sandstone ledges in semishade, often seasonally damp.
Rationale: A habitat specialist known from three subpopulations with no recorded threats.

F **Ischyrolepis paludosa** (Pillans) H.P.Linder **Plate 36**

Status: **VU** A2bc; B1ab(i,ii,iii,iv,v)
R.C. Turner, H.P. Linder & D. Raimondo
e**Distribution:** WC. Citrusdal to Bredasdorp and Agulhas.
Habitat: Seasonally wet sands.
Rationale: EOO 14 851 km². Most subpopulations of this predominantly lowland, habitat-specific species are threatened by urban development and encroachment from invasive alien acacias. Only sites in the Cape of Good Hope section of the Table Mountain National Park are well conserved. It has lost over 30% of its habitat to crops and urban expansion over the past three generations (generation length 30 years).

[F] **Ischyrolepis papillosa** Esterh. **Plate 36**

Status: **VU** A2abce

R.C. Turner

[e]**Distribution:** EC WC. Malmesbury to Bredasdorp and Humansdorp.

Habitat: Coastal flats and slopes on recent sands or clays.

Rationale: This species resprouts after fire and the generation length is likely to exceed 30 years. It has lost over 30% of its habitat and subpopulation over the past 90 years to urban development, crop cultivation, afforestation and invasion by alien plants.

[F] **Ischyrolepis pratensis** Esterh.

Status: **EN** A2ace ; B1ab(ii,iii,iv,v)

R.C. Turner & H.P. Linder

[e]**Distribution:** WC. Cape Peninsula, Worcester and Malmesbury.

Habitat: Seasonally waterlogged habitats on loamy sand, usually over an impervious laterite layer, in lowlands.

Rationale: EOO < 251 km^2. Four of the seven historically recorded subpopulations (71%) are on coastal lowlands between Cape Town and Gordon's Bay and are likely to be extinct as a result of urban development. This species coppices after fire, hence generation length is over 30 years. Currently extant at three locations and declining because of invasive alien plants and crop cultivation.

Ischyrolepis sabulosa (Pillans) H.P.Linder

Status: **EN** A2a; B1ab(ii,iii,iv,v)

D. Raimondo & J.E. Victor

[e]**Distribution:** WC. Cape Peninsula and Bredasdorp.

Habitat: Restricted to habitats that are waterlogged in winter, often growing partially submerged in water, 5–20 m.

Rationale: EOO 720 km^2. Known from the Cape Flats and a few subpopulations on the Agulhas Plain (a 140 km disjunction). Severely threatened by dense invasive alien plant infestations at all subpopulations. More than half of historical sites have been lost since 1965 as a result of urban expansion (generation length 20 years).

[F] **Ischyrolepis saxatilis** Esterh.

Status: **Rare**

D. Raimondo, P.A. Manyama & D.A. Kamundi†

[e]**Distribution:** WC. Franschhoek and Hottentots Holland Mountains.

Habitat: Rock ledges and in seeps, often in the vicinity of waterfalls, 300–1 200 m.

Rationale: A range-restricted species (EOO 20 km^2), known from five subpopulations with no recorded threats.

Ischyrolepis setiger (Kunth) H.P.Linder

Status: **Rare**

H.P. Linder & D. Raimondo

[e]**Distribution:** WC. Brandewyn River, near Clanwilliam.

Habitat: Shallow sand over sandstone outcrops and among sandstone ridges.

Rationale: EOO < 100 km^2. Occurring in areas not suitable for cultivation. Not threatened.

[F] **Ischyrolepis sp. nov.**

Voucher: *Esterhuysen 32998* BOL

Status: **EN** B1ab(iii,iv,v)

H.P. Linder & R.C. Turner

[e]**Distribution:** WC. Southern Agulhas Plain between Elim, Viljoenshof and the Soetanysberg.

Habitat: Gravelly soils or damp sand, often with impeded drainage, on low coastal plains.

Rationale: Although locally common, it occurs in a highly transformed area and is known from only three localised subpopulations. Threats from crop cultivation and invasion by alien plants are ongoing.

[F] **Ischyrolepis sp. nov.**

Voucher: *Linder, Harding & Moline 7523* BOL

Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v)

R.C. Turner

[e]**Distribution:** WC. Kouebokkeveld, from the Suurvlakte in the north to the summit of the Skurweberg Pass in the south.

Habitat: Quartzitic, acidic, montane sandy flats.

Rationale: A recently discovered new taxon known from two locations (EOO ± 498 km^2, AOO ± 9 km^2), but could occur elsewhere in the Skurweberg range. Habitat destruction on the Skurweberg Pass is causing continuing decline. It is also potentially threatened by forestry on the Suurvlakte and because it is only known from female plants.

[F] **Ischyrolepis tenuis** H.P.Linder

Status: **VU** D2

R.C. Turner

[e]**Distribution:** WC. Bloukop, north of the Kouebokkeveld Sneeukop, to Gabriel's Pass in the central Cederberg.

Habitat: Well-drained, sometimes rocky soils, also on shale bands in ecotones between renosterveld and fynbos, 900–1 500 m.

Rationale: Although locally common, this taxon is known from only five locations (EOO 200 km^2). It is potentially threatened by too frequent fires.

Ischyrolepis vilis (Kunth) H.P.Linder

Status: **Rare**

H.P. Linder, N.A. Helme & D. Raimondo

[e]**Distribution:** NC. Namaqualand, Kamiesberg.

Habitat: Granitic rocks, in well-drained loams, 1 450 m.

Rationale: A range-restricted species (EOO 500 km^2), known from several peaks, suggesting that there are several subpopulations. There is no formal protection for any of these subpopulations, but no severe threats are known.

Ischyrolepis wittebergensis Esterh.

Status: **Rare**

H.P. Linder & D. Pillay

[e]**Distribution:** WC. Witteberg above Laingsburg.

Habitat: Well-drained stony slopes, 1 350–1 900 m.

Rationale: Locally common but with a restricted range (EOO 110 km^2). There is no formal protection for this area, but it is not suitable for cultivation and it is not threatened.

Nevillea Esterh. & H.P.Linder

[F] **Nevillea singularis** Esterh.

Status: **VU** D2

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Riviersonderend Mountains above Genadendal.

Habitat: Marsh on a shale band, and on the rocky slope directly below the shale band, possibly very wet in winter.

Rationale: Known from one location. Potentially threatened by invading alien plants.

[F] **Nevillea sp. nov.**
Voucher: *Helme 3916* NBG
Status: **VU** D2
J.H. Vlok & D. Raimondo
[e]**Distribution:** WC. Langeberg Mountains.
Habitat: Deep, peaty, poorly drained areas on north-facing slopes in fynbos.
Rationale: Known from five locations. Potentially threatened by encroachment from invasive alien pines and extraction of water.

Platycaulos H.P.Linder

[F] **Platycaulos acutus** Esterh.
Status: **VU** D2
J.H. Vlok & D. Raimondo
[e]**Distribution:** WC. Langeberg Mountains.
Habitat: Seeps along streams.
Rationale: A range-restricted species (EOO < 180 km^2), known from two locations. Potentially threatened by road construction through seepage areas, flower-picking and encroachment from invasive alien pines.

Platycaulos subcompressus (Pillans) H.P.Linder
Status: **Rare**
H.P. Linder, D. Raimondo & J.E. Victor
[e]**Distribution:** WC. Landdroskop in the Hottentots Holland Mountains to Bain's Kloof.
Habitat: Marshy habitats, seepages along streambanks, rarely on rock ledges, 750–1 500 m.
Rationale: A range-restricted species (EOO < 266 km^2), known from three subpopulations. No recorded threats.

Restio Rottb.

Restio acockii Pillans **Plate 37**
Status: **CR** A2c; B1ab(,iii)+B2ab(iii)
J.E. Victor & R.C. Turner
[e]**Distribution:** WC. Malmesbury.
Habitat: Acid coastal sand, 100 m.
Rationale: EOO and AOO < 3.5 km^2. Previously known from several sites between Cape Town and Paarl, but they have all been destroyed by urban development. We suspect that it has lost 80% of its habitat over the past 30 years (generation length 10 years). It is now known from Riverlands Nature Reserve where invasive alien plants continue to cause slow but ongoing degradation of its habitat.

[F] **Restio alticola** Pillans
Status: **Rare**
D. Raimondo, P.A. Manyama & D.A. Kamundi†
[e]**Distribution:** WC. Wemmershoek to Bain's Kloof.
Habitat: Rock ledges and among rocks on south-facing slopes, restricted to summits, in somewhat fire-protected habitat, 1 500–1 800 m.
Rationale: A habitat specialist, known from five subpopulations. Not threatened.

Restio brunneus Pillans
Status: **Rare**
H.P. Linder, D. Pillay & R.C. Turner
[e]**Distribution:** WC. Cederberg.
Habitat: Sandstone slopes, along seeps and streamlines, 1 000–1 800 m.
Rationale: Endemic to Cederberg Sandstone Fynbos (EOO < 150 km^2). No significant threats.

[F] **Restio colliculospermus** H.P.Linder
Status: **VU** D2
H.P. Linder, D. Raimondo, P.A. Manyama & D.A. Kamundi†
[e]**Distribution:** WC. Riviersonderend and Swellendam.
Habitat: Steep, south-facing slopes on black organic soils, usually in shady places.
Rationale: Known from two locations. The fire sensitivity of this species is not known, and it therefore remains possible that a series of inappropriate fires could result in extinction.

Restio communis Pillans
Status: **VU** D2
H.P. Linder, N.A. Helme, D. Raimondo & R.C. Turner
[e]**Distribution:** WC. Cape Peninsula.
Habitat: Seepages and damp sand localities, often forming an extensive groundcover, 300–500 m.
Rationale: A range-restricted species (EOO < 20 km^2). Most of its range falls within the Table Mountain National Park, but its sensitivity to fire is not known and it might be driven to extinction by a set of inappropriate fires.

Restio distans Pillans
Status: **Rare**
H.P. Linder, R.C. Turner & D. Pillay
[e]**Distribution:** WC. Hottentots Holland Nature Reserve, Nuweberg between Landdroskop and Emerald Dome.
Habitat: Rock outcrops and ledges, often on steep broken cliffs below shale bands.
Rationale: A range-restricted species (EOO and AOO < 20 km^2). No threats have been recorded to have an impact on this species.

Restio dodii Pillans var. **dodii**
Status: **VU** D2
H.P. Linder, R.C. Turner & D. Pillay
[e]**Distribution:** WC. Cape Peninsula.
Habitat: Damp habitats, in seepages and along stream margins, 150–250 m.
Rationale: Restricted to the southern end of the Cape Peninsula (EOO < 10 km^2, AOO < 1 km^2). Potentially threatened by a too frequent fires and alterations to drainage systems.

[F] **Restio dodii** Pillans var. **purpureus** Pillans
Status: **VU** B1ab(ii,iii,v)
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Agulhas Plain to De Hoop.
Habitat: Seasonally wet sands over limestone.
Rationale: EOO 2 900 km^2. Known from fewer than 10 locations, of which only one occurs within a reserve. Declining at all other locations owing to invasive alien plants, drainage of its seasonally wet habitat for crop cultivation, and aseasonal fires.

Restio fusiformis Pillans
Status: **Rare**
R.C. Turner
[e]**Distribution:** WC. Hottentots Holland Mountains.
Habitat: Marshes, wetlands and along streamsides.
Rationale: A range-restricted species (EOO 380 km^2) known from five subpopulations, all of which fall within the Kogelberg Biosphere Reserve or the Hottentots Holland Nature Reserve.

Restio harveyi Mast. Plate 37

Status: **EN** B1ab(ii,iii,v)

H.P. Linder, R.C. Turner & D. Raimondo

e**Distribution:** WC. Cape Peninsula, Somerset West, Bot River to Onrus, and Elim.

Habitat: Granitic soils, and sandstone rubble, or pebbly slopes, in renosterveld, 50–200 m.

Rationale: EOO 2 200 km^2. This lowland species has lost 50% of known locations to urban expansion and crop cultivation. Extant at only four locations and threatened by invasive alien plants at all four.

F **Restio implicatus** Esterh.

Status: **Critically Rare**

H.P. Linder, D. Raimondo, P.A. Manyama & D.A. Kamundi†

e**Distribution:** WC. Langeberg Mountains.

Habitat: Upper south-facing slopes, where the plants receive rain and fog throughout the year.

Rationale: A range-restricted species (EOO < 10 km^2), known from one site at high altitude. It has no recorded threats.

Restio micans Nees Plate 37

Status: **EN** B1ab(ii,iii)

N.A. Helme, D. Raimondo & R.C. Turner

e**Distribution:** WC. Malmesbury to False Bay.

Habitat: Acid coastal sand, often near streams or seepages.

Rationale: EOO 110 km^2. Herbarium specimens indicate that this species was once widespread and common, especially on the Cape Flats. It has lost over 95% of its habitat to urban development, crop cultivation and severe infestations of invasive alien plants. It is now extant at only four locations and loss is continuing as a result of invasion by alien plants and draining of wetlands.

F **Restio montanus** Esterh.

Status: **Critically Rare**

H.P. Linder, D. Raimondo, P.A. Manyama & D.A. Kamundi†

e**Distribution:** WC. Slanghoek Mountains.

Habitat: In seepage cracks below high cliffs, 1 200–1 350 m.

Rationale: Known from one subpopulation (EOO, AOO < 5 km^2). Occurs in a safe, permanently moist habitat.

F **Restio nodosus** Pillans

Status: **Rare**

D. Raimondo, P.A. Manyama & D.A. Kamundi†

e**Distribution:** WC. Hex River Mountains, from Brandwacht Peak in the south to Milner Peak in the northeast, and to the Mostertshoek Twins to the northwest.

Habitat: Seasonally wet flushes over bedrock, 1 500–1 920 m.

Rationale: A range-restricted species (EOO < 200 km^2), known from fewer than 10 subpopulations. No recorded threats.

F **Restio nuwebergensis** Esterh.

Status: **VU** D2

H.P. Linder, D. Raimondo, P.A. Manyama & D.A. Kamundi†

e**Distribution:** WC. Hottentots Holland Mountains.

Habitat: In marshy places where the growth is low and the more aggressive marsh restios are absent.

Rationale: Known from one location in the Nuweveld forest station, on the eastern slopes of Landdroskop. Potentially threatened by a deleterious fire regime and invasive alien plants.

F **Restio paludicola** H.P.Linder

Status: **Rare**

H.P. Linder, D. Raimondo, P.A. Manyama & D.A. Kamundi†

e**Distribution:** WC. Kleinrivier Mountains.

Habitat: Wet habitats, in seepages and along stream margins.

Rationale: Restricted to one mountain range (EOO 75 km^2), falls within the Maanskynkop Nature Reserve. Not threatened.

Restio papyraceus Pillans

Status: **VU** D2

D. Raimondo, J.H. Vlok, H.P. Linder & R.C. Turner

e**Distribution:** WC. Klein Swartberg Mountains.

Habitat: On rocky ledges at base of cliffs, on damp, south-facing ledges.

Rationale: Known from one mountain range within the Klein Swartberg Reserve (EOO 7.5 km^2, AOO < 1 km^2). This reseeding species is potentially threatened by too frequent fires.

F **Restio peculiaris** Esterh.

Status: **Critically Rare**

H.P. Linder, D. Raimondo, P.A. Manyama & D.A. Kamundi†

e**Distribution:** WC. Langeberg Mountains.

Habitat: Shallow, well-drained soils, often stony.

Rationale: A range-restricted species (EOO < 20 km^2) known from a single subpopulation in the high peaks above Swellendam, endemic to South Langeberg Sand Fynbos. It has no known threats.

F **Restio pumilis** Esterh.

Status: **Rare**

D. Raimondo, P.A. Manyama & D.A. Kamundi†

e**Distribution:** WC. Kleinmond to Jonaskop in the Riviersonderend Mountains.

Habitat: Among rocks and on ledges on cool, somewhat sheltered, south-facing slopes.

Rationale: A range-restricted species (EOO < 300 km^2), known from six subpopulations. No recorded threats.

F **Restio rarus** Esterh.

Status: **Critically Rare**

H.P. Linder, D. Raimondo, P.A. Manyama & D.A. Kamundi†

e**Distribution:** WC. Klein Swartberg Mountains.

Habitat: Marshy or seepage spots, as well as on rock flushes.

Rationale: A range-restricted species (EOO < 10 km^2) known from a single subpopulation. Locally abundant, within a well protected area.

F **Restio rupicola** Esterh.

Status: **Critically Rare**

H.P. Linder, D. Raimondo, P.A. Manyama & D.A. Kamundi†

e**Distribution:** WC. Matroosberg.

Habitat: Crevices and cracks in rugged rocks on the southern flanks of the mountain, 1 200–1 300 m.

Rationale: EOO < 10 km^2. Known from a single site in a rather rugged and inaccessible area. There appear to be no immediate threats to this species.

Restio scaber Mast. Plate 37

Status: **VU** D2

N.A. Helme & D. Raimondo

e**Distribution:** WC. Caledon Swartberg.

Habitat: Mountain slopes, 600 m.

Rationale: Previously known only from the type, collected in the late 1800s on the Caledon Swartberg. Recollected by N.A. Helme in 2008. AOO < 5 km^2. Currently known from only one subpopulation, potentially threatened by invasive alien pines.

[F] **Restio singularis** Esterh.

Status: **Rare**

H.P. Linder, D. Raimondo, P.A. Manyama & D.A. Kamundi†

[e]**Distribution:** WC. Du Toit's Kloof.

Habitat: On ledges, in gullies, at base of rocks, and in recesses in rocks on the very rugged summits of these peaks, and generally on south-facing slopes.

Rationale: EOO 14 km^2. A high-alpine species known from three mountain peaks. It has no threats as it occurs in fire refuges.

[F] **Restio subtilis** Mast.

Status: **Rare**

H.P. Linder, D. Raimondo, P.A. Manyama & D.A. Kamundi†

[e]**Distribution:** WC. Hottentots Holland Mountains.

Habitat: Very wet marshes on level areas, or marshy streamsides, 800–2 100 m.

Rationale: A range-restricted species (EOO 120 km^2), known from two subpopulations that fall within protected areas and therefore not threatened.

[F] **Restio vallis-simius** H.P.Linder

Status: **Rare**

H.P. Linder, D. Raimondo, P.A. Manyama & D.A. Kamundi†

[e]**Distribution:** EC. Baviaanskloof.

Habitat: Among rocks in fire-protected habitats, but also on open slopes.

Rationale: Known from three collections (EOO < 20 km^2). The area is poorly explored, and it is possible that the species is more widespread. It has no recorded threats.

[F] **Restio zuluensis** H.P.Linder

Status: **VU** B1ab(iii)+2ab(iii)

L. von Staden & C.R. Scott-Shaw

Distribution: KZN. Northern KwaZulu-Natal and southern Mozambique.

Habitat: Grows on the margins of wetlands in short coastal grassland.

Rationale: Restricted to a highly specialised habitat (AOO estimated < 200 km^2) and has a restricted range (EOO 2 300 km^2) in northern KwaZulu-Natal. There are nine known locations, and although much of the habitat is well protected within the extensive Greater St Lucia Wetland Park, there is continuing decline in the quality and extent of the habitat outside reserve areas. Subpopulations are large and the habitat is mostly intact within reserve systems, and therefore not considered severely fragmented. This species also occurs in southern Mozambique, but the extent of its range, its habitat and threats are not known.

Staberoha Kunth

Staberoha multispicula Pillans

Status: **VU** B1ab(ii,iii,iv,v)

H.P. Linder & D. Raimondo

[e]**Distribution:** WC. Baardskeerdersbos to Soetanysberg.

Habitat: Well-drained, sandy slopes, 50–200 m.

Rationale: EOO < 500 km^2. Known from fewer than 10 locations from the hills around Viljoenshof. Threatened by protea, vineyard and wheat cultivation.

Staberoha stokoei Pillans

Status: **Rare**

H.P. Linder & D. Pillay

[e]**Distribution:** WC. Groot Swartberg Mountains.

Habitat: Summits of ridges and north-facing slopes, restricted to south-facing ledges on upper rocky peaks, 1 800–2 200 m.

Rationale: EOO 73 km^2. Known from three subpopulations. It has no recorded threats.

Thamnochortus P.J.Bergius

[F] **Thamnochortus amoena** H.P.Linder

Status: **Rare**

H.P. Linder, D. Raimondo, P.A. Manyama & D.A. Kamundi†

[e]**Distribution:** WC. Langeberg Mountains.

Habitat: Rocky, north-facing slopes, on well-drained, gravelly slopes and alluvial fans.

Rationale: A range-restricted species (EOO < 20 km^2), known from two subpopulations, with no recorded threats.

Thamnochortus dumosus Mast.

Status: **VU** B1ab(iii,v)

H.P. Linder, R.C. Turner & D. Raimondo

[e]**Distribution:** WC. Caledon to Bredasdorp.

Habitat: Lowland sandy areas often seasonally wet, 100–300 m.

Rationale: EOO < 1 250 km^2. Known from 5–10 locations, all of which are threatened by either too frequent fires or invasive alien plants.

Thamnochortus ellipticus Pillans

Status: **VU** D2

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Northern Langeberg Mountains.

Habitat: Well-drained gravelly soils on dry, north-facing sandstone slopes.

Rationale: EOO < 25 km^2, AOO < 10 km^2. Has declined in the past because of crop cultivation and afforestation and is now potentially threatened by pine invasions.

Thamnochortus fraternus Pillans **Plate 37**

Status: **NT** B1ab(iii)

H.P. Linder, R.C. Turner & D. Raimondo

[e]**Distribution:** WC. Cape Peninsula to Bredasdorp.

Habitat: Well-drained limestone slopes and pavements, 50–200 m.

Rationale: EOO < 2 000 km^2. Known from 10–15 locations. Most of which are highly threatened by invading alien acacias.

[F] **Thamnochortus karooica** H.P.Linder

Status: **VU** D2

D. Raimondo

[e]**Distribution:** WC. Northern slopes of the Langeberg and the Warmwatersberg Mountains.

Habitat: Sandstone slopes.

Rationale: A range-restricted species (EOO < 250 km^2), known from four subpopulations. Potentially threatened by harvesting and habitat degradation due to overgrazing by livestock.

[F] **Thamnochortus levynsiae** Pillans

Status: **Rare**

D. Raimondo, P.A. Manyama & D.A. Kamundi†

[e]**Distribution:** WC. Cape Peninsula, Table Mountain to Kalk Bay Mountain.

Habitat: Steep, rocky slopes or on ledges, restricted to moist, south-facing slopes, 450–900 m.

Rationale: A Cape Peninsula endemic (EOO 190 km^2), known from fewer than 10 subpopulations, with no recorded threats.

Thamnochortus muirii Pillans **Plate 37**

Status: **VU** B1ab(i,ii,iii,iv,v)

J.E. Victor & R.C. Turner

[e]**Distribution:** WC. Potberg to Mossel Bay.

Habitat: Deep sandy habitats associated with limestone, 30–200 m.

Rationale: EOO < 5 700 km^2. Known from eight locations. Declining because of crop cultivation, urban development and invasive alien plants.

Thamnochortus nutans (Thunb.) Pillans

Status: **VU** D2

H.P. Linder, R.C. Turner & D. Pillay

[e]**Distribution:** WC. Cape Peninsula.

Habitat: Shallow soil over sandstone bedrock, often in waterlogged habitats, with moss beds often at the base of plants.

Rationale: Known from two locations (Constantiaberg and Table Mountain). Potentially threatened by trampling as both locations are heavily frequented by hikers. The Constantiaberg subpopulation is fragmented by a radio tower and a tar road.

[F] **Thamnochortus paniculatus** Mast.

Status: **NT** B1ab(iii,v)

H.P. Linder, D. Raimondo & R.C. Turner

[e]**Distribution:** WC. Cape Agulhas to Still Bay.

Habitat: Well-drained slopes, usually over limestone pavements, 10–200 m.

Rationale: EOO < 3 000 km^2. Known from 13 locations. Occurring on coastal limestone patches that are heavily infested by invasive alien plants.

[F] **Thamnochortus papyraceus** Pillans

Status: **VU** D2

D. Raimondo, J.H. Vlok, H.P. Linder & R.C. Turner

[e]**Distribution:** WC. Klein Swartberg Mountains.

Habitat: High-altitude, well-drained habitats in stony places, or in shallow, stony soil over rock.

Rationale: Known from four high peaks in an area currently experiencing frequent fire events. This reseeder is potentially threatened by too frequent fires.

Thamnochortus pellucidus Pillans

Status: **VU** B1ab(i,ii,iii,iv,v)

J.E. Victor & R.C. Turner

[e]**Distribution:** WC. Betty's Bay to Soetanysberg.

Habitat: Well-drained acid coastal sand, occasionally under slightly peaty conditions.

Rationale: EOO 500 km^2. Known from seven locations and experiencing ongoing habitat loss as a result of invasive alien plants, protea cultivation and coastal development.

Thamnochortus pluristachyus Mast.

Status: **VU** B1ab(iii,v)

H.P. Linder, D. Raimondo & R.C. Turner

[e]**Distribution:** WC. Agulhas coast.

Habitat: Limestone pavements, in cracks in the limestone bedrock.

Rationale: EOO < 4 000 km^2. Known from fewer than 10 locations. Threatened by invading alien plants throughout its range.

Thamnochortus punctatus Pillans

Status: **Declining**

H.P. Linder, R.C. Turner & D. Raimondo

[e]**Distribution:** NC WC. Bokkeveld Mountains to Cape Peninsula.

Habitat: Acidic coastal sand plains, often spreading into disturbed areas, particularly common along roads and avoids wetter areas.

Rationale: EOO < 15 000 km^2. Known from 20–40 locations with many large subpopulations. It is predominantly a lowland species and has lost at least 40% of its range and locations to crop cultivation. Currently declining as a result of housing development, invasion by alien plants, harvesting for thatch and crop cultivation.

Willdenowia Thunb.

Willdenowia affinis Pillans

Status: **EX**

H.P. Linder, R.C. Turner & D. Pillay

[e]**Distribution:** WC. Table Mountain.

Habitat: Well-drained slopes on granite or Table Mountain Sandstone bedrock.

Rationale: Collected once, in 1918, from the northern slopes of Table Mountain near Kloof Corner. This area has been under forestry plantations for at least 85 years. In addition, the area where Table Mountain road and the Lower Cable Station were built has been invaded by alien plants (especially pine and *Acacia mearnsii*), and these slopes have been subject to frequent fires in places. These combined factors have led to the extinction of this species.

Willdenowia purpurea Pillans

Status: **VU** D2

H.P. Linder & D. Pillay

[e]**Distribution:** WC. Franschhoek Mountains to Viljoen's Pass.

Habitat: Sandy flats, possibly somewhat damp in winter, at the base of the sandstone slopes, 350–600 m.

Rationale: Known from two locations, one of which was lost as a result of dam construction and a pine plantation. The second location falls within a reserve where it is potentially threatened by invasive alien plants.

[F] **Willdenowia rugosa** Esterh.

Status: **VU** D2

H.P. Linder, D. Raimondo & P.A. Manyama

[e]**Distribution:** WC. Kogelberg.

Habitat: Coarse sands that are seasonally damp, 300–600 m.

Rationale: A very narrow endemic (EOO 180 km^2), known from three locations. Although the area is well protected, the species might be vulnerable to an inappropriate fire regime and extraction of groundwater.

Plate 36


R.C. Turner

Elegia recta NT


H.P. Linder

Calopsis impolita VU


R.C. Turner

Ischyrolepis paludosa VU


R.C. Turner

Elegia verreauxii VU


R.C. Turner

Ischyrolepis papillosa VU


H.P. Linder

Calopsis levynsiae Rare


R.C. Turner

Ischyrolepis duthieae VU

Plate 37


N.A. Helme

Restio scaber VU


H.P. Linder

Thamnochortus muirii VU


R.C. Turner

Thamnochortus fraternus NT


H.P. Linder

Restio harveyi (inflorescence) EN


H.P. Linder

Restio harveyi (sheath) EN


H.P. Linder

Restio acockii (inflorescence) CR


H.P. Linder

Restio micans (inflorescence) EN


H.P. Linder

Restio micans (habit) EN


H.P. Linder

Restio acockii (habit) CR

STRELITZIACEAE

Strelitzia Aiton

Strelitzia juncea Link

Status: **VU** B1ab(ii,iii,v)
A.L. Schutte-Vlok, J.H. Vlok, A.P. Dold & D. Raimondo
[e]**Distribution:** EC. Port Elizabeth, Uitenhage and Patensie.
Habitat: Succulent thicket.
Rationale: EOO 1 300 km^2. Known from six locations. Declining as a result of quarrying and illegal collecting for the horticultural trade; it is also threatened by invasive alien plants.

TECOPHILAEACEAE

Cyanella L.

Cyanella aquatica Oberm. ex G.Scott

Status: **VU** D1+2
D. Raimondo, S. Todd & E. Marinus
[e]**Distribution:** NC. Bokkeveld Escarpment.
Habitat: Grows in seasonally waterlogged Dwyka tillite soils wedged between large dolerite rocks.
Rationale: A range-restricted species (EOO 56 km^2), known from six subpopulations. Less than 500 mature individuals have been recorded. Potentially threatened by overgrazing by livestock and by climate change.

Cyanella cygnea G.Scott

Status: **Rare**
D. Raimondo
[e]**Distribution:** NC. Namaqualand and Richtersveld.
Habitat: Moist granitic soils.
Rationale: A habitat specialist, recorded from five subpopulations, but likely to occur at more. No known threats.

Walleria Kirk

Walleria gracilis (Salisb.) S.Carter

Status: **Rare**
J.E. Victor
Distribution: WC. Cederberg, Klawer and Richtersveld.
Habitat: Sandy, windblown soils, often between rocks.
Rationale: Known from three disjunct subpopulations. No threats have been recorded to have an impact on this species.

VELLOZIACEAE

Xerophyta Juss.

Xerophyta longicaulis Hilliard

Status: **Critically Rare**
J.E. Victor
[e]**Distribution:** KZN. KwaZulu-Natal Drakensberg, Mont-aux-Sources.
Habitat: Montane grassland, in scrub at the edge of moist sandstone cliffs, 1 700 m.
Rationale: Known from the type locality, which is protected within the Ukhahlamba Drakensberg National Park.

ZANNICHELLIACEAE

Pseudalthenia Nakai

[F] **Pseudalthenia aschersoniana** (Graebn.) Hartog

Status: **CR** B2ab(iii)
D. Raimondo, E. Sieben & J.A. Day
[e]**Distribution:** WC. Cape Peninsula.
Habitat: Brackish pools near the sea.
Rationale: AOO < 10 km^2. Known from two locations. This species has lost habitat to urban development in the past. Remaining subpopulations are severely fragmented and threatened by degradation of wetlands as a result of urban expansion and invasion by alien plants.

ZINGIBERACEAE

Siphonochilus J.M.Wood & Franks

Siphonochilus aethiopicus (Schweinf.) B.L.Burtt

Status: **CR** A4acd
M. Lötter, J.E. Burrows & L. von Staden
Distribution: LM MP. Sporadically from the Letaba catchment in the Limpopo lowveld to Swaziland. Extinct in KwaZulu-Natal. Widespread elsewhere in Africa.
Habitat: Tall open or closed woodland, wooded grassland or bushveld.
Rationale: The most highly sought-after medicinal plant on South African muthi markets. It is now extinct over most of its former range, with a 90% reduction in EOO over the last 100 years. Numbers remaining in the wild are critically low: subpopulations numbering 4 000 individuals or more were common in the past, but at present over 60% of remaining subpopulations consist of less than 100 mature individuals. Monitoring of subpopulations in Mpumalanga recorded an 84% decline in only four years. All indications are that harvesting is unsustainable and that this species is rapidly heading towards extinction.

5.4 ANGIOSPERMS: DICOTYLEDONS

ACANTHACEAE

Acanthopsis Harv.

[F] **Acanthopsis glauca** (E.Mey.) Schinz

Status: **DDD**
D.A. Kamundi†

[e]**Distribution:** NC. Namaqualand, Kookfontein.
Habitat: Unknown.
Rationale: Known only from the type, collected in the early 1800s. Not enough is known about the distribution, habitat or population status of this species to determine its status.

[F] **Acanthopsis spathularis** (E.Mey.) Schinz

Status: **Rare**
D. Raimondo & D.A. Kamundi†

[e]**Distribution:** NC. Kamieskroon to Springbok.
Habitat: Namaqualand Klipkoppe Shrubland.
Rationale: A range-restricted species (EOO < 100 km^2), known from two subpopulations. No recorded threats.

Barleria L.

Barleria argillicola Oberm.

Status: **CR** A3ce; B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)
T. Makholela, K. Balkwill, F.H. van der Bank & L. von Staden

[e]**Distribution:** KZN. Between Weenen and Estcourt.
Habitat: Savanna, in eroded doleritic soils or among dolerite boulders, 900–1 200 m.
Rationale: EOO 34.5 km^2. Known from seven small, severely fragmented subpopulations, scattered over three farms. All known subpopulations are threatened by illegal informal settlements and land claims and there is currently continuing decline as a result of overgrazing by livestock in at least one subpopulation and expected future declines in all others. We predict that the total population is likely to decline by 80% over the next 60 years.

Barleria dolomiticola M. & K.Balkwill

Status: **VU** D1
L. von Staden

[e]**Distribution:** LM. From Bewaarkloof in the Strydpoort Mountains to Lekgalameetse, southern Wolkberg Mountains.
Habitat: Grassland or low, open woodland, restricted to rocky dolomite slopes, 1 360–1 950 m.
Rationale: A rare, range-restricted habitat specialist known from nine subpopulations of ± 20–30 mature individuals within an area of ± 230 km^2. These subpopulations all occur in an extensive chain of private and provincial nature conservancies, but remain vulnerable because of the small total population, estimated to be no more than 500 mature individuals.

Barleria greenii M. & K.Balkwill

Status: **CR** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)
C.R. Scott-Shaw, I.M. Johnson, D. Styles, T. Makholela & L. von Staden

[e]**Distribution:** KZN. Between Weenen and Estcourt.
Habitat: Savanna, on moderately sloping, north-facing aspects in open, rocky areas with heavy, dense, black clay soils strewn with doleritic rock. It occurs at the interface of grassland and valley bushveld, mostly in, or along the borders of seasonal or perennial streams, drainage lines or boggy areas, 1 200–1 260 m.
Rationale: Restricted to a very small range (EOO 23.3 km^2) and highly habitat specific (AOO 1.5 km^2). All known populations are threatened by illegal informal settlements and land claims and there is currently continuing decline in at least one population and expected future declines in all others. Populations are severely fragmented owing to very short dispersal distances. There are two or three locations.

Barleria natalensis Lindau

Status: **EX**
C.R. Scott-Shaw & L. von Staden

[e]**Distribution:** KZN. Verulam.
Habitat: Coastal grassland, 100 m.
Rationale: Known from type, last collected in 1890. The type locality and surrounds have been completely transformed for commercial sugarcane cultivation. It has not been found again at the type locality or elsewhere and is presumed to be extinct.

Barleria oxyphylla Lindau

Status: **Rare**
J.E. Victor
Distribution: MP. Komatipoort and Swaziland, possibly Mozambique.
Habitat: Granite lowveld bushveld.
Rationale: Known from three sites in South Africa, and one in Swaziland. Known only from conservation areas within South Africa, therefore not threatened.

Blepharis Juss.

[F] **Blepharis dilatata** C.B.Clarke

Status: **Rare**
L. von Staden & D.A. Kamundi†

[e]**Distribution:** EC. Kubusi River between Stutterheim and Kei Bridge.
Habitat: Riverine and valley thicket on sandy soils, 150–650 m.
Rationale: An apparently rare species known from five collections within a very small area (EOO 390 km^2). Likely to be overlooked.

[F] **Blepharis fenestralis** Vollesen

Status: **Critically Rare**
D.A. Kamundi† & L. von Staden

[e]**Distribution:** MP. Songimvelo Game Reserve.
Habitat: Grasslands on stony, serpentine soil, 1 000 m.
Rationale: Known from one site, occurs within a provincial nature reserve and has no recorded threats.

Blepharis inermis (Nees) C.B.Clarke

Status: **VU** D2
D. Raimondo & R.C. Turner

[e]**Distribution:** WC. Ladismith to Garcia's Pass.
Habitat: Open karoo shrubland in dry, sandy riverbeds.
Rationale: Known from three locations. Its alluvial habitat is potentially threatened as it is targeted for crop cultivation.

[F] **Blepharis sericea** Vollesen

Status: **Critically Rare**
D.A. Kamundi† & J.E. Victor

[e]**Distribution:** KZN. Greater St Lucia Wetland Park.

Habitat: Open, coastal bushveld on sand or mud flats at the edge of a lake, near sea level.
Rationale: Known from one site within a provincial conservation area. No recorded threats.

[F] **Blepharis spinipes** Vollesen

Status: **DD**D
D.A. Kamundi†
[e]**Distribution:** LM. Soutpansberg Mountains.
Habitat: Unknown.
Rationale: Known from only one collection, not enough is known about the distribution, specific habitat or population status of this species to determine its status.

[F] **Blepharis subglabra** Vollesen

Status: **VU** D2
D.A. Kamundi† & J.E. Victor
[e]**Distribution:** KZN. Paulpietersburg.
Habitat: Grassland, on steep rocky slopes, 1 050 m.
Rationale: Known from one location where it is potentially threatened by grazing by livestock.

[F] **Blepharis uniflora** C.B.Clarke

Status: **Rare**
J.E. Victor & M.F. Pfab
[e]**Distribution:** G LM. Widespread but rare between Cullinan and the Makgabeng Mountain.
Habitat: Dry acacia woodland on sandy soil, 1 000–1 250 m.
Rationale: An extremely rare and poorly known species, collected from only four widely separated sites in Gauteng and Limpopo Provinces.

Dicliptera Juss.

Dicliptera fionae K.Balkwill

Status: **Critically Rare**
P.J.D. Winter & J.E. Victor
[e]**Distribution:** LM. Bewaarkloof Nature Reserve, Polokwane district.
Habitat: Mistbelt grassland, occurs at the edges of dolomite terraces on steep slopes.
Rationale: Only one known site that is protected in a nature reserve. Not threatened or declining.

Dyschoriste Nees

[F] **Dyschoriste perrottetii** (Nees) Kuntze

Status: **VU** D2
M. Lötter, J.E. Burrows & D. Raimondo
[e]**Distribution:** MP. Roossenekal to Lydenburg.
Habitat: Sekhukhune Mountain Grassland.
Rationale: Only two locations known. Potentially threatened by mining.

Isoglossa Oerst.

[F] **Isoglossa densa** N.E.Br.

Status: **DD**D
D.A. Kamundi† & D. Raimondo
[e]**Distribution:** EC. East London.
Habitat: Unknown.
Rationale: Known from one collection near East London, collected in 1896 by J. Wood. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

[F] **Isoglossa sylvatica** C.B.Clarke

Status: **DD**D
D.A. Kamundi†
[e]**Distribution:** WC. Knysna.
Habitat: Unknown.
Rationale: Known only from the type, collected in the 1700s. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Justicia L.

Justicia bolusii C.B.Clarke

Status: **Rare**
J.E. Victor & A.P. Dold
[e]**Distribution:** EC. Kentani and Komga to East London.
Habitat: Coastal forest.
Rationale: A habitat specialist known from 10 sites. No recorded threats.

Justicia minima A.Meeuse

Status: **Rare**
D. Raimondo
[e]**Distribution:** LM. Waterberg district.
Habitat: Rocky riverbeds.
Rationale: A habitat specialist that is not threatened.

Justicia montis-salinarum A.Meeuse

Status: **Rare**
J.E. Victor & L. von Staden
[e]**Distribution:** LM. Western Soutpansberg Mountains and northern foothills of eastern Blouberg.
Habitat: Dry, extremely rocky areas in sandy soils in rock crevices on lower, north-facing slopes, restricted to quartzite.
Rationale: Known from a restricted range (EOO 300 km^2), from only six subpopulations. Its extremely rocky habitat is unlikely to be threatened.

Metarungia Baden

Metarungia galpinii (Baden) Baden

Status: **EN** A4ac; B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)
J.E. Victor & A.P. Dold
[e]**Distribution:** EC. East London.
Habitat: Buffels Thicket.
Rationale: Known from two locations, one of which is declining as a result of expansion of informal settlements. By 2030, an estimated 50% of the population will be lost.

Monechma Hochst.

Monechma saxatile Munday

Status: **Rare**
D. Raimondo
[e]**Distribution:** NC. Pofadder.
Habitat: South-facing slopes of rocky gneiss hills.
Rationale: A range-restricted species (EOO 300 km^2), known from four collections. Not threatened.

Peristrophe Nees

Peristrophe cliffordii K.Balkwill

Status: **Rare**
J.E. Victor & L. von Staden
Distribution: LM. Limpopo River Valley between Messina and Pontdrif. Possibly also on the northern bank in Zimbabwe.

Habitat: Kalahari sand in mopane bushveld.
Rationale: EOO 170 km². Known from only three subpopulations, two of which are protected within the Vhembe-Dongola National Park.

Peristrophe gillilandiorum K.Balkwill

Status: **Rare**
J.E. Victor & L. von Staden
Distribution: LM. Limpopo River Valley, in Zimbabwe and Limpopo Province between Beit Bridge and the confluence of the Limpopo and Shashe Rivers.
Habitat: Various habitats within mopane bushveld, including rocky hillsides and clay flats.
Rationale: Known from a restricted range (EOO 270 km²), but locally more common and not as habitat-specific as *P. cliffordii* from the same area.

Ruellia L.

[F] **Ruellia pilosa** L.f.

Status: **VU** B1ab(i,ii,iii,iv,v)
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Swellendam to Mossel Bay.
Habitat: Renosterveld slopes.
Rationale: Eastern Overberg endemic, known from 10 locations. Declining as a result of coastal development and crop cultivation.

Salpinctium T.J.Edwards

Salpinctium natalense (C.B.Clarke) T.J.Edwards

Status: **Rare**
J.E. Victor & A.E. van Wyk
[e]**Distribution:** KZN. Hluhluwe-Imfolozi Park.
Habitat: Savanna, in partially shaded sites on the margins of acacia scrub.
Rationale: Known from one site within a provincial nature reserve. Not threatened.

Sclerochiton Harv.

Sclerochiton triacanthus A.Meeuse

Status: **VU** D2
M. Lötter, J.E. Burrows & L. von Staden
[e]**Distribution:** MP. Barberton to Ngodwana.
Habitat: Open bushveld, in shallow, serpentine soils on shale outcrops and rocky slopes but not in dense, closed woodland, 900–1 200 m.
Rationale: A serpentine endemic from the Barberton region, known from three locations with a potential threat of mining.

Siphonoglossa Oerst.

Siphonoglossa nkandlaensis Immelman

Status: **Rare**
J.E. Victor & A.P. Dold
[e]**Distribution:** EC KZN. Zululand and Eastern Cape.
Habitat: Scarp or mistbelt forest.
Rationale: A habitat specialist, recorded from two disjunct areas. Possibly overlooked, and no known threats.

Thunbergia Retz.

Thunbergia venosa C.B.Clarke

Status: **Rare**
C.R. Scott-Shaw & L. von Staden
[e]**Distribution:** KZN. Richmond to Inanda, northwards to Weenen and Estcourt.
Habitat: Grassland or wooded grassland.
Rationale: A sparsely distributed species, known from 12 herbarium collections. No recorded threats.

AIZOACEAE

Plinthus Fenzl

Plinthus rehmannii G.Schellenb.

Status: **EN** B1ab(ii,iii)
J.E. Victor & S.J. Siebert
[e]**Distribution:** LM MP. Northern Sekhukhuneland, Strydpoort Mountains.
Habitat: Sand dunes in dry regions.
Rationale: EOO < 1 250 km². Recorded from only three locations and experiencing an ongoing loss and degradation of habitat caused by overgrazing and urban expansion.

Tetragonia L.

[F] **Tetragonia caesia** Adamson

Status: **EN** B1ab(ii,iii, v)
N.A. Helme
[e]**Distribution:** WC. Cape Flats to Gansbaai.
Habitat: Alkaline sand flats.
Rationale: Known from fewer than five locations and declining primarily as a result of urban expansion, but also because of invasion by alien plants and quarrying.

[F] **Tetragonia galenioides** Fenzl

Status: **DD**D
N.A. Helme
[e]**Distribution:** WC. Clanwilliam.
Habitat: Unknown.
Rationale: Known from two specimens cited by Adamson in 1955, but not enough is known about its distribution, specific habitat or population status to determine its status.

[F] **Tetragonia halimoides** Fenzl

Status: **DD**D
N.A. Helme
[e]**Distribution:** WC. Piketberg to Paarl.
Habitat: Sandy or clay flats.
Rationale: Recorded from only two old specimens in the Compton Herbarium. A very poorly known species. It is likely to be threatened as it is confined to lowland habitats.

[F] **Tetragonia pillansii** Adamson

Status: **VU** D2
N.A. Helme & D.A. Kamundi†
[e]**Distribution:** NC. Hondeklip Bay to Wallekraal.
Habitat: Shale and sand flats.
Rationale: Localised species in northern Namaqualand coastal areas, known from fewer than five locations. Potentially threatened by mining and crop cultivation.

[F] **Tetragonia sphaerocarpa** Adamson

Status: **VU** D2
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Piketberg and Dassenberg.
Habitat: Lower shale slopes.
Rationale: Known from fewer than five locations and potentially threatened by crop cultivation.

ANACARDIACEAE

Loxostylis A.Spreng. ex Rchb.

[F] **Loxostylis alata** A.Spreng. ex Rchb.

Status: **Declining**

A.T.D. Abbott, V.L. Williams & D. Raimondo

[e]**Distribution:** EC KZN WC. Western Cape to southern KwaZulu-Natal.

Habitat: Forest margins.

Rationale: This species is widespread (EOO 106 300 km^2). Its bark is traded for medicinal use. There has been no observed decline in the Western Cape or Eastern Cape but it is being affected in Pondoland and in areas of KwaZulu-Natal. In certain areas of Pondoland a decline of 5–10% of mature individuals per year has been estimated. It regenerates well from seed and the decline is not sufficient to merit listing as Near Threatened or Threatened.

Ozoroa Delile

Ozoroa barbertonensis Retief

Status: **VU** D2

J.E. Victor, E. Retief & A.E. van Wyk

[e]**Distribution:** MP. Barberton.

Habitat: Grassland, on rocky hillsides between rocks on white-green band of serpentine soil, 1 000 m.

Rationale: Known from five locations in a restricted area west of Barberton (EOO < 200 km^2). Potentially threatened by mining.

Ozoroa namaquensis (Sprague) Von Teichman & A.E.van Wyk

Status: **Rare**

J.E. Victor, R.H. Archer & A.E. van Wyk

Distribution: NC. Namibia and north into Angola, occurs only in a small area of the Northern Cape around Augrabies Falls National Park.

Habitat: Among rocks and on gravel flats.

Rationale: Although fairly widespread, it has a restricted range in South Africa (EOO < 500 km^2) and is known from two subpopulations. It has no known threats.

Searsia F.A.Barkley

[F] **Searsia acocksii** (Moffett) Moffett

Status: **NT** B1ab(iii)+2ab(iii)

L. von Staden & A.T.D. Abbott

[e]**Distribution:** EC KZN. Oribi Gorge to Isicezula Forest.

Habitat: Pondoland scarp forest, understorey shrub in forest margins or rocky outcrops above river gorges, restricted to Msikaba Formation Sandstone, 200–600 m.

Rationale: A range-restricted species (EOO 1 700 km^2, AOO 200 km^2). Declining in extent and habitat quality outside formal reserves because of too frequent and intense grassland fires having an impact on forest margins. Subpopulations not severely fragmented and occurs in 10–20 locations.

Searsia albomarginata (Sond.) Moffett

Status: **CR** D

J.E. Victor & A.P. Dold

[e]**Distribution:** EC. Albany, west of Grahamstown.

Habitat: Grassy fynbos in rocky, red sandstone soils.

Rationale: Known from less than 50 mature individuals from an EOO of 27 km^2.

Searsia batophylla (Codd) Moffett

Status: **VU** A2c

M. Lötter, J.E. Burrows & L. von Staden

[e]**Distribution:** LM. Sekhukhuneland.

Habitat: Dry bushveld, in low-lying areas and along watercourses, 650–975 m.

Rationale: It has a restricted range (EOO 945 km^2), but is locally common (at least 26 known subpopulations). There has been extensive transformation of its habitat by mining, human settlements and land degradation caused by overgrazing. We estimate a 30% decline of the population over the last three generations (90–150 years) based on a 32% loss of habitat.

Searsia dracomontana (Moffett) Moffett

Status: **Rare**

C.R. Scott-Shaw & D. Pillay

[e]**Distribution:** FS KZN MP. Lower Drakensberg Escarpment around Charlestown and Wakkerstroom in southern Mpumalanga and at Van Reenen on the Free State-KwaZulu-Natal border.

Habitat: Dolerite grasslands at the edge of scrub forest, 1 700–2 100 m.

Rationale: A habitat specialist, known from at least five sites from the foothills of the Drakensberg. No known threats.

[F] **Searsia gracillima** (Engl.) Moffett var. **gracillima**

Status: **NT** D2

L. von Staden

[e]**Distribution:** G. Restricted to a small area to the north-east of Pretoria.

Habitat: Rocky quartzitic outcrops in bushveld.

Rationale: EOO 227 km^2. Known from 7–10 locations. Most subpopulations are in still relatively undisturbed sites outside the urban edge of Pretoria, but owing to its proximity to the urban centre, it is potentially threatened by future development. One known subpopulation in Pretoria East has declined as a result of habitat loss caused by development.

Searsia harveyi (Moffett) Moffett

Status: **NT** D2

C.R. Scott-Shaw & J.E. Victor

Distribution: KZN. Ithala Nature Reserve and Mbabane (Swaziland).

Habitat: Grasslands, rocky sites, among sandstone rocks and quartzitic soils.

Rationale: A range-restricted species known from fewer than 10 locations. Potentially threatened by crop cultivation and afforestation.

Searsia kwazuluana (Moffett) Moffett

Status: **Rare**

C.R. Scott-Shaw & L. von Staden

[e]**Distribution:** KZN. Mkuze to St Lucia to Tembe, probably also southern Mozambique.

Habitat: Sandy coastal grasslands as well as stony hilltop grasslands and woodlands.

Rationale: EOO 4 800 km^2. Occurs as scattered individuals. No significant threats. The sandy, nutrient-poor soils in which it grows are not suitable for crop cultivation and most subpopulations are protected within three large nature reserves.

Searsia maricoana (Baker f.) Moffett

Status: **VU** D2

J.E. Victor & R.H. Archer

e**Distribution:** NW. Zeerust district.

Habitat: Grassland, at the transition from bushveld, in dark soil among igneous rocks.

Rationale: Known from one location, which is potentially threatened by mining.

F **Searsia pygmaea** (Moffett) Moffett

Status: **VU** D2

M. Lötter, J.E. Burrows & L. von Staden

e**Distribution:** MP. Barberton.

Habitat: Grassland, restricted to amphibolite serpentine soils, 1 950 m.

Rationale: One of the rarest members of the genus, known from a very small area (EOO 32.5 km^2), from three locations. Potentially threatened by dam construction, mining and urban expansion.

Searsia rudatisii (Engl.) Moffett

Status: **EN** A2ac

C.R. Scott-Shaw, J.E. Victor, A.T.D. Abbott & L. von Staden

e**Distribution:** KZN. Hela-Hela to Vernon Crookes Nature Reserve.

Habitat: Open grasslands, in gently sloping or flat areas with well-drained loamy soils, 300–1 300 m.

Rationale: This long-lived resprouter has lost 70–80% of its habitat to crop cultivation within the last 80 years (generation length 30 years). Three of six subpopulations are now extinct, and there is continuing decline in the habitat due to afforestation, subsistence farming and invasion by alien wattles.

Searsia sekhukhuniensis (Moffett) Moffett

Status: **Rare**

J.E. Victor & A.E. van Wyk

e**Distribution:** LM. Sekhukhuneland, Roossenekal to Steelpoort.

Habitat: Rocky hillsides in bushveld, on pyroxenitic substrates of the eastern rim of the Bushveld Igneous Complex.

Rationale: A habitat specialist restricted to the Sekhukhuneland Centre of Endemism. No known threats.

Searsia stenophylla (Eckl. & Zeyh.) Moffett

Status: **NT** D2

D. Raimondo, J.E. Victor & R.H. Archer

e**Distribution:** WC. Cape Peninsula and Paarl to Gordon's Bay.

Habitat: Sandstone slopes.

Rationale: Known from fewer than 10 locations and potentially threatened by invading alien plants.

APIACEAE

Alepidea F.Delaroche

FS **Alepidea amatymbica** Eckl. & Zeyh. **Plate 38**

Status: **VU** A2d

V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya

Distribution: EC FS KZN LM MP. Eastern Cape Drakensberg Mountains to Wolkberg Mountains in Limpopo Province. Also occurs in Lesotho, Swaziland and Zimbabwe.

Habitat: On boulder-strewn slopes and in grassland, near streams, moist areas or drainage lines up to 2 500 m.

Rationale: The population is estimated to have declined at least 30% over the last three generations (60 years) as a result of persistent and consistent harvesting pressures for the medicinal plant trade and some loss of suitable habitat for afforestation and crop cultivation. It is a highly sought-after medicinal plant that has been exploited over much of its KwaZulu-Natal range, especially at lower altitudes, and local extinctions have been observed at several sites. Two studies have shown that subpopulation density of mature individuals within protected areas is at least twice that of plants within communal areas accessible to commercial harvesters.

F **Alepidea attenuata** Weim.

Status: **NT** B2ab(i,ii,iii,iv,v)

L. von Staden & P.J.D. Winter

Distribution: G LM MP. Dullstroom, Lydenburg, Machadodorp, Swaziland, Gauteng, Wolkberg Mountains and Sasolburg.

Habitat: Wetlands in grassland up to 2 200 m.

Rationale: AOO < 800 km^2, 7–12 locations. This rare but widespread species is confined to a restricted and highly threatened habitat type that is declining because of damming, drainage for crop cultivation, trampling by cattle, disturbance as a result of fragmentation by pine plantations and invasion by alien plants.

F **Alepidea basinuda** Pott var. **subnuda** Weim.

Status: **EN** B1ab(iii)+2ab(iii)

P.J.D. Winter, M. Lötter, J.E. Burrows & L. von Staden

e**Distribution:** MP. Graskop to Witklip.

Habitat: Grassland, probably confined to Northern Escarpment Quartzite Sourveld, 1 400 m.

Rationale: A range-restricted taxon known from four locations (EOO < 160 km^2). This taxon has lost 72% of its habitat to commercial forestry plantations over the past 50 years and is declining in habitat quality as a result of habitat fragmentation due to plantations, invasion by alien plants and a deleterious fire regime. It is a small herb with a short generation length.

F **Alepidea delicatula** Weim. **Plate 38**

Status: **Rare**

D. Raimondo

e**Distribution:** WC. Swartberg, Kammanassie and Outeniqua Mountains.

Habitat: Rocky sandstone slopes.

Rationale: A high-altitude habitat specialist, known from three herbarium collections. No known threats.

F **Alepidea insculpta** Hilliard & B.L.Burtt

Status: **Rare**

P.J.D. Winter & J.E. Victor

e**Distribution:** KZN. Southern Drakensberg Mountains.

Habitat: Short subalpine grassland on high basalt ridges, 2 200–2 600 m.

Rationale: Known from two sites. Not threatened.

F **Alepidea macowani** Dummer **Plate 38**

Status: **VU** A2ad; B1ab(v)

V.L. Williams & A.P. Dold

e**Distribution:** EC. Mountains of the Eastern Cape between Somerset East and Cathcart.

Habitat: Moist montane grassland.

Rationale: EOO 2 318 km^2. This species is naturally rare and is known from fewer than 10 locations. Collecting for the traditional medicine trade has led to declines in at least three of the seven known locations (representing

43% of the total population). The tubers are not easily distinguishable from those of *A. amatymbica*, a species which is also heavily harvested and in high demand.

[F] **Alepidea multisecta** B.L.Burtt

Status: **CR** PE
J.E. Victor & A.P. Dold
Distribution: EC. Hogsback.
Habitat: Grasslands on mountain slopes.
Rationale: Known from the type collection on Gaika's Kop, collected in 1910. Numerous searches for this species recently have failed to relocate it. It is therefore possibly extinct.

Anginon Raf.

Anginon jaarsveldii B.L.Burtt

Status: **EN** D
E.J. van Jaarsveld, N.A. Helme & D. Raimondo
[e]**Distribution:** NC. Pellaberg, near Pofadder.
Habitat: Broken veld, on mountain tops.
Rationale: Known from one very isolated mountain. The subpopulation is small, totalling less than 200 plants. This species is unlikely to be more widespread.

[F] **Anginon pumilum** I.Allison & B.-E.van Wyk

Status: **Rare**
D.A. Kamundi† & J.E. Victor
[e]**Distribution:** WC. Bredasdorp to De Hoop.
Habitat: Limestone.
Rationale: A range-restricted species (EOO 319 km^2). Most subpopulations fall within the De Hoop Nature Reserve. This species has no recorded threats.

Anginon tenuior I.Allison & B.-E.van Wyk

Status: **VU** D2
J.E. Victor
[e]**Distribution:** WC. Montagu.
Habitat: Stony slopes.
Rationale: A range-restricted species, known from two locations. Potentially threatened by vineyard cultivation.

Anginon ternatum I.Allison & B.-E.van Wyk

Status: **Rare**
F. Daniels, N.A. Helme & D. Raimondo
[e]**Distribution:** NC WC. Bokkeveld Escarpment, Gifberg and Matsikamma Mountains, and Heerenlogements Mountain.
Habitat: Steep south-facing sandstone and shale slopes amongst rocks.
Rationale: A habitat specialist known from six sites. Its rocky habitat affords it protection from ploughing for rooibos tea, the predominant threat in the region. Not threatened.

Annesorhiza Cham. & Schltdl.

[F] **Annesorhiza fibrosa** B.-E.van Wyk

Status: **EN** B1ab(ii,iii)
D. Raimondo
[e]**Distribution:** NC. Nieuwoudtville Escarpment.
Habitat: Sandy soil in fynbos vegetation.
Rationale: EOO 30 km^2. Known from three locations. Its habitat (sandy soils) is currently being converted for rooibos tea cultivation.

Annesorhiza lateriflora (Eckl. & Zeyh.) B.-E.van Wyk

Status: **Rare**
P.J.D. Winter & D. Raimondo
[e]**Distribution:** NC WC. Kamiesberg and Vanrhynsdorp district.
Habitat: Rocky outcrops.
Rationale: Known from three highly disjunct sites, but apparently a naturally rare species that occurs as small, sparsely distributed subpopulations. No known threats.

Arctopus L.

[F] **Arctopus dregei** Sond.

Status: **VU** B1ab(i,ii,iii,iv,v)
N.A. Helme, A. Magee & D. Raimondo
Distribution: WC. Koekenaap to Paarl.
Habitat: Renosterveld-fynbos transition on loamy sands and clays, often seasonally moist.
Rationale: EOO 12 388 km^2. It has lost significant portions of its habitat as a result of crop cultivation (cereals and vineyards). More than half the subpopulations are severely fragmented. Habitat loss to crop cultivation and invading alien plants continues.

Capnophyllum Gaertn.

[F] **Capnophyllum africanum** (L.) Gaertn.

Status: **NT** B1ab(ii,iii,iv,v)
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Saldanha to Gansbaai.
Habitat: Coastal sand dunes.
Rationale: EOO $<$ 4 000 km^2. Known from 15 locations. Losing habitat and subpopulations across its range as a result of coastal housing developments and the spread of invasive alien plants.

[F] **Capnophyllum leiocarpon** (Sond.) Manning & Goldblatt

Status: **Declining**
N.A. Helme & D. Raimondo
[e]**Distribution:** NC WC. Port Nolloth to Rocher Pan.
Habitat: Deep coastal sands.
Rationale: This annual species is widespread in sandveld along the West Coast, but it is losing habitat to crop cultivation (± 30% of its range falls within the area currently being farmed for potatoes and rooibos) and its remaining habitat is threatened by heavy-mineral and diamond mining.

Centella L.

[F] **Centella caespitosa** Adamson

Status: **VU** D2
N.A. Helme
[e]**Distribution:** WC. Table Mountain and Hottentots Holland Mountains.
Habitat: Upper sandstone slopes.
Rationale: Known from four locations. Two subpopulations that occur in the Hottentots Holland Mountains are potentially threatened by invasive alien plants.

[F] **Centella calcaria** M.T.R.Schub. & B.-E.van Wyk

Status: **NT** B1ab(ii,iii,iv,v)
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Bredasdorp to Gouritsmond.
Habitat: Coastal limestone flats.

Rationale: EOO < 3 000 km². Known from five locations, but it is only evident up to five years after fire, so possibly under-collected. We suspect that there are ± 15 locations. Declining as a result of coastal development and invasion by alien plants.

[F] **Centella cryptocarpa** M.T.R.Schub. & B.-E.van Wyk

Status: **Critically Rare**
N.A. Helme
[e]**Distribution:** WC. Riviersonderend Mountains, Skilpadkop.
Habitat: Sandy patches on sandstone slopes.
Rationale: Known only from the type locality. Not threatened.

[F] **Centella dolichocarpa** M.T.R.Schub. & B.-E.van Wyk

Status: **Rare**
N.A. Helme & D.A. Kamundi†
[e]**Distribution:** WC. Riviersonderend Mountains.
Habitat: Rocky sandstone slopes at medium altitudes.
Rationale: A range-restricted species (EOO < 200 km²) known from two sites. Not threatened.

[F] **Centella gymnocarpa** M.T.R.Schub. & B.-E.van Wyk

Status: **NT** D2
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Agulhas Peninsula.
Habitat: Limestone.
Rationale: EOO < 300 km². Restricted to limestone patches. Known from four locations but likely to exist at a few more. Potentially threatened by invading alien plants and coastal development.

[F] **Centella longifolia** (Adamson) M.T.R.Schub. & B.-E.van Wyk

Status: **Rare**
J.E. Victor & P.J.D. Winter
[e]**Distribution:** EC WC. Tsitsikamma Mountains in the Willowmore district to Longmore State Forest in the Port Elizabeth district.
Habitat: Mountain foothills in hard gravel.
Rationale: Known from five sites. Occurs on lower slopes of mountains where it is not threatened.

[F] **Centella pilosa** M.T.R.Schub. & B.-E.van Wyk

Status: **Rare**
N.A. Helme
[e]**Distribution:** WC. Kogelberg.
Habitat: Sandstone slopes.
Rationale: Known from one collecting site that falls within a provincial conservation area and is well managed.

Centella pottebergensis Adamson

Status: **VU** D2
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Potberg in the Bredasdorp district.
Habitat: Sandstone slopes.
Rationale: A range-restricted species (EOO 50 km²) known from one location. Potentially threatened by invading alien plants.

[F] **Centella rupestris** (Eckl. & Zeyh.) Adamson

Status: **VU** D2
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Babilonstoring and Kleinrivier Mountains.
Habitat: Sandstone rocks above 250 m.
Rationale: A range-restricted species known from four locations. Potentially threatened by invading alien plants.

[F] **Centella sp. nov.**
Voucher: *Esterhuysen 36426* BOL

Status: **EN** B1ab(iii)
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Bredasdorp to Agulhas.
Habitat: Seasonally wet acid sand flats.
Rationale: Known from fewer than five locations (EOO 3 200 km²). A newly discovered species threatened primarily by ongoing invasion by alien acacias and, to a lesser extent, by coastal development and agricultural expansion.

Centella ternata M.T.R.Schub. & B.-E.van Wyk

Status: **Rare**
F. Daniels & N.A. Helme
[e]**Distribution:** WC. Cederberg, Wolfberg.
Habitat: Rock crevices at high altitudes.
Rationale: Known only from the type, collected in 1962. Likely to be in a few other sites in the Cederberg. Not threatened because of the inaccessibility of its habitat.

[F] **Centella thesioides** M.T.R.Schub. & B.-E.van Wyk

Status: **VU** D2
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Riviersonderend Mountains.
Habitat: Sandstone slopes at medium elevation.
Rationale: Known from fewer than five locations and potentially threatened by invasive alien plants.

Centella tridentata (L.f.) Drude ex Domin var. **dregeana** (Sond.) M.T.R.Schub. & B.-E.van Wyk

Status: **EN** D
N.A. Helme & D. Raimondo
[e]**Distribution:** NC. Namaqualand, Kamiesberg.
Habitat: Renosterveld, in open areas with well-drained, loamy soil on northeast-facing mountain slopes.
Rationale: Known from one subpopulation with less than 200 mature individuals. Potentially threatened by grazing by wild donkeys (this taxon occurs within a communally owned area).

Centella tridentata (L.f.) Drude ex Domin var. **hermanniifolia** (Eckl. & Zeyh.) M.T.R.Schub. & B.-E.van Wyk

Status: **Rare**
J.E. Victor
[e]**Distribution:** EC. Humansdorp to Port Elizabeth, including Gamtoos River Valley and the Van Stadens River Mountains.
Habitat: Sandstone slopes.
Rationale: Recorded from only five sites, most of which are mountain slopes that are not threatened.

Centella umbellata M.T.R.Schub. & B.-E.van Wyk

Status: **Rare**
N.A. Helme
[e]**Distribution:** WC. Porterville and Groot Winterhoek Mountains.

Habitat: Sandstone rock crevices at high altitude.
Rationale: A range-restricted habitat specialist (EOO < 500 km²) that has no recorded threats.

Chamarea Eckl. & Zeyh.

[F] **Chamarea esterhuyseniae** B.L.Burtt
Status: **Critically Rare**
P.J.D. Winter, N.A. Helme & J.E. Victor
[e]**Distribution:** WC. Waaihoek Mountains in the Worcester district.
Habitat: High alpine peak.
Rationale: Known from only one collection from the top of Waaihoek Peak. Not threatened.

Chamarea snijmaniae B.L.Burtt
Status: **Rare**
P.J.D. Winter & D. Raimondo
[e]**Distribution:** WC. Bokkeveld Escarpment.
Habitat: Seasonal streams on shale slate slabs.
Rationale: Known from only one site within a provincial conservation area and therefore not threatened. It is possible that this species occurs elsewhere in unexplored areas of the Bokkeveld Escarpment.

Diplolophium Turcz.

[F] **Diplolophium buchananii** (Benth. ex Oliv.) C.Norman subsp. **swynnertonii** (Baker f.) Cannon
Status: **VU** D2
P.J.D. Winter & J.E. Victor
Distribution: LM. Venda, Thate Vondo.
Habitat: Montane grassland, rocky outcrops.
Rationale: Although this taxon occurs in tropical Africa, there is one highly disjunct subpopulation occurring in Venda. This subpopulation is potentially threatened by commercial forestry plantations.

Dracosciadium Hilliard & B.L.Burtt

Dracosciadium italae Hilliard & B.L.Burtt **Plate 38**
Status: **VU** B1ab(i,ii,iii)
C.R. Scott-Shaw, L. von Staden & J.E. Victor
[e]**Distribution:** KZN MP. Hilltops in the Vryheid-Ngome district, northern KwaZulu-Natal and Wakkerstroom, southern Mpumalanga.
Habitat: Montane and mistbelt grassland, on rock outcrops with dolerite soils, 1 200–1 600 m.
Rationale: EOO 2 860 km². Fewer than 10 known locations. Much of its habitat has been transformed to forestry plantations. Threatened by ongoing habitat degradation through severe overgrazing, especially in the Ngome area.

Dracosciadium saniculifolium Hilliard & B.L.Burtt
Status: **Rare**
C.R. Scott-Shaw & J.E. Victor
[e]**Distribution:** KZN. Drakensberg mountain range.
Habitat: Steep, east-facing, basalt slopes in montane grassland, 2 000–2 400 m.
Rationale: Known from three sites in the Drakensberg, occurs at high altitudes and is not threatened.

Hermas L.

[F] **Hermas pillansii** C.Norman
Status: **Rare**
P.J.D. Winter & J.E. Victor
[e]**Distribution:** WC. Table Mountain on the Cape Peninsula.
Habitat: Vertical cliffs and rocky areas.
Rationale: A range-restricted species (EOO 315 km²) that is not threatened because of the inaccessibility of its habitat.

Peucedanum L.

Peucedanum camdebooense B.L.Burtt
Status: **Rare**
P.J.D. Winter, J.E. Victor & D. Raimondo
[e]**Distribution:** EC WC. Camdeboo to Beaufort West Mountains.
Habitat: Rocky soil on mountain slopes.
Rationale: Known from fewer than 10 collecting sites, subpopulations sparsely distributed over the central Karoo. Not threatened because of the inaccessibility of its habitat.

Peucedanum khamiesbergense B.L.Burtt
Status: **VU** D1+2
P.J.D. Winter, N.A. Helme & D. Raimondo
[e]**Distribution:** NC. Namaqualand, Kamiesberg.
Habitat: High peaks above 1 200 m, amongst granite boulders near summits.
Rationale: Known from three sites, subpopulations are small, with less than 30 mature individuals. We suspect that a few more undiscovered subpopulations exist but that the population consists of less than 1 000 mature individuals. This species is potentially threatened by climate change and grazing by goats.

Peucedanum pearsonii Adamson
Status: **VU** D2
N.A. Helme & D. Raimondo
[e]**Distribution:** NC. Namaqualand, Kamiesberg.
Habitat: Rocky granite slopes, 1 000–1 300 m.
Rationale: Known from two locations and potentially threatened by overgrazing by livestock and frequent fires.

[F] **Peucedanum pungens** E.Mey. ex Sond. **Plate 38**
Status: **EN** A2c; B1ab(ii,iii,v)
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Bot River to Greyton.
Habitat: Low-altitude shale slopes.
Rationale: Known from the western Overberg in the upper parts of the Bot River Valley (EOO 400 km²), recorded from six small, severely fragmented subpopulations. This long-lived resprouter (generation length 50 years) has lost > 50% of its habitat to wheat over the past 70 years. Declining in habitat quality and number of mature individuals because of overgrazing by livestock.

[F] **Peucedanum striatum** (Thunb.) Sond. **Plate 38**
Status: **NT** B1ab(iii,v)
P.J.D. Winter, D. Raimondo & I. Ebrahim
[e]**Distribution:** WC. Overberg, Protem to Riversdale.
Habitat: Shale slopes, confined to renosterveld associated with silcrete outcrops.
Rationale: A Lower Breede River Valley endemic (EOO 1 600 km²). Recorded from fewer than 20 locations and declining because of overgrazing and encroachment by invasive alien plants.

[F] **Peucedanum wilmsianum** H.Wolff

Status: **VU** B1ab(ii,iii,iv,v)

P.J.D. Winter & J.E. Victor

[e]**Distribution:** EC KZN. Ngome to Umzimkulu.

Habitat: Mistbelt and coastal scarp grasslands.

Rationale: Known from five small, severely fragmented subpopulations (EOO 11 000 km^2). Declining as a result of grassland conversion to agricultural crops and commercial forestry plantations and ongoing degradation due to overgrazing and trampling by livestock.

APOCYNACEAE

Adenium Roem. & Schult.

Adenium swazicum Stapf

Status: **CR** A4acd

P.J.H. Hurter, M. Lötter, S. Krynauw, J.E. Burrows & J.E. Victor

Distribution: MP. Kruger National Park, Swaziland and Lebombo Mountains.

Habitat: Deep clay soils predominantly derived from basalt and rhyolite, in short mixed thornveld, 200–400 m.

Rationale: Based on aerial photographs, 50% of its habitat has been transformed by sugarcane agriculture over the past two generations (60 years). It is currently declining as a result of harvesting for horticultural and medicinal purposes. Extrapolating to include a future generation (i.e. another 30 years), we estimate an overall decline of 80% over three generations.

Asclepias L.

Asclepias bicuspis N.E.Br.

Status: **CR** B1ab(ii,iii,iv)

A. Nicholas, C.R. Scott-Shaw, L. von Staden & J.E. Victor

[e]**Distribution:** KZN. KwaZulu-Natal Midlands.

Habitat: Mistbelt grassland, in well-drained soil in annually burnt grasslands, including firebreaks, 1 200–1 500 m.

Rationale: Currently known from only one farm southwest of Howick (EOO 6 km^2). Occurs in an area that has been heavily affected by agriculture, afforestation, the construction of the Midmar Dam and urban expansion. Despite repeated collecting trips, Ashley Nicholas (*Asclepias* systematist) has not found this species at most of its former collecting locations or at other locations within its known range. There are very few natural areas left and the future survival of this species is doubtful. There is a strong likelihood that the known subpopulation is the only one remaining.

Asclepias compressidens (N.E.Br.) Nicholas

Status: **Rare**

D. Raimondo, J.E. Victor & A. Nicholas

[e]**Distribution:** EC. Albany, Cradock and Queenstown.

Habitat: Grasslands in sparsely wooded thornveld.

Rationale: EOO 20 000 km^2. Known from five herbarium collections, but is likely to be under-collected. It occurs as individual plants, sparsely distributed within its range. It is unlikely to be threatened as there are only low levels of urban expansion and agricultural transformation in this part of the Eastern Cape.

Asclepias concinna (Schltr.) Schltr.

Status: **VU** D2

A. Nicholas, C.R. Scott-Shaw, L. von Staden & J.E. Victor

[e]**Distribution:** EC KZN. KwaZulu-Natal Midlands to Maclear.

Habitat: Montane grassland, in annually burnt grassland, 900–1 500 m.

Rationale: Known from three collections. Schlechter referred to two specimens in his description, one collected in grasslands somewhere near the Tina River. This area has been searched in recent times but we suspect that the plant is locally extinct as the habitat is highly degraded through transformation for rural settlement, erosion and overgrazing. A second specimen, collected by John Medley Wood, came from an unknown location in the KwaZulu-Natal interior. Ashley Nicholas (*Asclepias* systematist) discovered a population at Nkonzo State Forest in the KwaZulu-Natal Midlands in 1981. This remains the only known extant subpopulation. It is potentially threatened by afforestation and rural settlement.

Asclepias cooperi N.E.Br.

Status: **Rare**

J.E. Victor

[e]**Distribution:** EC. Idutywa to Stutterheim.

Habitat: Grasslands.

Rationale: EOO 4 000 km^2. Recorded from only four collections. This species is naturally rare, occurring as single individuals distributed sparsely over its range.

Asclepias disparilis N.E.Br. **Plate 39**

Status: **VU** B1ab(ii,iii,iv)

A. Nicholas, C.R. Scott-Shaw & J.E. Victor

[e]**Distribution:** EC KZN. Creighton to Umtamvuna Nature Reserve.

Habitat: Mistbelt and coastal grassland, 900 m.

Rationale: EOO $<$ 2 000 km^2. Recorded from seven locations. One, in the Eastern Cape near Clydesdale, has been transformed and is extinct. The six remaining locations are declining as a result of habitat loss to crop cultivation and commercial forestry plantations; there is also ongoing degradation of habitat as a result of overgrazing by livestock.

Asclepias dissona N.E.Br.

Status: **VU** B1ab(ii,iii)+2ab(ii,iii)

A. Nicholas & J.E. Victor

Distribution: MP. Carolina and Machadodorp.

Habitat: Montane grassland.

Rationale: Suspected to occur in fewer than 10 locations (EOO 8 000 km^2). Declining as a result of habitat loss to crop cultivation and commercial forestry plantations.

Asclepias gordon-grayae Nicholas

Status: **EN** B1ab(iii)

A. Nicholas, L. von Staden & J.E. Victor

[e]**Distribution:** KZN. Ngoye to St Lucia.

Habitat: Tall, unburnt coastal grassland, in black peat soils in marshy areas, 10–100 m.

Rationale: A range-restricted species (EOO 1 400 km^2), recorded from five locations, with continuing decline as a result of afforestation, subsistence and commercial crop cultivation and opencast mining. Coastal grasslands between Ngoye and St Lucia are 64% transformed.

Asclepias monticola N.E.Br.

Status: **Critically Rare**

J.E. Victor & A. Nicholas

[e]**Distribution:** EC. Queenstown, Andriesberg.

Habitat: Tarkastad Montane Shrubland.

Rationale: No threats but very restricted, currently known from only one site.

Plate 38



A.P. Dold

Alepidea macowani VU



P.J.D. Winter

Alepidea delicatula Rare



I. Ebrahim

Peucedanum pungens EN



I. Ebrahim

Peucedanum striatum NT



P.J.D. Winter

Alepidea amatymbica VU



I. Johnson

Dracosciadium italae VU

Plate 39



D. Styles

Schizoglossum bidens subsp. *gracile* VU



D. Styles

Asclepias disparilis VU



P. Wragg

Schizoglossum peglerae EN



D. Styles

Raphionacme lucens NT



D. Styles

Riocreuxia flanaganii Rare

Plate 40



C. McMaster

Brachystelma caffrum VU



C. McMaster

Brachystelma cathcartense VU



D. Styles

Brachystelma chlorozonum NT



D. Styles

Brachystelma modestum NT



D. Styles

Brachystelma petraeum VU



D. Styles

Brachystelma natalense CR



D. Styles

Brachystelma gerrardii EN



P. Wragg

Brachystelma franksiae subsp. *franksiae* VU

Plate 41



D. Styles

Brachystelma pulchellum NT



M. Lötter

Brachystelma minor Rare



C. McMaster

Ceropegia macmasteri VU



D. Styles

Orbea macloughlinii Rare



D. Styles

Orbea woodii VU



D. Styles

Orbea hardyi Rare

Asclepias nana I.Verd.

Status: **DD**D

A. Nicholas & J.E. Victor

Distribution: LM. Mokopane district.

Habitat: Granite plains.

Rationale: Known only from the type collection. Too little is known about the exact number of subpopulations and where they occur to list this species as threatened.

Asclepias oreophila Nicholas

Status: **Rare**

A. Nicholas & J.E. Victor

[e]**Distribution:** EC KZN. Kamberg to Ramatsiliso Gate.

Habitat: Montane grassland, 1 800–2 200 m.

Rationale: Occurs as sparsely distributed subpopulations, fewer than 10 subpopulations known (EOO 6 000 km^2). Not threatened because of the inaccessibility of its high-altitude habitat.

Asclepias patens N.E.Br.

Status: **NT** D2

L. von Staden

[e]**Distribution:** EC. Eastern Cape Wild Coast between Port St Johns and Kentani.

Habitat: Coastal grasslands, on the margins of riverine forests.

Rationale: EOO 310 km^2. Eight subpopulations are known from historical collections, but there are likely to be more as this species occurs in a poorly explored area. Threats to the habitat include overgrazing, frequent and intense fires, habitat degradation through harvesting of firewood and invasion by alien plants. Recent collections indicate that some subpopulations are still intact. Too little is known about its population dynamics to say whether it is declining.

[F]**Asclepias rara** N.E.Br.

Status: **DD**D

J.E. Victor & A. Nicholas

[e]**Distribution:** EC. Albany, Coombs Valley east of Grahamstown.

Habitat: Unknown.

Rationale: Recorded only from the type collection, although parts of the valley where it occurs have been transformed for crop cultivation; other parts are still natural. The site description on the type specimen is too vague to determine whether or not this species is threatened.

Asclepias schlechteri (K.Schum.) N.E.Br.

Status: **EN** B2ab(ii,iii,iv,v)

A. Nicholas & L. von Staden

[e]**Distribution:** EC KZN. Harding and surrounding areas on the border between KwaZulu-Natal and the Eastern Cape, possibly also in Swaziland.

Habitat: Ngongoni Veld, sandy soils in tall grasslands.

Rationale: Although this species is very poorly known, there is good reason to believe that it is rare and declining as a result of habitat destruction through afforestation, agriculture and overgrazing. It is currently known from one location, but was collected from up to six historical locations. Although it has a large EOO (7 500–37 500 km^2), the species is extremely rare within its range and its area of occupancy is probably very low (estimated $<$ 250 km^2). Subpopulations are isolated and severely fragmented as a result of habitat destruction.

Asclepias velutina (Schltr.) Schltr.

Status: **VU** D2

A. Nicholas & J.E. Victor

Distribution: MP. Barberton, Pigg's Peak.

Habitat: Serpentine soils.

Rationale: A serpentine endemic (EOO 650 km^2) recorded from fewer than five locations. Potentially threatened by afforestation.

Asclepias woodii (Schltr.) Schltr.

Status: **VU** B1ab(ii,iii)+2ab(ii,iii)

A. Nicholas, C.R. Scott-Shaw, L. von Staden & J.E. Victor

[e]**Distribution:** KZN. KwaZulu-Natal Midlands.

Habitat: Midlands Mistbelt Grassland, in unburnt areas, 600–1 400 m.

Rationale: EOO 5 600 km^2, AOO $<$ 2 000 km^2. Recorded from fewer than 10 locations. Declining in habitat as a result of crop cultivation, afforestation, urban expansion and a deleterious fire regime.

Asclepias xysmalobioides Hilliard & B.L.Burtt

Status: **Rare**

J.E. Victor & A. Nicholas

Distribution: KZN. Ukhahlamba Drakensberg National Park and Sehlabathebe National Park in Lesotho.

Habitat: Montane and subalpine grassland. Short stony grassland and around rocks, 1 900–2 900 m.

Rationale: Recorded from four sites in the Drakensberg, all within protected areas. It is not suspected to be threatened.

Aspidoglossum E.Mey.

Aspidoglossum demissum Kupicha

Status: **DD**D

A. Nicholas & J.E. Victor

[e]**Distribution:** KZN MP. Utrecht district.

Habitat: Montane grassland. In rock crevices on mountain summits, 2 040 m.

Rationale: Known only from the type, collected in 1961 on the farm Naauhoek in northern KwaZulu-Natal. Not enough is known about the distribution and population status of this species to determine its status.

Aspidoglossum flanaganii (Schltr.) Kupicha

Status: **DD**D

D. Raimondo & A. Nicholas

[e]**Distribution:** EC. Kei Mouth and Chalumna River.

Habitat: Habitat unknown, possibly riverbanks in coastal belt vegetation.

Rationale: Known from two old collecting sites. Lack of collecting over the past 100 years may indicate that it has declined as a result of overgrazing and trampling by livestock, but as the site descriptions are vague and the habitat is unknown, the species is considered DD.

Aspidoglossum uncinatum (N.E.Br.) Kupicha

Status: **EN** B1ab(i,ii,iii)

J.E. Victor, A.P. Dold & A. Nicholas

[e]**Distribution:** EC. Katberg to Stutterheim.

Habitat: Grassland.

Rationale: EOO 700 km^2. Two known locations continue to decline because of ongoing habitat loss to commercial forestry plantations.

Aspidoglossum xanthosphaerum Hilliard
Status: **VU** D2
A. Nicholas & J.E. Victor
[e]**Distribution**: KZN MP. Groenvlei and Ermelo.
Habitat: Montane grassland, marshy sites, 1 800 m.
Rationale: Recorded from four locations from a restricted range (EOO < 500 km^2). Potentially threatened by wetland drainage for crop cultivation and by trampling and grazing by livestock.

Aspidonepsis Nicholas & Goyder

Aspidonepsis cognata (N.E.Br.) Nicholas & Goyder
Status: **Rare**
A. Nicholas & J.E. Victor
[e]**Distribution**: KZN. Nottingham Road to south of Kokstad.
Habitat: Montane grassland, 1 200–2 100 m.
Rationale: Recorded from only six sites. Occurs on high mountain slopes and is not threatened.

Aspidonepsis shebae Nicholas & Goyder
Status: **VU** D2
A. Nicholas & J.E. Victor
[e]**Distribution**: MP. Mount Anderson and Mount Sheba.
Habitat: Montane grassland.
Rationale: Known from four locations, potentially threatened by afforestation and invasion by alien plants.

Brachystelma R.Br.

Brachystelma caffrum (Schltr.) N.E.Br. **Plate 40**
Status: **VU** B1ab(ii,iii,v)
A.P. Dold & J.E. Victor
[e]**Distribution**: EC. Stutterheim to Engcobo and Mthatha.
Habitat: Dolerite outcrops.
Rationale: EOO 11 300 km^2. Known from fewer than 10 locations. Declines as a result of rooting and predation by invasive pigs have been observed at three of the known subpopulations.

Brachystelma campanulatum N.E.Br.
Status: **NT** D2
R. Peckover & J.E. Victor
[e]**Distribution**: EC. Fish River to Kariega River.
Habitat: Open grassland, only on sand.
Rationale: EOO 3 000 km^2. Recorded from seven locations. It has lost habitat to pineapple and other crop cultivation in the past. It is not declining currently but is potentially threatened by livestock farming.

[F] **Brachystelma canum** R.A.Dyer
Status: **CR** B1ab(iii,v)
P.A. Manyama
[e]**Distribution**: NW. Between Setlagoli and Mafikeng.
Habitat: Sandy *Terminalia* veld.
Rationale: Known from the type collected in 1956. It has an estimated EOO of 50 km^2 and its habitat is being degraded as it occurs in communal land that is severely overgrazed. *Brachystelma* species are particularly sensitive to overgrazing.

Brachystelma cathcartense R.A.Dyer **Plate 40**
Status: **VU** D1
J.E. Victor & A.P. Dold
[e]**Distribution**: EC. Cathcart district.
Habitat: Open, moist grassland, often near or on sandstone outcrops.
Rationale: Known from only one location. The total population consists of less than 1 000 mature individuals.

Brachystelma chlorozonum E.A.Bruce **Plate 40**
Status: **NT** B1ab(iii,v)
J.E. Burrows, M. Lötter & L. von Staden
[e]**Distribution**: KZN MP. Barberton, northern KwaZulu-Natal and Ozwatini. Unconfirmed records from near Tzaneen.
Habitat: A wide range of habitats and altitudes, from sea level in northern Zululand to above 1 000 m in Songimvelo Game Reserve.
Rationale: Known from a few, scattered and isolated records across a large range (EOO 50 000 km^2) but it is thought to be very rare within its range. There are three known locations, two of which are severely threatened and declining because of severe overgrazing, rural development and sugarcane cultivation. It is possible that other subpopulations exist.

[F] **Brachystelma christianeae** Peckover
Status: **VU** D2
J.E. Victor
[e]**Distribution**: KZN. Vryheid to Nkandla.
Habitat: Between sandstone rocks in poor, greyish, sandy soil.
Rationale: Known from two locations potentially threatened by crop cultivation and afforestation.

Brachystelma comptum N.E.Br.
Status: **VU** D2
J.E. Victor & A.P. Dold
[e]**Distribution**: EC. Grahamstown and Uitenhage.
Habitat: Grassy quartzite ridges surrounded by dense thicket.
Rationale: Known from five locations. Potentially threatened by invasive alien plants, crop cultivation and urban expansion.

[F] **Brachystelma cummingii** A.P.Dold
Status: **EN** B1ab(ii,iii)
D. Raimondo & A.P. Dold
[e]**Distribution**: EC. Kleinpoort and Coega Kop.
Habitat: Sundays Thicket.
Rationale: EOO 2 100 km^2. Three known locations. Some 25% of the population was destroyed in 2006 as part of the Coega harbour development and there is continuing decline in habitat quality as a result of overgrazing by livestock.

Brachystelma delicatum R.A.Dyer
Status: **VU** B1ab(ii,iii,iv,v)
J.E. Victor & A.P. Dold
[e]**Distribution**: EC. Grahamstown to Bathurst.
Habitat: Coastal grassland, in sand and on rocky ridges.
Rationale: EOO 2 200 km^2. Known from 5–10 locations. It has declined in the past as a result of pineapple cultivation and is currently likely to be declining at a slow rate because of overgrazing by livestock.

Brachystelma dimorphum R.A.Dyer subsp. **gratum** R.A.Dyer
Status: **Rare**
R. Peckover & J.E. Victor
[e]**Distribution**: FS NW. Vryburg to Bloemfontein.

Habitat: Alluvial pans.
Rationale: Known from four disjunct sites. Its seasonally wet habitat is not usually ploughed for crops and it therefore has no known threats.

Brachystelma discoideum R.A.Dyer

Status: **EN** B2ab(ii,iii,iv)
J.E. Victor & R. Peckover
Distribution: G NW. Soutpan, KwaMhlanga, Thabazimbi and Botswana.
Habitat: Alluvial pans.
Rationale: Known from fewer than five locations within South Africa (estimated AOO 12 km^2), declining as a result of habitat destruction caused by crop cultivation and urban expansion.

[F] Brachystelma duplicatum R.A.Dyer

Status: **Critically Rare**
J.E. Victor
[e]**Distribution:** FS. Fauresmith.
Habitat: Arid karoo vegetation on shale soils.
Rationale: A range-restricted species recorded from one site (EOO < 10 km^2). Not known to be threatened.

Brachystelma dyeri K. & M.Balkwill

Status: **VU** D2
J.E. Victor & R. Peckover
[e]**Distribution:** MP. Barberton.
Habitat: Serpentine and quartzitic soils.
Rationale: Known from only one location above Barberton, potentially threatened by afforestation and mining.

Brachystelma franksiae N.E.Br. subsp. franksiae

Plate 40

Status: **VU** B1ab(iii,iv,v)
D. Styles & L. von Staden
[e]**Distribution:** KZN. Camperdown to Pietermaritzburg.
Habitat: Grassland.
Rationale: This taxon was previously thought to have a restricted range, occurring in a highly transformed area between Pietermaritzburg and Camperdown. However, recent collections have enlarged its range to 16 000 km^2. It is now known from four to eight locations and remains severely threatened by urban expansion and invasion by alien plants at most of its locations.

[F] Brachystelma franksiae N.E.Br. subsp. grandiflorum A.P.Dold & Bruyns

Status: **VU** D2
J.E. Victor & A.P. Dold
[e]**Distribution:** EC. East London district.
Habitat: Coastal grassland, within 200 m of the sea on steep, sea-facing slopes, 50 m.
Rationale: Known from one location, potentially threatened by urban expansion and crop cultivation.

[F] Brachystelma gerrardii Harv.

Plate 40

Status: **EN** C2a(i)
D. Styles & L. von Staden
Distribution: KZN LM. KwaZulu-Natal, Waterberg and Swaziland.
Habitat: Open grassland, 400–1 800 m.
Rationale: This widespread species is exceptionally rare, with subpopulations usually consisting of no more than 10 mature individuals. Currently recorded from 20 locations. We conservatively estimate that the total population consists of less than 2 500 mature individuals. It is severely threatened and declining as a result of habitat destruction in KwaZulu-Natal where most of the known subpopulations occur. Decline is as a result of urban and rural housing development, overgrazing by livestock and a deleterious fire regime. Possibly also threatened by crop cultivation, afforestation, invasion by alien plants and harvesting for food.

Brachystelma gracillimum R.A.Dyer

Status: **CR** B1ab(iii,v)
P.A. Manyama
[e]**Distribution:** NW. Marico district, east of Ramotswa.
Habitat: Dwaalboom Thornveld.
Rationale: Known only from the type specimen, collected in 1940. Severely threatened by habitat degradation as a result of overgrazing by livestock as it occurs in a communal area. Species in this genus are particularly sensitive to overgrazing.

Brachystelma hirtellum Weim.

Status: **NT** A2c
P.A. Manyama
Distribution: LM. Waterberg, Bela-Bela to Mookgophong and Zimbabwe.
Habitat: Bushveld.
Rationale: An estimated 20% of the population has been lost over the last three generations (30 years) as a result of habitat loss to tobacco and peanut cultivation.

[F] Brachystelma huttonii (Harv.) N.E.Br.

Status: **Rare**
P.F. Matlamela & D.A. Kamundi†
[e]**Distribution:** EC. North of Grahamstown in the Fish River catchment.
Habitat: Karroid scrub, 400–1 200 m.
Rationale: A range-restricted species (EOO 10 km^2), known from only one subpopulation, this species has no recorded threats.

Brachystelma incanum R.A.Dyer

Status: **VU** A2a
R. Peckover & J.E. Victor
[e]**Distribution:** NW. Coligny, Lichtenburg and Wolmaransstad.
Habitat: Sandy loam soils in bushveld.
Rationale: Known from three locations, one of which has suffered a severe decline because of collecting for the horticultural trade. We predict that at least a 30% population decline has occurred over the past three generations (60 years) as a result of collecting.

Brachystelma inconspicuum S.Venter

Status: **Rare**
R. Peckover & J.E. Victor
[e]**Distribution:** LM. Waterberg.
Habitat: Open, grassy areas with well-drained, grey-brown, sandy loam derived from the Waterberg quartzite and conglomerates on gentle slopes.
Rationale: A range-restricted species (EOO < 100 km^2), known from fewer than five subpopulations. Not threatened.

[F] Brachystelma kerzneri Peckover

Status: **VU** D2
J.E. Victor & R. Peckover
[e]**Distribution:** EC KZN. Mouth of the Umtamvuna River.
Habitat: Coastal grassland, 50 m.
Rationale: Known from one location, potentially threatened by a deleterious fire regime and road construction.

Brachystelma longifolium (Schltr.) N.E.Br.

Status: **VU** D2

R. Peckover & J.E. Victor

e**Distribution:** MP. Elandspruit, Morgenzon and Amersfoort.

Habitat: Granite domes, between rocks.

Rationale: Known from three locations, potentially threatened by crop cultivation.

F **Brachystelma luteum** Peckover

Status: **VU** D2

A.P. Dold & J.E. Victor

e**Distribution:** EC. Grahamstown district.

Habitat: Rocky grassland.

Rationale: Known from five locations from a restricted range (EOO < 100 km^2). Potentially threatened by overgrazing and trampling by livestock and rural settlement.

Brachystelma meyerianum Schltr.

Status: **Rare**

J.E. Victor & A.P. Dold

e**Distribution:** EC. Katberg and Amathole Mountains and King William's Town to Komga.

Habitat: Damp margins of exposed dolerite rock sheets.

Rationale: A habitat specialist with no known threats.

Brachystelma micranthum E.Mey.

Status: **DD**D

R. Peckover, A.P. Dold & J.E. Victor

e**Distribution:** EC. Queenstown.

Habitat: Unknown.

Rationale: A poorly known species, known only from the type material that has been damaged by insects, making it difficult to determine its characteristics.

Brachystelma minimum R.A.Dyer

Status: **Rare**

J.E. Victor & A.P. Dold

e**Distribution:** EC. Grahamstown.

Habitat: Sandstone outcrops.

Rationale: A range-restricted species (EOO < 500 km^2), known from six sites. Not threatened as it occurs in rocky habitats not suitable for agriculture.

Brachystelma minor E.A.Bruce **Plate 41**

Status: **Rare**

R. Peckover & J.E. Victor

e**Distribution:** LM. Wolkberg Mountains.

Habitat: Shallow pockets of dolomite, tolerating both open and shady conditions.

Rationale: A habitat specialist, known from fewer than five sites and currently not threatened.

F **Brachystelma modestum** R.A.Dyer **Plate 40**

Status: **NT** B1ab(iii,v)

C.R. Scott-Shaw, D. Styles & L. von Staden

e**Distribution:** KZN. Nkandla to Noodsberg, and a disjunct record from Umzinto.

Habitat: Grassland, grows in shallow soils among rocks, Natal Group Sandstone, 900–1 200 m.

Rationale: EOO 3 300 km^2. Known from very few records, but may be under-collected. We estimate there are 10–15 locations. There is a continuing decline in habitat quality and number of mature individuals due to severe overgrazing and trampling by cattle.

F **Brachystelma molaventi** Peckover & A.E.van Wyk

Status: **VU** D2

J.E. Victor, R. Peckover & A.E. van Wyk

e**Distribution:** EC KZN. Ngele Forest Reserve to Mzimkulu in the Eastern Cape.

Habitat: Moist, short grassland, in shallow, dark-brown loamy soil along outcrops of volcanic rock.

Rationale: Known from two locations, both protected within reserves and not seriously threatened. However, this species was only recently discovered and is still poorly known, and it quite likely occurs at least in the areas surrounding the reserves and possibly elsewhere in the Eastern Cape. Outside the reserves the habitat is extensively transformed by forestry plantations and there is much ongoing illegal afforestation, especially in the Eastern Cape, which could potentially threaten subpopulations.

Brachystelma montanum R.A.Dyer

Status: **Critically Rare**

R. Peckover, A.P. Dold & J.E. Victor

e**Distribution:** EC. Queenstown.

Habitat: Rocky mountain summit.

Rationale: Known from one site, occurs in a habitat that has not been transformed.

Brachystelma natalense (Schltr.) N.E.Br. **Plate 40**

Status: **CR** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v); C2a(i)

L. von Staden & D. Styles

e**Distribution:** KZN. Pinetown.

Habitat: Ngongoni grassland, Natal Group Sandstone, 450–500 m.

Rationale: EOO < 10 km^2, AOO < 0.12 km^2. The habitat of this rare species has been extensively destroyed and fragmented by urban expansion, crop cultivation and overgrazing. It now remains as two small, nonviable subpopulations occurring on isolated grassland fragments. Although the largest subpopulation (of ± 50 individuals) is protected in a reserve, monitoring has shown continuing declines in the number of mature individuals and a complete lack of recruitment. The habitat of a second, smaller subpopulation of six individuals is severely threatened by unmanaged invasive wattles.

Brachystelma ngomense R.A.Dyer

Status: **EN** B1ab(iii)+2ab(iii)

C.R. Scott-Shaw, I.M. Johnson & L. von Staden

e**Distribution:** KZN. Ngome.

Habitat: Mistbelt grassland, restricted to seepage aprons at the edge of dolerite rock sheets, not found in open grassland, 1 100–1 200 m.

Rationale: Known from five locations within a restricted range (EOO 386 km^2). It has lost 34% of its habitat to afforestation since 1950 (generation length is predicted to be less than 15 years). Remaining grasslands are currently used as communal rangelands and are so severely overgrazed that a few hardy native species are beginning to dominate, completely transforming the grassland structure. There is also generally very poor fire management.

Brachystelma occidentale Schltr.

Status: **CR** D

J.E. Victor & R. Peckover

e**Distribution:** WC. Bredasdorp.

Habitat: Weathered quartzite.

Rationale: Originally thought to occur only at Smitswinkel Bay on the Cape Peninsula, where it went extinct as a result of dense infestations of alien plants and expansion of houses. Recently, a small subpopulation (less than 50 mature individuals) was discovered near Bredasdorp.

Brachystelma parvulum R.A.Dyer

Status: **VU** D2

J.E. Burrows, M. Lötter & J.E. Victor

e**Distribution:** MP. Bourke's Luck Potholes and Abel Erasmus Pass.

Habitat: Dolomite ridges.

Rationale: Known from two locations which are potentially threatened by grazing and trampling by livestock.

Brachystelma perditum R.A.Dyer

Status: **Rare**

R. Peckover & J.E. Victor

Distribution: EC KZN. Lesotho and Giant's Castle.

Habitat: Rocky areas of high-altitude grassland.

Rationale: Known from a few records in the Drakensberg range, a habitat specialist that is not threatened.

Brachystelma petraeum R.A.Dyer **Plate 40**

Status: **VU** D2

R. Peckover & J.E. Victor

e**Distribution:** KZN. KwaZulu-Natal Midlands and Drakensberg foothills.

Habitat: Moist grassland, in humus pockets on top of large, flat rock surfaces and flat, damp basal gravel.

Rationale: Known from two locations and potentially threatened by invasive alien pines.

F **Brachystelma pulchellum** (Harv.) Schltr. **Plate 41**

Status: **NT** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

L. von Staden, D. Styles & D. Raimondo

e**Distribution:** KZN. Durban to Pietermaritzburg.

Habitat: Low grassland, in shallow soils on or near sandstone outcrops or sheets of exposed sandstone, often on the edge of sandstone cliffs.

Rationale: EOO 400 km^2. Although its habitat continues to be severely affected by urban development, overgrazing and frequent fires, it is still relatively common and easily located in suitable habitat. Currently known from 11 locations.

F **Brachystelma remotum** R.A.Dyer

Status: **Rare**

L. von Staden & C.R. Scott-Shaw

e**Distribution:** KZN MP. Northern KwaZulu-Natal, between Utrecht, Wakkerstroom and Paulpietersburg.

Habitat: Montane grasslands. Grows in shallow soils on shale outcrops, 1 600–2 200 m.

Rationale: A range-restricted species (EOO 200 km^2) known from two collections.

F **Brachystelma sandersonii** (Oliv.) N.E.Br.

Status: **VU** A4c; B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

L. von Staden & D. Styles

e**Distribution:** KZN. Port Shepstone to St Lucia.

Habitat: Coastal grassland, 10–200 m.

Rationale: The coastal habitat of this is species has undergone severe and extensive transformation since the early 1800s. Small remaining habitat fragments have become invaded with dense, woody vegetation over the last 10 years and this could lead to a further reduction of around 30% of available habitat within the next 5–10 years (generation length 10 years). Urban and coastal development is a severe, ongoing threat facing the only confirmed existing subpopulation. We suspect that there are up to eight remaining extant subpopulations, EOO is very uncertain, but is 6 000 km^2 at the largest.

Brachystelma schoenlandianum Schltr.

Status: **EX**

R. Peckover & J.E. Victor

e**Distribution:** EC. Uitenhage district.

Habitat: Dry hills.

Rationale: Known only from the type specimen, described in 1893. The area where this species was collected has been transformed as a result of urban development. It has not been found since, despite numerous searches over the past 15 years and it is therefore considered extinct.

F **Brachystelma stellatum** E.A.Bruce & R.A.Dyer

Status: **Rare**

J.E. Burrows, S.P. Bester, M. Lötter & J.E. Victor

e**Distribution:** MP. Steenkampsberg, Ohrigstad Dam Nature Reserve and Long Tom Pass.

Habitat: Montane grassland.

Rationale: Known from four sites. It may have experienced declines as a result of pine plantations in the past, but known sites are not threatened.

Brachystelma tenellum R.A.Dyer

Status: **VU** D2

L. von Staden, D. Styles, C.R. Scott-Shaw & J.E. Victor

e**Distribution:** EC KZN. Oribi Flats to the Mnyameni River.

Habitat: Coastal grasslands, in shallow soil pockets in rocky outcrops and on cliffs, restricted to Msikaba Formation Sandstone.

Rationale: A range-restricted species within Pondoland (EOO 324 km^2). It is a rare habitat specialist restricted to rocky outcrops (estimated AOO < 20 km^2). Known from five locations and potentially threatened in the southern part of its range by trampling by livestock.

Brachystelma tenue R.A.Dyer

Status: **EN** A2ac; B1ab(i,ii,iii)+2ab(i,ii,iii)

J.E. Victor, D. Raimondo & R. Peckover

e**Distribution:** KZN. Makatini flats.

Habitat: Grassland, sandy soils.

Rationale: EOO 500 km^2, AOO < 500 km^2. Three known locations continue to decline owing to ongoing habitat loss and degradation as a result of subsistence agriculture and overgrazing. In addition, a population reduction of at least 50% is estimated based on habitat loss to forestry plantations over the past 30 years (less than three generations).

Brachystelma vahrmeijeri R.A.Dyer

Status: **EN** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

J.E. Victor & R. Peckover

e**Distribution:** KZN. Coastal Maputaland, Sodwana Bay to Manzengwenya.

Habitat: Coastal and woody grasslands, sandy soils.

Rationale: A range-restricted species (EOO < 500 km^2), known from fewer than five locations. This species was apparently locally abundant in 1965 when the type material was collected. It has since experienced a reduction of at least 40% of its habitat to forestry plantations over the past 30 years (less than three generations). It continues to decline owing to ongoing habitat loss and degradation as a result of subsistence agriculture and overgrazing.

[F] **Brachystelma villosum** (Schltr.) N.E.Br.

Status: **Rare**

P.F. Matlamela & D.A. Kamundi† & F. Cholo

Distribution: KZN LM MP. Haenertsburg to Swaziland.

Habitat: Scattered in grassland at an altitude of 500–1 500 m.

Rationale: Occurs at three mountain-top sites on the northern escarpment and not threatened.

Ceropegia L.

Ceropegia antennifera Schltr.

Status: **EX**

R. Peckover & J.E. Victor

[e]**Distribution:** KZN. Newcastle district.

Habitat: Montane grassland, 1 230 m.

Rationale: Collected once. Its habitat is not transformed, but many searches have failed to relocate this species it is presumed extinct.

[F] **Ceropegia arenaria** R.A.Dyer

Status: **EN** B1ab(iii)

R. Scott-Shaw & D. Raimondo

[e]**Distribution:** KZN. Sodwana Bay to Lake Sibaya.

Habitat: Coastal forest, sandy soils near coastal dune forest.

Rationale: A range-restricted species (EOO 115 km^2) known from fewer than five collections. It occurs in coastal forests, a threatened habitat even within protected areas. There are generally no fences for the reserves in which it occurs and the forests are being degraded by subsistence wood-harvesting. In addition, frequent fires as a result of burning for cattle grazing are causing a severe reduction of forest ecotones where this species occurs.

Ceropegia barbata R.A.Dyer

Status: **DD**D

R. Peckover & J.E. Victor

[e]**Distribution:** WC. Calitzdorp.

Habitat: Not recorded but likely to be shale flats.

Rationale: Known from one specimen collected by S. Blackburn in 1939, near Calitzdorp, and not recollected since. Not enough is known about the distribution and population status of this species to determine its status.

Ceropegia bowkeri Harv. subsp. **bowkeri**

Status: **EX**

A.P. Dold & J.E. Victor

[e]**Distribution:** EC. Mbashe River, near Collywobbles.

Habitat: Valley bushveld.

Rationale: Last recorded over 100 years ago. Its former habitat is degraded. Both P. Bruyns and A.P. Dold (*Ceropegia* experts) have looked for it but were unsuccessful. Heavy grazing over the past 100 years is likely to have caused its extinction.

Ceropegia cimiciodora Oberm.

Status: **VU** B2ab(ii,iii,v)

J.E. Victor & R. Peckover

Distribution: KZN LM. Makatini Flats and Venda.

Habitat: Savanna, thorn scrub on turf and sandy loam soils.

Rationale: Known from six locations (AOO 600 km^2). Declining because of expansion of subsistence crop cultivation and overgrazing by livestock.

[F] **Ceropegia craibii** J.Victor

Status: **VU** D2

J.E. Victor

[e]**Distribution:** KZN. Vryheid.

Habitat: Short, open grassland, in shallow, gravelly soil overlying shale on ridges.

Rationale: Known from one location, potentially threatened by harvesting for horticultural purposes.

Ceropegia cycniflora R.A.Dyer

Status: **VU** D2

D. Raimondo & C.R. Scott-Shaw

[e]**Distribution:** KZN. Muden district in the Mooi River Valley.

Habitat: Valley thicket, hot dry valleys and in woody vegetation near watercourses.

Rationale: Its only known location falls within communally owned land. Potentially threatened by overgrazing and trampling by livestock.

Ceropegia decidua E.A.Bruce subsp. **pretoriensis** R.A.Dyer

Status: **VU** D1+2

M.F. Pfab & J.E. Victor

[e]**Distribution:** G NW. Magaliesberg.

Habitat: Associated with ridges and quartzitic rocky outcrops in pockets of soil among rocks in direct sunshine or shaded areas.

Rationale: The small population (less than 1 000 mature individuals) occupies a very specific habitat type and is restricted to an estimated AOO of between 3.5 and 11 km^2. The habitat is potentially threatened by urban expansion, erosion and invasion by alien plants.

[F] **Ceropegia distincta** N.E.Br. subsp. **verruculosa** R.A.Dyer

Status: **DD**D

P.A. Manyama & D.A. Kamundi†

[e]**Distribution:** MP. Burgersfort.

Habitat: Scrub bush, 500–900 m.

Rationale: Known only from the type locality near Burgersfort where it was collected by Roux in 1957. Not enough is known about the distribution and population status of this taxon to determine its status. Possibly threatened by crop cultivation and grazing by livestock.

Ceropegia fimbriata E.Mey. subsp. **fimbriata**

Status: **VU** D2

R. Peckover, A.P. Dold & J.E. Victor

[e]**Distribution:** EC. Great Fish River Valley.

Habitat: Karoo-type thicket.

Rationale: Known from three locations. Potentially threatened by overgrazing and expansion of rural settlements.

Ceropegia insignis R.A.Dyer

Status: **Rare**

J.E. Victor & R. Peckover

[e]**Distribution:** NW. Marico district.

Habitat: Stony grassland.

Rationale: Known from two sites, with no serious threats known. A small percentage of its range is cultivated, but this is not considered a serious potential threat as this species grows in rocky areas.

[F] **Ceropegia macmasteri** A.P.Dold **Plate 41**

Status: **VU** D2

C. McMaster, A.P. Dold, D. Raimondo & P.A. Manyama

[e]**Distribution:** EC. Cathcart.

Habitat: Sourveld grassland in exposed sandstone rock sheets, 1 200 m.

Rationale: Known only from the type locality near Cathcart (EOO < 10 km^2). The farm on which this species occurs is currently well managed but should the land change ownership, this species may become threatened by overgrazing and trampling by livestock.

Ceropegia occidentalis R.A.Dyer

Status: **NT** D2

D. Raimondo

[e]**Distribution:** WC. Namaqualand coast from Strandfontein to Kleinsee.

Habitat: Rocky outcrops in sandveld close to the coast.

Rationale: Known from fewer than 10 locations. Potentially threatened by sand mining.

Ceropegia radicans Schltr. subsp. **radicans**

Status: **VU** D2

R. Peckover & J.E. Victor

[e]**Distribution:** EC. Komga district.

Habitat: Thicket.

Rationale: Known from fewer than five locations, all in communally owned lands. Potentially threatened by overgrazing and trampling by livestock.

Ceropegia rudatisii Schltr.

Status: **CR** PE

C.R. Scott-Shaw, R. Peckover, L. von Staden & J.E. Victor

[e]**Distribution:** KZN. Umzinto.

Habitat: Ngongoni grassland, Natal Group Sandstone, on rocky outcrops and bush clump margins, 700 m.

Rationale: Known from a few collections in an area extensively transformed by agriculture, forestry and invasive alien plants. Searches in the area revealed very little remaining pristine vegetation within the known range of this species and no subpopulations were found. This species is possibly extinct.

Ceropegia scabriflora N.E.Br.

Status: **DD**D

C.R. Scott-Shaw, D. Raimondo & L. von Staden

[e]**Distribution:** KZN MP. Durban and Piet Retief.

Habitat: Grasslands on quartzite or sandstone.

Rationale: Known from two highly disjunct sites, one from KwaZulu-Natal near Verulam, and the second from Piet Retief in Mpumalanga. It is extinct at the type locality (Verulam) as a result of urban expansion and sugarcane cultivation. Its range is too poorly known to determine its current threat status.

Ceropegia stentiae E.A.Bruce

Status: **VU** D2

J.E. Victor

[e]**Distribution:** LM NW. Wolmaransstad to Polokwane.

Habitat: Red, sandy loam soil.

Rationale: Subpopulations around Wolmaransstad have been lost to crop cultivation. It is currently extant at four locations and is potentially threatened by grazing and urban expansion.

Ceropegia tomentosa Schltr.

Status: **CR** PE

J.E. Victor & A.P. Dold

[e]**Distribution:** EC. Fort Bowker, between Butterworth and Mthatha.

Habitat: Unknown.

Rationale: Known only from the type specimen, collected between Butterworth and Mthatha. A burgeoning human population and high stocking rates make it very unlikely that this species is still extant. Field surveys are required before it can be declared extinct.

Ceropegia turricula E.A.Bruce

Status: **NT** A2c

R. Peckover & J.E. Victor

[e]**Distribution:** G LM NW. Lichtenburg to Gravelotte.

Habitat: Grassland slopes.

Rationale: An estimated 20% of the population has declined over the last three generations (30 years) as a result of habitat destruction (mainly mining and urban development).

Duvalia Haw.

[F] **Duvalia angustiloba** N.E.Br.

Status: **DD**D

F. Cholo

[e]**Distribution:** EC WC. Willowvale district.

Habitat: Unknown.

Rationale: Known only from the type, collected in 1957. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

[F] **Duvalia elegans** (Masson) Haw.

Status: **VU** B1ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Robertson to Riversdale.

Habitat: Renosterveld on shales.

Rationale: EOO 1 400 km^2. Known from 10 locations. Experiencing severe, ongoing habitat loss to crop cultivation. It is also threatened by ostrich and horse farming in the Bonnievale and Robertson areas.

[F] **Duvalia immaculata** (C.A.Lückh.) Bayer ex L.C.Leach

Status: **EN** B1ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Cape Infanta to Little Brak near Mossel Bay.

Habitat: Arid fynbos-renosterveld ecotone vegetation, on shales and limestone.

Rationale: EOO < 1 400 km^2. Known from 3–5 locations. Declining as a result of coastal development, crop cultivation, invasive alien plants and quarrying.

Duvalia parviflora N.E.Br.

Status: **VU** B1ab(iii,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Van Wyksdorp to Ladismith to Oudtshoorn.

Habitat: Flat, stony to loamy ground, under small karroid bushes.

Rationale: EOO 1 400 km^2. Suspected to occur at 10 locations. Ongoing decline in habitat is currently taking place as a result of ostrich farming and to a lesser extent habitat is being lost for vineyard cultivation.

Duvalia pillansii N.E.Br.

Status: **Rare**
J.E. Victor & A.P. Dold
[e]**Distribution:** EC. Hankey and Kirkwood.
Habitat: Stony ground in thicket vegetation.
Rationale: Known from five sites, no significant threats recorded.

Ectadium E.Mey.

[F] **Ectadium virgatum** E.Mey.

Status: **NT** D2
J.E. Victor
Distribution: NC. Along Orange River from Oranjemund to Sendelingsdrift.
Habitat: Gravel plains.
Rationale: Known from fewer than 10 locations in South Africa. Potentially threatened by crop cultivation and overgrazing by goats.

Emplectanthus N.E.Br.

Emplectanthus cordatus N.E.Br.

Status: **Rare**
A. Nicholas & J.E. Victor
[e]**Distribution:** KZN. Dhlinza and Entumeni Forest.
Habitat: Scarp forest.
Rationale: Known from two sites. Not threatened.

Emplectanthus gerrardii N.E.Br.

Status: **Rare**
A. Nicholas & J.E. Victor
[e]**Distribution:** KZN. Qudeni, KwaZulu-Natal.
Habitat: Mistbelt forest.
Rationale: Known from two sites. Not threatened.

Hoodia Sweet ex Decne.

Hoodia dregei N.E.Br.

Status: **VU** D2
D. Raimondo, J.E. Victor & S.P. Bester
[e]**Distribution:** NC WC. Merweville, Beaufort West and Prince Albert.
Habitat: Stony slopes of hills or stony flat areas.
Rationale: A rare species known from five locations. Potentially threatened by collecting as it could be mistaken for *H. gordonii*.

Hoodia gordonii (Masson) Sweet ex Decne.

Status: **DD**
D. Raimondo, R. Wynberg, D. Newton & J.E. Victor
Distribution: FS NC WC. Namibia, Botswana, Angola and the dry margins of the summer-rainfall region of South Africa.
Habitat: Occurs in a wide variety of arid habitats, from coastal to mountainous, also on gentle to steep shale ridges, found from dry, rocky places to sandy spots in riverbeds.
Rationale: A widespread species, EOO 850 000 km^2 that has undergone decline since 2001 as a result of indiscriminate harvesting for its appetite suppressant properties. International and national demand was particularly high between 2004 and 2006 and as a result of the high economic value of this species, even remote areas of its distribution range are suspected to have been harvested. Unfortunately data do not exist to quantify the degree of decline to the population and as this species is widespread and can be locally common, it is not possible to estimate overall population decline. Research on population recovery after harvesting and the degree of the impact of harvesting over the past 10 years, is required before it can be accurately assessed.

Hoodia officinalis (N.E.Br.) Plowes subsp. **officinalis**

Status: **NT** B1ab(v)
J.E. Victor & E. Powell
Distribution: FS NC. Southern Namibia (except winter-rainfall areas and deep sands of Kalahari in the east) and from Griqualand West near Douglas to Kimberley and Jacobsdal.
Habitat: Inside bushes in flat or gently sloping areas.
Rationale: EOO 21 000 km^2. Occurs as small subpopulations scattered throughout the Northern Cape and the Free State. It is collected from the wild when misidentified as *H. gordonii*.

Hoodia pilifera (L.f.) Plowes subsp. **pilifera**

Status: **NT** B1ab(iii,v)
D. Raimondo
[e]**Distribution:** WC. Montagu to Uniondale, Matjiesfontein to Laingsburg and Gamka Poort, and Klaarstroom.
Habitat: On steep shale slopes or near the foot of sandstone mountains, usually on hotter, northern aspects, occasionally found on flat areas and cooler, southern slopes.
Rationale: EOO 15 700 km^2. Known from 13 locations. This taxon is very rare and difficult to find. Low densities are most likely the result of habitat degradation due to overgrazing throughout its range as well as harvesting for food by local people.

Huernia R.Br.

Huernia echidnopsioides (L.C.Leach) L.C.Leach

Status: **Rare**
J.E. Victor & D. Raimondo
[e]**Distribution:** EC. Southeastern end of the Baviaanskloof and Kouga Mountains.
Habitat: Variety of habitats and soils, including clay slopes, exposed rock cliff faces, conglomerate slopes, shale and shallow loamy soil on rock outcrops.
Rationale: A range-restricted species (EOO < 500 km^2). Not threatened because of the unsuitability of its habitat for ploughing.

Huernia kennedyana Lavranos

Status: **Rare**
J.E. Victor & A.P. Dold
[e]**Distribution:** EC. Cradock and Somerset East.
Habitat: Occasionally on flat areas, more usually associated with slightly raised gravelly spots, on low dolerite ridges, also on shale ridges in crevices among rocks.
Rationale: Amongst the most localised of all members of the genus, known from five sites from an EOO < 500 km^2. Not known to be threatened.

Huernia longii Pillans

Status: **Rare**
J.E. Victor & A.P. Dold
[e]**Distribution:** EC. KwaZunga River Valley north of Uitenhage.
Habitat: Steep, crumbly slopes between the higher sandstone mountains.

Rationale: A range-restricted species (EOO < 330 km²) recorded only from one valley, occurs in a habitat that cannot be ploughed and is safe from the impact of grazing by livestock.

Huernia nouhuysii I.Verd.

Status: **VU** D2

J.E. Victor

[e]**Distribution:** LM. Wyllie's Poort to Vivo.

Habitat: On rocky sandstone ridges and outcrops usually in dry, exposed sites near summits, amongst rocks, wedged in crevices or between small grass clumps.

Rationale: Known from three locations within a restricted range (EOO < 100 km²). Potentially threatened by harvesting for the specialist succulent horticultural trade, and by drought and disturbance by animals.

Huernia pendula E.A.Bruce

Status: **Rare**

J.E. Victor & A.P. Dold

[e]**Distribution:** EC. Bolo and along the Mbashe River, and at Collywobbles.

Habitat: Pockets of soil and leaf litter that gather on ledges on cliffs, or on rock outcrops, usually on north- or east-facing aspects.

Rationale: Restricted to river gorges in the Transkei. It occurs on cliffs and is therefore safe from the impact of trampling and grazing by livestock, the main threat in this area.

Miraglossum Kupicha

Miraglossum davyi (N.E.Br.) Kupicha

Status: **VU** B1ab(ii,iii,iv,v)+B2ab(ii,iii,iv,v)

M. Lötter, J.E. Burrows, A. Nicholas & J.E. Victor

[e]**Distribution:** MP. Dullstroom, Middelburg and Standerton.

Habitat: Grassland.

Rationale: EOO < 15 000 km². Known from five locations but suspected to occur at one or two more. Declining as a result of habitat loss to coal mining and urban expansion.

Mondia Skeels

Mondia whitei (Hook.f.) Skeels

Status: **EN** A2ad

V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya

Distribution: KZN LM. From Guinea-Bissau through tropical Africa to KwaZulu-Natal.

Habitat: Mainly swamp forest in South Africa and occasionally in riverine and coastal forest, further north it is found in afromontane forest. It is currently restricted to lower elevations, although historically it was recorded in higher-altitude midlands forest.

Rationale: There are 21 recorded locations from herbarium records, the literature and personal observations. Extinctions are believed to have occurred as a result of harvesting for medicinal use, wood extraction, agriculture and drainage of wetlands in at least seven (33%) of the locations south of the Tugela River. Furthermore, extinctions are also suspected to have occurred in a further six sites (29%) in Zululand between the Tugela River and Maputaland, as well as in Limpopo Province. It is suspected to be rare in the remaining sites because it is very infrequently recorded, if at all. Therefore we suspect > 50% decline over the last three generations (60 years) as a result of over-harvesting. This national assessment is not down-listed because the closest subpopulations in Zimbabwe and Mozambique are disjunct, being more than 500 km away.

Notechidnopsis Lavranos & Bleck

Notechidnopsis columnaris (Nel) Lavranos & Bleck

Status: **Rare**

J.E. Victor & S.P. Bester

[e]**Distribution:** NC. Richtersveld, from Koda's Peak to Eksteenfontein.

Habitat: Steep, rocky slopes or stony summits in short scrub, growing inside bushes or between rocks.

Rationale: Restricted to high, westernmost ridges of the Richtersveld. Not threatened because of the inaccessibility of its habitat.

Ophionella Bruyns

[F] **Ophionella willowmorensis** Bruyns

Status: **Rare**

P.F. Matlamela & D.A. Kamundi†

[e]**Distribution:** EC. Witteberg and Boesmanspoortberg near Willowmore.

Habitat: Crevices on sandstone slabs, 1 000–1 300 m.

Rationale: EOO 300 km². Known from three collections. This species has no recorded threats.

Orbea Haw.

Orbea elegans Plowes

Status: **CR** PE

P.J.D. Winter & L. von Staden

[e]**Distribution:** LM. Blouberg.

Habitat: Dry rocky woodland slopes dominated by *Pseudolachnostylis maprouneifolia*, 1 150 m.

Rationale: Described in 2004 from a single plant at a site that has subsequently been destroyed by overgrazing by livestock and erosion. Searches in the area have not relocated any other surviving individuals. The site of another unconfirmed record seen in the 1960s was destroyed by dam construction.

Orbea gerstneri (Letty) Bruyns subsp. **elongata** (R.A.Dyer) Bruyns

Status: **Rare**

P.J.D. Winter & J.E. Victor

[e]**Distribution:** LM. Ohrigstad, Penge and Blyde River Canyon.

Habitat: Stony places wedged among stones and clumps of grass on hillsides, often on soils derived from dolomite, 900–1 600 m.

Rationale: Known from four sites and potentially threatened by illegal harvesting.

Orbea gerstneri (Letty) Bruyns subsp. **gerstneri**

Status: **Rare**

C.R. Scott-Shaw, D. Styles & L. von Staden

Distribution: KZN. Northern KwaZulu-Natal and adjacent areas in Swaziland.

Habitat: Savanna, in low-lying areas on flat stony ground with a sparse covering of trees.

Rationale: Known from only four collections in northern KwaZulu-Natal and Swaziland. Occurs in savannas that are not severely threatened because the many game farms between Nongoma, Mkuze and along the Lebombo Mountains would preserve this habitat.

Orbea hardyi (R.A.Dyer) Bruyns **Plate 41**

Status: **Rare**

J.E. Victor

Distribution: LM. Bewaarkloof to Abel Erasmus Pass to Blyde River Canyon.

Habitat: In accumulated litter on the floor of dry forest on south-facing slopes, also on cliffs and rocky outcrops, wedged in crevices.

Rationale: A range-restricted species (EOO < 500 km^2) known from fewer than five subpopulations. No recorded threats.

Orbea longii (C.A.Lückh.) Bruyns

Status: **Rare**

J.E. Victor

Distribution: EC. Klein Winterhoek Mountains and Suurberg.

Habitat: Ledges on cliffs, steep areas exclusively on shallow soils of sandstone origin.

Rationale: A range-restricted species (EOO < 500 km^2). Not threatened because of the inaccessibility of its habitat.

Orbea macloughlinii (I.Verd.) L.C.Leach **Plate 41**

Status: **Rare**

J.E. Victor

Distribution: EC KZN. Oribi Gorge and Mthatha district.

Habitat: Dry, rocky places in shallow soils along precipitous edges of riverbanks or in areas where the dolerite bedrock is close to the surface.

Rationale: A habitat specialist known from three sites. Sporadically collected for food by local people but this practice is unlikely to represent a significant threat.

Orbea woodii (N.E.Br.) L.C.Leach **Plate 41**

Status: **VU** B1ab(v)

J.E. Victor, D. Styles & C.R. Scott-Shaw

Distribution: KZN. Tugela River Valley.

Habitat: Valley thicket and savanna, open and closed dry woodland, on gently sloping areas of shale with dolerite rocks, between stones and small tufts of grass in open places, 800–1 200 m.

Rationale: EOO < 5 000 km^2 known from fewer than 10 locations. It is collected for medicinal purposes, causing a continuing decline to the population.

Pachycarpus E.Mey.

Pachycarpus lebomboensis D.M.N.Sm.

Status: **Rare**

A. Nicholas & J.E. Victor

Distribution: KZN. Southern Lebombo and Ubombo Mountains from Jozini to Mkuze.

Habitat: Open grassy areas in woodland.

Rationale: A range-restricted species, EOO 450 km^2. Known from very few collections. Its habitat is well protected in reserves and private game farms.

Pachycarpus linearis (E.Mey.) N.E.Br.

Status: **DD**D

D. Raimondo & A. Nicholas

Distribution: EC. Dohne Peak near Stutterheim and Transkei.

Habitat: Grassland.

Rationale: Known from nine collections, all from the turn of the previous century. Its range is heavily populated and the vegetation is under significant pressure from grazing by livestock. This may have caused declines in the population and resulted in no collections over the past 100 years. However, the Transkei has also not been well explored over the past 80 years, and more field surveys are required before a threat status is assigned.

Pachycarpus mackenii (Harv.) N.E.Br.

Status: **DD**D

A. Nicholas & J.E. Victor

Distribution: KZN. Zululand.

Habitat: Unknown, recorded from grasslands and coastal forests.

Rationale: Known from the type collection from Zululand, from a SANBI herbarium record from Kosi Bay and an observation by A. Nicholas (*Pachycarpus* expert) from the foothills of the Drakensberg. It is still too poorly known to determine distribution and habitat preferences and we are unable to assign a threat status.

Pachycarpus rostratus N.E.Br.

Status: **CR** PE

A. Nicholas & L. von Staden

Distribution: KZN. Nkandla.

Habitat: Unknown, probably grassland.

Rationale: Known from a single record from an unspecified site in the Nkandla district. This area has been extensively transformed and degraded as a result of overgrazing by livestock, a deleterious fire regime, afforestation and crop cultivation. It has not been recorded in more than 100 years and is possibly extinct.

Pachycarpus stenoglossus (E.Mey.) N.E.Br.

Status: **DD**D

J.E. Victor & A. Nicholas

Distribution: EC. Winterberg and Coombs Valley near Grahamstown.

Habitat: Unknown.

Rationale: Known from two disjunct collections, both very old. Searches at these sites have failed to relocate it. However, we are unsure if this indicates a decline or merely that the species is highly inconspicuous. The genus *Pachycarpus* is generally under-collected.

Pachycarpus suaveolens (Schltr.) Nicholas & Goyder

Status: **VU** B1ab(iii)

M. Lötter, A. Nicholas & L. von Staden

Distribution: MP. Gauteng and Mpumalanga to Swaziland.

Habitat: Short or annually burnt grasslands, 1 400–2 000 m.

Rationale: A showy plant known from eight historical locations and probably extremely rare. One location, last collected in Gauteng in 1929, has subsequently been lost to urban expansion and this species is likely to be locally extinct in Gauteng. The grassland habitat across its range (EOO 19 900 km^2) has been extensively transformed by urban development, crop cultivation, mining and invasive alien plants. Mining is causing a continuing decline in habitat between Witbank and Carolina.

Pectinaria Haw.

Pectinaria articulata (Aiton) Haw. subsp. **articulata**

Status: **Rare**

J.E. Victor

Distribution: NC. Between Sutherland and Fraserburg.

Habitat: Under small asteraceous shrubs in flat, slightly gravelly areas.

Rationale: According to Bruyns (*Pectinaria* taxonomist and expert field botanist) this taxon is uncommon, occurring in low numbers except in a small area in the eastern part of its range, where it is fairly abundant.

Quaqua N.E.Br.

Quaqua bayeriana (Bruyns) Plowes

Status: **Rare**

J.E. Victor & D. Raimondo

[e]**Distribution:** NC. Springbok.

Habitat: South- or west-facing slopes of gneiss or quartzite.

Rationale: A range-restricted species known from two sites (EOO 120 km^2). It is locally common in suitable habitat.

Quaqua cincta (C.A.Lückh.) Bruyns

Status: **Rare**

J.E. Victor

[e]**Distribution:** NC. Nuwerus and Springbok to Concordia and Okiep.

Habitat: Usually in clumps under bushes on stony slopes.

Rationale: Known from fewer than 10 sites. Generally uncommon, occurring as sparsely scattered individuals. No known threats.

Quaqua framesii (Pillans) Bruyns

Status: **EN** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Southern Knersvlakte.

Habitat: Red sands and stony ground.

Rationale: EOO 70 km^2. Known from fewer than five locations. Its habitat is being rapidly transformed for vineyard and tomato cultivation.

Quaqua inversa (N.E.Br.) Bruyns

Status: **Rare**

J.E. Victor

[e]**Distribution:** NC. Nuwerus, Bitterfontein and Kotzesrus to near Port Nolloth.

Habitat: Firm, red sand or gneissic ground on low, rolling hills.

Rationale: A rare species endemic to the centre of Namaqualand. Known from nine widely scattered sites. Not threatened.

[F] **Quaqua pallens** Bruyns

Status: **Rare**

J.E. Victor

[e]**Distribution:** NC. Garies.

Habitat: Succulent karoo, on gneissic slopes inside bushes, 600–900 m.

Rationale: A range-restricted species (EOO < 200 km^2) restricted to the hills north of Garies, where it is locally common and not threatened.

[F] **Quaqua pulchra** (Bruyns) Plowes

Status: **EN** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** NC WC. Lutzville to Vanrhynsdorp.

Habitat: Firm, red sands and loams.

Rationale: EOO < 70 km^2. Known from fewer than five locations. This species has experienced significant habitat loss to vineyard and tomato cultivation. The red sand habitat close to rivers is targeted for agriculture. Already, 20% of the habitat has been lost over the past 20 years and the type locality at Liebendal has also been lost; decline is continuing.

Raphionacme Harv.

[F] **Raphionacme villicorona** Venter

Status: **CR** D

P.A. Manyama & P.J.D. Winter

[e]**Distribution:** LM. Sekhukhuneland, northern end of Leolo Mountains.

Habitat: Dry savanna in well-drained, stony or rocky, dark brown loam soil, 800–1 300 m.

Rationale: A range-restricted species recorded from three small subpopulations (EOO 54 km^2). The smallest subpopulation is possibly extinct but the two remaining ones are not threatened. The known population size is less than 50 mature individuals.

Raphionacme elsana Venter & R.L.Verh.

Status: **EN** B1ab(iii)

H.J.T. Venter, L. von Staden & J.E. Victor

[e]**Distribution:** KZN. Makatini flats.

Habitat: Open savanna in Maputaland clay bushveld, in hard, reddish, clay soils on gently sloping hills.

Rationale: EOO < 800 km^2. Known from 1–5 locations. It has lost 35% of its habitat, mainly to crop cultivation. It occurs in a communally owned area that is severely overgrazed by goats and cattle; also affected by an altered fire regime and heavy encroachment by *Chromolaena*.

Raphionacme lobulata Venter & R.L.Verh.

Status: **Rare**

J.E. Victor & A.P. Dold

[e]**Distribution:** EC. Bathurst.

Habitat: Banks of the Kap River in dense forest.

Rationale: Known from two sites from a very restricted range (EOO 90 km^2). Not threatened.

[F] **Raphionacme lucens** Venter & R.L.Verh. **Plate 39**

Status: **NT**[*] D2

H.J.T. Venter, A. Nicholas, C.R. Scott-Shaw & J.E. Victor

Distribution: KZN. Mtunzini to Maputo in Mozambique.

Habitat: Coastal grassland.

Rationale: Known from fewer than five locations in South Africa and potentially threatened by pine plantations and urban expansion. Downgraded from VU because of its good dispersal ability and potential to recolonise from subpopulations in Mozambique.

Riocreuxia Decne.

Riocreuxia aberrans R.A.Dyer

Status: **NT** D2

M. Lötter, J.E. Burrows & J.E. Victor

[e]**Distribution:** MP. Dullstroom to Ermelo.

Habitat: Exposed quartzite ridges.

Rationale: Known from eight locations. Potentially threatened by urban expansion.

Riocreuxia alexandrina (H.Huber) R.A.Dyer

Status: **CR** PE

D. Styles, C.R. Scott-Shaw, I.M. Johnson, D. Raimondo & L. von Staden

[e]**Distribution:** KZN. Umzinto district.

Habitat: Grassland (exact details unknown), either around the edge of bush clumps or in open grassland.

Rationale: The habitat of this species has been almost entirely transformed by sugarcane and forestry plantations and invaded by alien plants. It was last collected before 1930. Efforts to locate individuals over the past 20 years have failed and it is therefore probably extinct. However, systematic searches in all remaining natural habitat in this area have to be conducted before this species is declared extinct.

Riocreuxia bolusii N.E.Br.

Status: **DD**D

J.E. Victor

[e]**Distribution:** EC. Mthatha River.

Habitat: Unknown.

Rationale: Collected only once in 1896 by Bolus. Much of the land around the Mthatha River is degraded and transformed. This species is likely to be threatened.

Riocreuxia flanaganii Schltr. **Plate 39**

Status: **Rare**

J.E. Victor & A.P. Dold

[e]**Distribution:** EC. Grahamstown to Komga, and into the Transkei.

Habitat: Dolerite outcrops.

Rationale: Recorded from four collecting localities, not known to be threatened.

Riocreuxia woodii N.E.Br.

Status: **CR** PE

D. Styles, C.R. Scott-Shaw, D. Raimondo & L. von Staden

[e]**Distribution:** KZN. Inanda.

Habitat: Unknown, probably in the ecotonal area at the edges of bush clumps in grasslands.

Rationale: Known from an inexact type locality at Inanda near Durban, where it was collected in 1879. Searches have been unsuccessful, indicating that this species is possibly extinct. However, experts believe that it may still be relocated as intact habitat remains in the area.

Schizoglossum E.Mey.

Schizoglossum amatolicum Hilliard

Status: **Critically Rare**

J.E. Victor

[e]**Distribution:** EC. Amathole Mountains.

Habitat: Montane grasslands.

Rationale: Known from one site and not threatened.

Schizoglossum bidens E.Mey. subsp. **gracile** Kupicha **Plate 39**

Status: **VU** D2

A. Nicholas & J.E. Victor

[e]**Distribution:** EC. Kentani district.

Habitat: Grassland, in marshy or rocky sites, 1 320–2 600 m.

Rationale: Known from one location. Potentially threatened by overgrazing by livestock and rural housing developments.

Schizoglossum bidens E.Mey. subsp. **hirtum** Kupicha

Status: **DD**D

C.R. Scott-Shaw, A. Nicholas & J.E. Victor

[e]**Distribution:** KZN. KwaZulu-Natal Midlands and on the Transkei border.

Habitat: Mistbelt grassland, 1 050–1 500 m.

Rationale: This taxon has not been collected for 50 years. Not enough is known about its distribution and population status to assign a threat category.

[F] **Schizoglossum elingue** N.E.Br. subsp. **purpureum** Kupicha

Status: **Rare**

P.F. Matlamela & D.A. Kamundi†

Distribution: KZN. Drakensberg Mountains, Thomatuwa Pass in South Africa and Sehlabathebe in Lesotho.

Habitat: Rocky grassland on steep slopes, 2 300–2 700 m.

Rationale: A range-restricted, high-altitude habitat specialist known from a single site in South Africa (EOO 10 km^2). This taxon has no known threats in South Africa. Its status in Lesotho is unknown.

Schizoglossum montanum R.A.Dyer

Status: **Rare**

J.E. Victor & A. Nicholas

Distribution: FS KZN. Drakensberg summits in Lesotho, Free State and KwaZulu-Natal.

Habitat: Subalpine grassland and Drakensberg Afroalpine Heathland, 2 100–2 900 m.

Rationale: A high-altitude Drakensberg endemic restricted to grasslands above 2 100 m. This species has no recorded threats.

[F] **Schizoglossum peglerae** N.E.Br. **Plate 39**

Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v)

P. Wragg & L. von Staden

[e]**Distribution:** EC KZN. Durban, Pietermaritzburg and Ozwatini in the Ndwedwe district.

Habitat: Sandstone grasslands, on deeper soils on top of sandstone plateaus.

Rationale: EOO 360 km^2, AOO < 42 km^2. Known from fewer than five severely fragmented subpopulations. Historically recorded from Kentani in the Eastern Cape, but not recorded there for over 100 years. Declining in KwaZulu-Natal owing to urban expansion and habitat degradation as a result of overgrazing and too frequent fires.

[F] **Schizoglossum quadridens** N.E.Br.

Status: **DD**D

D.A. Kamundi† & P.A. Manyama

[e]**Distribution:** KZN. Unknown the type notes Griqualand East.

Habitat: Unknown.

Rationale: Known from the type collection in 1890. The collecting locality has not been successfully traced. Not enough is currently known about the distribution, specific habitat or population status of this species to assign a threat category.

Schizoglossum rubiginosum Hilliard

Status: **VU** D2

A. Nicholas & D. Raimondo

[e]**Distribution:** KZN. Harding district.

Habitat: Mistbelt grassland, 1 000 m.

Rationale: Known from one location, in an area that has been significantly transformed for afforestation. This taxon is potentially threatened by alien plants invading grasslands between pine plantations, a deleterious fire regime and overgrazing by livestock.

Schizoglossum singulare Kupicha

Status: **VU** D2

A. Nicholas & D. Raimondo

eDistribution: EC KZN. Ngele Mountain.

Habitat: Montane grassland on dolerite, 2 100 m.

Rationale: Known from Ngele Mountain in southern KwaZulu-Natal and likely to occur both within and outside the reserve area. Outside the reserve the habitat has been extensively transformed by forestry plantations and there is a potential threat from habitat degradation due to overgrazing by livestock.

Sisyranthus E.Mey.

F **Sisyranthus anceps** Schltr.

Status: **DD**

P.F. Matlamela & D.A. Kamundi†

eDistribution: KZN. Inanda, north of Durban.

Habitat: Unknown.

Rationale: Known only from the type, collected in 1880 at Inanda. This area is threatened by overgrazing by livestock and expansion of informal settlements. Not enough is known about the habitat or population status of this species to determine its status.

Sisyranthus fanniniae N.E.Br.

Status: **VU** B1ab(iii)

C.R. Scott-Shaw, A. Nicholas, I.M. Johnson & L. von Staden

eDistribution: KZN. Impendle to Dargle, possibly also Underberg and Nsikeni.

Habitat: Montane grassland, 1 600–1 800 m.

Rationale: This genus is very poorly known and data for this species are uncertain. However, the estimated range is very restricted (EOO 200–1 400 km^2). There are very few records, indicating that it is rare (estimated fewer than 10 locations), and there is evidence of continuing decline in the habitat from afforestation in the vicinity of the type locality and from overgrazing by livestock elsewhere. Members of the tribe Asclepiadineae are, despite their milky latex, very sensitive to grazing and tend to disappear from heavily grazed areas.

F **Sisyranthus macer** (E.Mey.) Schltr.

Status: **DD**

P.F. Matlamela & D.A. Kamundi†

eDistribution: EC. Komga.

Habitat: Unknown.

Rationale: A poorly known species, recorded only from the type specimen collected near Komga by Drège in the early 1800s. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Stapelia L.

Stapelia divaricata Masson

Status: **VU** D2

S.P. Bester & D. Raimondo

eDistribution: WC. East of Swellendam.

Habitat: Grows on steep, north-facing slopes, usually tightly wedged between stones and small bushes on exposed shale outcrops.

Rationale: Known from two locations. It has lost habitat in the past, and there remains a potential threat of loss due to future crop cultivation and pressure from grazing livestock.

Stapelia glanduliflora Masson

Status: **VU** D2

N.A. Helme & D. Raimondo

eDistribution: WC. Klawer to ± 20 km north of Citrusdal.

Habitat: Arid, stony slopes among shrubs.

Rationale: Known from four locations. It has lost habitat to crop cultivation (deciduous fruit, vines, tomatoes and onions) in the past. Although not declining currently, loss to agriculture remains a potential threat, especially as irrigation technologies improve.

F **Stapelia montana** L.C.Leach var. **grossa** L.C.Leach

Status: **Rare**

P.F. Matlamela & D.A. Kamundi†

eDistribution: WC. Witels River, in the Hex River Mountains.

Habitat: Sandstone slopes.

Rationale: A range-restricted taxon (EOO < 10 km^2) known from one subpopulation. No recorded threats.

Stapelia paniculata Willd. subsp. **paniculata**

Status: **NT** B1ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

eDistribution: WC. Doringbaai, south to Aurora and inland to Piekenierskloof Pass.

Habitat: Sandstone outcrops.

Rationale: EOO 2 900 km^2. Known from less than 15 locations. At least part of the Lambert's Bay subpopulation was lost because of excavations for the Sishen to Saldanha railway line. Other subpopulations are likely to have been lost as a result of quarrying for road material. This loss is predicted to be ongoing.

Stapelia paniculata Willd. subsp. **scitula** (L.C.Leach) Bruyns

Status: **VU** B1ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

eDistribution: WC. Robertson district.

Habitat: Usually steep shale and dolomite slopes.

Rationale: Known from a restricted range (EOO < 300 km^2) and recorded from three locations but predicted to occur at a few others, possibly up to 10. Declining in habitat as a result of vineyard and fruit orchard expansion and quarrying.

Stapelia rubiginosa Nel

Status: **VU** D2

N.A. Helme & D. Raimondo

eDistribution: NC. Richtersveld.

Habitat: Inside bushes on stony, typically north-facing, slopes.

Rationale: Known from three locations. The number of subpopulations has declined since the 1950s as a result of desertification. This species is potentially threatened by climate change.

Stapeliopsis Pillans

Stapeliopsis breviloba (R.A.Dyer) Bruyns

Status: **VU** B1ab(ii,iii,iv,v)

D. Raimondo

eDistribution: WC. Worcester to Robertson, and Swellendam.

Habitat: Under small bushes on low, stony ridges or in loam flats.

Rationale: EOO 2 860 km^2. Recorded from fewer than 10 locations. This species is most common along the

southern banks of the Breede River on loam flats. This habitat has been and continues to be rapidly transformed for viticulture. A number of historical locations have been lost.

Stapeliopsis neronis Pillans

Status: **Rare**

J.E. Victor & S.P. Bester

Distribution: NC. Richtersveld.

Habitat: Steep, south-facing quartzite, schist and gneiss slopes, under bushes or between rocks.

Rationale: A habitat specialist known from several scattered subpopulations in the Richtersveld, not threatened because of the inaccessibility of its habitat.

Stenostelma Schltr.

[F] **Stenostelma umbelluliferum** (Schltr.) S.P.Bester & Nicholas

Status: **NT** B1ab(ii,iii,iv,v)

J.E. Victor, S.P. Bester & M.F. Pfab

[e]**Distribution:** G NW. Pretoria North and adjacent areas in North West Province.

Habitat: Deep black turf in open woodland, mainly in the vicinity of drainage lines.

Rationale: EOO 9 700 km^2. Suspected to occur at 13 locations, declining as a result of urban expansion.

Tridentea Haw.

Tridentea virescens (N.E.Br.) L.C.Leach

Status: **Rare**

J.E. Victor

Distribution: EC NC WC. Warmbad in southern Namibia to Kakamas and Prieska in the Northern Cape, stretching east to Prince Albert and Aberdeen.

Habitat: Stony ground, or hard loam in floodplains.

Rationale: A widespread species that occurs as sporadic small subpopulations of up to six plants. No threats are known to have an impact on this species.

Tromotriche Haw.

Tromotriche herrei (Nel) Bruyns

Status: **Rare**

D. Raimondo

[e]**Distribution:** NC. Southern bank of the Orange River in the Richtersveld, from Eksteenfontein to just northeast of Steinkopf.

Habitat: Gentle gravel slopes on quartz or gneiss.

Rationale: Occurs as sparsely scattered individuals, in a specific habitat. Known from eight subpopulations; this species has no significant threats.

Tylophora R.Br.

[F] **Tylophora coddii** Bullock

Status: **Rare**

P.A. Manyama & D.A. Kamundi†

[e]**Distribution:** LM. Southern end of Wylie's Poort to Blouberg.

Habitat: Rock crevices, 1 000–1 600 m.

Rationale: A habitat specialist recorded from fewer than 10 subpopulations; this species has no known threats.

Woodia Schltr.

Woodia singularis N.E.Br.

Status: **Rare**

A. Nicholas & J.E. Victor

Distribution: LM MP. Swaziland, Barberton and Punda Maria.

Habitat: Various habitats in bushveld and grasslands.

Rationale: Known from three small, disjunct subpopulations and likely to be a paleoendemic species occupying the edges of a former larger range.

Woodia verruculosa Schltr.

Status: **VU** D2

A. Nicholas, C.R. Scott-Shaw & D. Raimondo

[e]**Distribution:** KZN. Howick to Eston.

Habitat: Mistbelt and Ngongoni grassland, 800–1 300 m.

Rationale: Known from four locations, it has lost suitable habitat to crop cultivation, urban expansion and forestry in the past. It remains potentially threatened by urban expansion and the impact of habitat fragmentation, including an inappropriate fire regime.

Xysmalobium R.Br.

Xysmalobium baurii N.E.Br.

Status: **EX**

A. Nicholas & J.E. Victor

[e]**Distribution:** EC. Bizana.

Habitat: Grassland.

Rationale: Known from one collection made in Bizana in 1890 and not collected since. A large area (500 km^2) in and around Bizana has been transformed for subsistence agriculture and what habitat remains between ploughed areas has been severely degraded by overgrazing and trampling. Searches failed to relocate this species and it is therefore considered extinct.

[F] **Xysmalobium fluviale** Bruyns

Status: **Rare**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

[e]**Distribution:** WC. Oudtshoorn district, Tierberg.

Habitat: Sandstone slopes often near watercourses, growing in small bushes.

Rationale: A range-restricted habitat specialist (EOO < 20 km^2), known from one subpopulation with no recorded threats.

Xysmalobium pearsonii L.Bolus

Status: **DD**D

A. Nicholas & D. Raimondo

[e]**Distribution:** NC. Kamiesberg Plateau.

Habitat: Granite outcrops.

Rationale: Known from the type collection made by Pearson in 1910. Precise locality information and habitat data are not available, making it impossible to list this species. Crop cultivation and overgrazing by livestock could be threatening this taxon.

Xysmalobium winterbergense N.E.Br.

Status: **CR** PE

A. Nicholas, A.P. Dold & J.E. Victor

[e]**Distribution:** EC. Winterberg Mountains.

Habitat: Grassland.

Rationale: Known only from the type collection; A. Nicholas (*Xysmalobium* expert) has searched for this

species and not found it. As members of this genus are very sensitive to grazing by livestock, it is possible that this species has gone extinct. Further fieldwork is required to confirm this.

Xysmalobium woodii N.E.Br.

Status: **Rare**
A. Nicholas & J.E. Victor
Distribution: KZN. Drakensberg mountain range.
Habitat: Montane grassland, 1 800–2 100 m.
Rationale: Known from six collecting localities from high-altitude grasslands of KwaZulu-Natal and Lesotho. Not known to be threatened.

AQUIFOLIACEAE

Ilex L.

[F] **Ilex mitis** (L.) Radlk. var. **mitis**

Status: **Declining**
V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya
Distribution: EC FS G KZN LM MP NW WC. Widespread from Table Mountain in the Western Cape to Ethiopia and also Madagascar.
Habitat: Along rivers and streams in forest and thickets, sometimes in the open. Found from sea level to inland mountain slopes.
Rationale: This taxon has experienced notable declines in the Eastern Cape because of bark-stripping for the medicinal plant trade. It is not severely affected in the rest of its South African range.

ARALIACEAE

Cussonia Thunb.

Cussonia gamtoosensis Strey

Status: **Rare**
J.E. Victor & A.P. Dold
[e] **Distribution:** EC. Gamtoos River Valley.
Habitat: Dry, rocky slopes.
Rationale: A range-restricted species (EOO 420 km^2). Not threatened because of the inaccessibility of its habitat.

ASTERACEAE

Amellus L.

[F] **Amellus asteroides** (L.) Druce subsp. **mollis** Rommel

Status: **VU** B1ab(ii,iii,iv,v)
T. Trinder-Smith & D. Raimondo
[e] **Distribution:** WC. Hawston to De Mond.
Habitat: Coastal dunes.
Rationale: EOO 1 260 km^2. Known from 7–10 locations. Threatened by ongoing habitat loss to coastal housing development and encroachment by invasive alien acacias.

[F] **Amellus capensis** (Walp.) Hutch.

Status: **VU** B1ab(ii,iii,iv,v)
N.A. Helme & D. Raimondo
[e] **Distribution:** WC. Cape Peninsula to Agulhas.
Habitat: Coastal dunes.
Rationale: EOO 250 km^2. Recorded from four locations but suspected to be under-collected and to occur at up to 10 locations. Declining as a result of coastal development and severe infestations of invasive alien plants.

Amphiglossa DC.

Amphiglossa callunoides DC. **Plate 49**

Status: **VU** B1ab(ii,iii,iv,v)
D. Raimondo, N.G. Bergh, A.P. Dold & M. Koekemoer
[e] **Distribution:** EC WC. Uitenhage and Baviaanskloof.
Habitat: Sandy pebble-covered riverbanks, common along the rivers where round white boulders occur.
Rationale: EOO 5 000 km^2. Recorded from five locations, but suspected to occur at another five undiscovered locations. Experiencing a severe, continuing decline at one of these locations (the Swartkops River) as a result of gravel mining.

Amphiglossa celans Koekemoer

Status: **Rare**
J.E. Victor & M. Koekemoer
[e] **Distribution:** NC. Garies to Kotzesrus.
Habitat: Strandveld, deep sand, with sparse vegetation of predominantly mesembryanthemous and asteraceous elements that seldom grow taller than 0.5 m.
Rationale: Currently known only from one collection from a small area between Garies and Kotzesrus, this species is likely to be under-collected but, based on existing knowledge, is considered rare.

Amphiglossa corrudifolia DC.

Status: **VU** D2
M. Koekemoer & J.E. Victor
[e] **Distribution:** NC WC. Loeriesfontein and Prince Albert.
Habitat: Dry, sandy riverbeds.
Rationale: Known from two highly disjunct locations. Potentially threatened by periodic flash floods.

Amphiglossa susannae Koekemoer

Status: **VU** B1ab(ii,iii,iv,v)
N.A. Helme & D. Raimondo
[e] **Distribution:** WC. Ceres Karoo, Swartruggens Mountain.
Habitat: Deep red or white sand in level areas between Table Mountain Sandstone outcrops.
Rationale: EOO < 1 400 km^2. Known from fewer than 10 locations. Declining as a result of conversion of its sandy habitat for cash crop and fruit orchard cultivation.

Anaxeton Gaertn.

Anaxeton angustifolium Lundgren

Status: **Critically Rare**
N.A. Helme & D. Raimondo
[e] **Distribution:** WC. Ceres, Milner Peak.
Habitat: Sandstone cliffs and steep rocky slopes.
Rationale: Known from one collection at the western foot of Milner Peak. Not threatened because of the inaccessibility of its habitat.

Anaxeton brevipes Lundgren

Status: **VU** D2
N.A. Helme & D. Raimondo
[e] **Distribution:** WC. Riviersonderend Mountains.
Habitat: Rocky slopes.
Rationale: Known from two locations on the Riviersonderend Mountains. Potentially threatened by the spread of invasive alien plants.

Anaxeton ellipticum Lundgren

Status: **Rare**
P.P.J. Herman & J.E. Victor
eDistribution: WC. Franschhoek Peak to Hottentots Holland Mountains.
Habitat: Rocky sandstone slopes in montane fynbos.
Rationale: Known from fewer than five sites, occurs on rocky mountain slopes and is not threatened.

Anaxeton hirsutum (Thunb.) Less.

Status: **VU** D2
N.A. Helme & D. Raimondo
eDistribution: WC. Riviersonderend Mountains and Caledon Swartberg.
Habitat: Rocky mountain peaks and slopes, 500–1 500 m.
Rationale: Both mountain ranges on which it occurs are heavily infested with alien plants, posing a significant potential threat to all four known locations.

F **Anaxeton lundgrenii** B.Nord.

Status: **Critically Rare**
P.A. Manyama
eDistribution: WC. Kleinrivier Mountains.
Habitat: Rock crevices and on large, inaccessible boulders on steep middle slopes, mainly with a southwest aspect.
Rationale: A range-restricted species (EOO 130 km^2), known from one subpopulation. It has no recorded threats.

Anderbergia B.Nord.

F **Anderbergia elsiae** B.Nord.

Status: **Rare**
N.A. Helme
eDistribution: WC. Langeberg Mountains.
Habitat: Sandstone mountain peaks, 1 500–2 000 m.
Rationale: Occurs only on the two highest peaks of the Langeberg Mountains. Not threatened.

F **Anderbergia epaleata** (Hilliard & B.L.Burtt) B.Nord.

Status: **Critically Rare**
N.A. Helme
eDistribution: WC. Klein Swartberg Mountains.
Habitat: South-facing, upper sandstone slopes.
Rationale: Known from one mountain slope where it has no recorded threats.

F **Anderbergia fallax** B.Nord.

Status: **Critically Rare**
N.A. Helme
eDistribution: WC. Langeberg Mountains.
Habitat: Sandstone slopes.
Rationale: Known from a single collection made on Goedgeloof Peak in the Langeberg near Swellendam. Not threatened.

F **Anderbergia rooibergensis** B.Nord.

Status: **Critically Rare**
N.A. Helme
eDistribution: WC. Ladismith district, Rooiberg.
Habitat: Sandstone slopes.
Rationale: Known from one subpopulation, it has no recorded threats.

F **Anderbergia ustulata** B.Nord.

Status: **Critically Rare**
N.A. Helme
eDistribution: WC. Keeromsberg, Saw Edge Peak.
Habitat: Sandstone slopes.
Rationale: Known from only one collection. Not threatened.

F **Anderbergia vlokii** (Hilliard) B.Nord.

Status: **Critically Rare**
N.A. Helme
eDistribution: WC. Waboomsberg.
Habitat: Sandstone slopes.
Rationale: Known from only the one collecting locality. Occurs on mountain slopes and is not threatened.

Anisothrix O.Hoffm.

F **Anisothrix integra** (Compton) Anderb.

Status: **Rare**
N.A. Helme
eDistribution: WC. Seweweekspoort and Rooiberg Mountains.
Habitat: Cliffs on arid, lower sandstone slopes.
Rationale: A habitat specialist recorded from two sites. Not threatened because of the inaccessibility of its habitat.

F **Anisothrix kuntzei** O.Hoffm.

Status: **Critically Rare**
N.A. Helme & D. Raimondo
eDistribution: WC. Montagu, Cogmans Kloof.
Habitat: Cliffs on low sandstone slopes.
Rationale: Known from one site. Not threatened because of the inaccessibility of its habitat.

Antithrixia DC.

Antithrixia flavicoma DC.

Status: **VU** D2
N.A. Helme & D. Raimondo
eDistribution: NC. Namaqualand, Kamiesberg.
Habitat: West-facing medium-altitude granite slopes, 600–1 000 m.
Rationale: A Kamiesberg endemic, known from three locations. Potentially threatened by grazing by livestock.

Arctotheca J.C.Wendl.

Arctotheca forbesiana (DC.) K.Lewin **Plate 42**

Status: **CR** B2ab(ii,iii,iv,v)
N.A. Helme & D. Raimondo
eDistribution: WC. Durbanville and Somerset West to Caledon and Elim.
Habitat: Seasonally wet to flooded shale, silty clay lowlands associated with silcrete and ferricrete.
Rationale: The habitat has mostly been lost to wheat agriculture and the urban expansion of the Cape Flats and the Strand area over the past 80 years. All possible remaining habitat totals < 10 km^2. It has lost over 50% of known locations to urban expansion and agriculture, and is currently recorded from six small, severely fragmented subpopulations with less than 2 300 mature individuals. All subpopulations are declining as a result of ongoing habitat loss (areas on the outskirts of Cape Town are being developed) and the habitat of the Overberg subpopulations is being degraded as a result of eutrophication from surrounding wheat fields and the related invasion of alien grasses.

F **Arctotheca marginata** Beyers **Plate 42**

Status: **VU** D2

D. Raimondo & R.J. McKenzie

e**Distribution:** NC. Bokkeveld Escarpment near Nieuwoudtville.

Habitat: Permanent vleis on Bokkeveld Sandstone.

Rationale: Known from two locations on a private farm. Potentially threatened by overgrazing by livestock and extraction of water.

Arctotis L.

Arctotis angustifolia L.

Status: **CR** C2a(i)

N.A. Helme, D. Raimondo & R.J. McKenzie

e**Distribution:** WC. Cape Flats to Malmesbury and Kleinmond.

Habitat: Lowland acid fynbos, below 100 m.

Rationale: Recorded from two severely fragmented small subpopulations consisting of fewer than 10 mature individuals each. We suspect that there are less than 250 extant mature individuals of this species. Most of its lowland habitat has been transformed for urban development, crop cultivation or has been invaded by alien plants. The two remaining subpopulations are threatened by urban development and protea cultivation.

F **Arctotis debensis** R.J.Mckenzie

Status: **VU** A2c; B1ab(iii)+2ab(iii)

L. von Staden

e**Distribution:** EC. King William's Town to Pririe Forest.

Habitat: Grassland, the species occurs only on the mound-like edges of seasonally inundated hollows or 'kommetjies' that are 0.9–1.2 m deep and 1–9 m in diameter.

Rationale: EOO 186 km^2. Eight known locations. The small range of this species falls entirely within a densely populated area. A 30% decline in the population of this locally common species is estimated based on a 32% decline of natural vegetation within the known range over the last 10 years. Habitat loss is ongoing as a result of expanding human settlements, crop cultivation and severe overgrazing.

F **Arctotis hispidula** (Less.) Beauverd

Status: **DD**D

D.A. Kamundi† & D. Raimondo

e**Distribution:** EC WC. George to Uitenhage.

Habitat: Coastal dunes, 0–300 m.

Rationale: Known from three old herbarium collections, two from 1835 and one from 1927. All three specimens have very vague site descriptions. Not enough is known about the distribution or the population status of this species to determine its status. Its habitat is declining as a result of coastal development and invasion by alien plants.

F **Arctotis venidioides** DC.

Status: **DD**D

D.A. Kamundi† & D. Raimondo

e**Distribution:** WC. Clanwilliam.

Habitat: Unknown.

Rationale: Known only from the type, collected in the Olifants River Valley near Clanwilliam in 1835. This area has been transformed for citrus cultivation and this species is likely to be threatened.

Aster L.

F **Aster bowiei** Harv.

Status: **VU** D2

N.A. Helme & D. Raimondo

e**Distribution:** WC. Swellendam.

Habitat: Grassy fynbos, possibly on shale bands.

Rationale: Known from three collections and potentially threatened by invading alien plants and agriculture, especially at two of its locations at Garcia's Pass and Strawberry Hill.

F **Aster confertifolius** Hilliard & B.L.Burtt

Status: **Rare**

D.A. Kamundi† & J.E. Victor

e**Distribution:** KZN. KwaZulu-Natal Drakensberg, near Sani Pass.

Habitat: Stream gully on south-facing slopes between sandstone cliffs.

Rationale: A range-restricted species (EOO < 200 km^2), known from one subpopulation, but suspected to occur at a few more sites. No known threats.

Aster laevigatus (Sond.) Kuntze **Plate 46**

Status: **VU** D2

P.P.J. Herman, A.P. Dold & J.E. Victor

e**Distribution:** EC. Van Stadens Mountains.

Habitat: Montane fynbos on sandstone slopes.

Rationale: A range-restricted species known from one location. This species flowers only after fire. Potentially threatened by invasive alien pines.

Aster nubimontis W.Lippert

Status: **EN** A2c; B1ab(iii)+2ab(iii)

L. von Staden & P.J.D. Winter

e**Distribution:** LM. Wolkberg Plateau and Woodbush.

Habitat: Rocky outcrops in mistbelt grassland, above 1 600 m.

Rationale: An estimated 50–70% of its habitat has been lost over the last three generations (60–90 years), mainly as a result of afforestation. At present there are three or four locations in grassland fragments amidst extensive plantations. These fragments are being continually degraded because of unsuitable fire management and invasion by woody alien species, mainly pines and wattle. One location is potentially threatened by mining. Estimated EOO 120 km^2, AOO < 20 km^2.

Athanasia L.

F **Athanasia adenantha** (Harv.) Källersjö **Plate 43**

Status: **EN** B1ab(ii,iii,v); C2a(i)

N.A. Helme & D. Raimondo

e**Distribution:** NC WC. Wolseley to the southern Bokkeveld.

Habitat: Lowland sands and clays.

Rationale: EOO 4 600 km^2. Known from five locations and subpopulations. Each subpopulation has less than 100 plants. There is a continuing decline as a result of invasion by alien plants and expanding crop cultivation.

F **Athanasia alba** Källersjö

Status: **Critically Rare**

N.A. Helme

e**Distribution:** WC. Worcester, Audensberg.

Habitat: Sandstone slopes.

Rationale: Known from one subpopulation, occurs on mountain slopes and is not threatened.

[F] **Athanasia calophylla** Källersjö

Status: **Rare**

D. Raimondo, N.A. Helme & D.A. Kamundi†

[e]**Distribution:** WC. Northern Cederberg Mountains.

Habitat: Sandstone slopes.

Rationale: Known from a very small range (EOO 43 km^2), from three sites within the Cederberg Wilderness Area. Not threatened.

Athanasia capitata (L.) L. Plate 43

Status: **EN** A2abc; B1ab(ii,iii)+2ab(ii,iii)

D. Raimondo & N.A. Helme

[e]**Distribution:** WC. Cape Town to Wellington.

Habitat: Seasonally wet clay flats or gentle slopes.

Rationale: Formerly common on the Cape Peninsula and on the clay flats up the West Coast to Wellington (EOO 250 km^2). This long-lived species (generation length 50 years) has lost over 65% of known subpopulations and EOO over the past 120 years, primarily as a result of urban expansion, but also agriculture (vines and wheat) and invasion by alien plants. The decline due to urban expansion is ongoing, especially around Durbanville, and is having an impact on all eight of the remaining severely fragmented subpopulations.

[F] **Athanasia cochlearifolia** Källersjö Plate 43

Status: **EN** B1ab(ii,iii,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Still Bay to Mossel Bay.

Habitat: Lowland fynbos, often associated with limestone outcrops.

Rationale: A Riversdale Plain endemic (EOO 1 600 km^2) known from four locations. Declining as a result of crop cultivation and invasion by alien plants.

[F] **Athanasia crenata** (L.) L.

Status: **EN** B1ab(ii,iii,iv)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Piketberg to Drakenstein Mountains.

Habitat: Renosterveld, clay flats and slopes.

Rationale: A Swartland endemic (EOO 3 100 km^2) that has lost 94% of its habitat to crop cultivation and urban expansion. All remaining subpopulations are small and occur on remnant fragments that are isolated from one another and are declining because of invasion by alien plants and ongoing expansion of urban areas and agricultural lands.

Athanasia grandiceps Hilliard & B.L.Burtt

Status: **Rare**

P.P.J. Herman & J.E. Victor

[e]**Distribution:** KZN. Drakensberg Gardens and Cobham Nature Reserve.

Habitat: Montane grasslands in rocky valleys.

Rationale: Recorded from only three sites, this species is a range-restricted Drakensberg endemic (EOO < 100 km^2) that has no known threats.

Athanasia hirsuta Thunb.

Status: **Rare**

D. Raimondo, P.P.J. Herman & J.E. Victor

[e]**Distribution:** WC. Worcester and Montagu.

Habitat: Arid sandstone slopes.

Rationale: Known from five sites occurring as isolated subpopulations and is not threatened.

[F] **Athanasia humilis** Källersjö

Status: **Rare**

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Riviersonderend and Langeberg Mountains, near Montagu.

Habitat: Dry sandstone slopes in karroid vegetation.

Rationale: Known from two sites in the Little Karoo. Not threatened.

[F] **Athanasia imbricata** Harv.

Status: **DD**D

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Riviersonderend Mountains.

Habitat: Dry mountain slopes.

Rationale: Known only from the type specimen, collected by Harvey in 1865. Not enough is known about the distribution or population status of this species to assign a threat category.

Athanasia inopinata (Hutch.) Källersjö

Status: **VU** D2

D. Raimondo

[e]**Distribution:** WC. Tradouw Mountains.

Habitat: Sandstone valley and mountain slopes.

Rationale: Known from three locations in a very limited range around Tradouw Pass (EOO 70 km^2). Potentially threatened by invasive alien pines and hakeas.

[F] **Athanasia leptocephala** Källersjö

Status: **Rare**

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Gifberg and Matsikamma Mountains.

Habitat: Acid sands over shale.

Rationale: A rare species (EOO < 50 km^2) that occurs in habitats not targeted for rooibos tea cultivation.

Athanasia oocephala (DC.) Källersjö Plate 43

Status: **VU** D2

D. Raimondo

[e]**Distribution:** WC. Swellendam, Stormsvlei Kloof.

Habitat: Dry, grassy lower slopes.

Rationale: Known from one location. Potentially threatened by invasive alien plants and agriculture (vineyards and deciduous fruit).

[F] **Athanasia quinquedentata** Thunb. subsp. **rigens** Källersjö

Status: **VU** B1ab(iii,v)

D. Raimondo

[e]**Distribution:** WC. Still Bay.

Habitat: Coastal lowlands, on alkaline sands and occasionally on acid-alkaline ecotones.

Rationale: Known from a limestone ridge that runs parallel to the coast north of Still Bay. Threatened by ongoing habitat loss to alien acacia infestations. Fewer than 10 locations are known from a maximum range of 1 250 km^2.

Athanasia rugulosa E.Mey. ex DC.

Status: **EN** B1ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Malmesbury to Dassenberg.

Habitat: Seasonally wet sands.

Rationale: Known from two locations, at Riverlands and at Rondevlei (EOO < 20 km^2). It has lost > 70% of its habitat over the past 60 years to invasive alien acacias

and agriculture. It is still declining at Rondevlei, a private farm that is not well managed. At Riverlands, constant clearing is required to stop aliens from degrading the habitat of this species.

Athanasia scabra Thunb. Plate 43

Status: **VU** D1+2

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Riviersonderend Mountains, Silverstreams between Villiersdorp and Genadendal.

Habitat: Sandstone slopes.

Rationale: Recorded from one subpopulation, occurring as sparsely scattered individuals. Known from less than 100 plants and although there are probably more, the population is not likely to exceed 1 000 mature individuals. It is potentially threatened by invasive alien plants (pines and hakeas).

Athanasia sertulifera DC. Plate 43

Status: **EN** A2bc; B1ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Paleisheuwel.

Habitat: Dry, sandy flats.

Rationale: Only ever collected from three locations from a restricted range (EOO < 100 km^2). It occurs in deep sands, a habitat severely threatened by potato cultivation. Some 60% of its habitat has been lost over the past 40 years (generation length is estimated to be 15 years).

Athanasia spathulata (DC.) D.Dietr. Plate 43

Status: **EN** B1ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Nardous Mountain and the southern Bokkeveld.

Habitat: Sandy areas in arid mountains.

Rationale: EOO < 530 km^2. Known from two locations. Experiencing rapid, ongoing habitat loss due to rooibos tea cultivation.

Berkheya Ehrh.

Berkheya angusta Schltr.

Status: **VU** D2

D. Raimondo & R.C. Turner

[e]**Distribution:** WC. Langeberg and Bredasdorp Mountains.

Habitat: Low slopes, on clays or sandstone.

Rationale: Known from three locations. Potentially threatened by vineyards in the Worcester Valley and invading alien plants at Elandskloof.

Berkheya coddii Roessler

Status: **Rare**

J.E. Burrows, M. Lötter & J.E. Victor

Distribution: MP. Barberton.

Habitat: Serpentine soils.

Rationale: Serpentine endemic known from five sites. Its habitat is targeted for pine plantations, but this does not appear to be affecting this species at present.

Berkheya draco Roessler

Status: **Rare**

C.R. Scott-Shaw

[e]**Distribution:** KZN. Drakensberg Mountains, from Mont-aux-Sources to Champagne Castle.

Habitat: Montane grassland, in steep gullies.

Rationale: A rare species with a narrow range (EOO < 500 km^2). Occurs only in steep gullies and is not threatened.

Berkheya dregei Harv.

Status: **Critically Rare**

D. Raimondo & R.C. Turner

[e]**Distribution:** WC. Pakhuis Mountains.

Habitat: Rocky sandstone slopes, on boulders.

Rationale: Known from Pakhuis Pass in an area of fynbos that is not threatened.

Berkheya francisci Bolus Plate 44

Status: **Rare**

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Swartberg Mountains.

Habitat: High-altitude rocky sandstone slopes.

Rationale: A rare species (EOO < 60 km^2) known from four sites. Not threatened.

[F] **Berkheya griquana** Hilliard & B.L.Burtt

Status: **VU** D2

D.A. Kamundi† & D. Raimondo

[e]**Distribution:** KZN. KwaZulu-Natal Drakensberg Mountains, near Kokstad.

Habitat: Grassland in mountain foothills.

Rationale: A range-restricted species (EOO < 100 km^2), known from fewer than five locations. Potentially threatened by crop cultivation and habitat degradation due to overgrazing.

Berkheya leucaugeta Hilliard

Status: **Rare**

J.E. Victor

[e]**Distribution:** KZN. Drakensberg Mountains, Royal Natal National Park.

Habitat: Montane and subalpine grassland. Marshy depressions and scrub on basalt, 1 800–2 400 m.

Rationale: A habitat specialist known from one site in the Drakensberg. This species is rare but not known to be declining.

[F] **Berkheya pannosa** Hilliard

Status: **Rare**

D.A. Kamundi† & J.E. Victor

[e]**Distribution:** EC KZN. KwaZulu-Natal Drakensberg Mountains.

Habitat: Montane rocky grassland, 1 525–2 164 m.

Rationale: A range-restricted species (EOO < 500 km^2), known from four subpopulations. No recorded threats.

[F] **Berkheya radyeri** Roessler

Status: **Rare**

D.A. Kamundi† & D. Raimondo

[e]**Distribution:** LM. Blouberg.

Habitat: Mistbelt grassland, occurs among rocks near the mountain summit, 1 700–2 000 m.

Rationale: A range-restricted species (EOO < 100 km^2), known from the summit of the Blouberg, this species has no recorded threats.

Bolandia Cron

[F] **Bolandia argillacea** (Cron) Cron

Status: **Rare**

J.E. Victor & G. Goodman

[e]**Distribution:** WC. Worcester, Brandwacht Peak.

Habitat: Clay zones, 1 700–1 800 m.

Rationale: A high-altitude, range-restricted endemic (EOO < 10 km^2) that has no known threats.

Cadiscus E.Mey. ex DC.

Cadiscus aquaticus E.Mey. ex DC. **Plate 42**

Status: **CR** B2ab(i,ii,iii,iv,v)
N.A. Helme & D. Raimondo

e**Distribution:** WC. Eendekuil to Tygerberg.

Habitat: Vernal pools on shale. Juveniles submerged, adults floating, emergent or temporarily terrestrial.

Rationale: AOO < 2 km^2. This species occurs as small, fragmented subpopulations. It is declining as a result of overgrazing and trampling by livestock, infilling of wetlands, invasion by alien plants and eutrophication. It has declined by > 70% over the past 100 years.

Callilepis DC.

Callilepis leptophylla Harv.

Status: **Declining**
J.E. Victor

Distribution: G KZN LM MP. Widespread in eastern half of South Africa. Also in Swaziland.

Habitat: Grassland or open woodland, often on rocky outcrops or rocky hill slopes.

Rationale: A widespread species (EOO 156 000 km^2) that is declining as a result of over-exploitation for the medicinal plant trade. The extent of the decline is currently unknown.

Calotesta P.O.Karis

F **Calotesta alba** P.O.Karis **Plate 45**

Status: **Critically Rare**
N.A. Helme & D. Raimondo

e**Distribution:** WC. Klein Swartberg Mountains.

Habitat: Steep, south-facing sandstone cliffs and ledges, 1 700–2 000 m.

Rationale: Known from a tiny range (EOO < 6 km^2) from one site. This high-altitude mountain endemic is not threatened.

Capelio B.Nord.

F **Capelio caledonica** B.Nord.

Status: **Rare**
N.A. Helme & D. Raimondo

e**Distribution:** WC. Kogelberg, Palmiet River Mountains.

Habitat: Sandy soil.

Rationale: A range-restricted species, known from one site. Occurs within the Kogelberg Nature Reserve and is not threatened.

Chrysocoma L.

Chrysocoma esterhuyseniae Ehr.Bayer

Status: **CR** A2bc; B1ab(iii)+2ab(iii)
N.A. Helme & D. Raimondo

e**Distribution:** WC. Hopefield to Melkbosstrand.

Habitat: Acid sands.

Rationale: EOO < 10 km^2, AOO < 1 km^2. Known from only one extant location. This species has lost 85% of recorded locations and habitat to crop cultivation and severe infestations of alien plants. This loss has taken place over the past 85 years (generation length 30 years). The only remaining location at Riverlands is not managed appropriately for fire. This, with the constant invasion of alien acacias, is causing an ongoing decline in habitat quality.

F **Chrysocoma flava** Ehr.Bayer

Status: **DD**
N.A. Helme & D. Raimondo

e**Distribution:** WC. Brak River.

Habitat: Unknown, possibly shale.

Rationale: Not recollected since Muir's original 1929 collection. This area has been substantially transformed to crop cultivation and this species is likely to be threatened.

F **Chrysocoma hantamensis** J.C.Manning & Goldblatt

Status: **VU** D2
P.A. Manyama

e**Distribution:** NC. Bokkeveld and northern Roggeveld Escarpment.

Habitat: Succulent Karoo, doleritic clays.

Rationale: Known from two locations. One subpopulation is potentially threatened by crop cultivation.

Cineraria L.

F **Cineraria volubilis** Spreng.f.

Status: **DD**
P.A. Manyama

e**Distribution:** Unknown.

Habitat: Unknown.

Rationale: Known only from the type, collected in the late 1800s, which states only Cape Province, South Africa, as the collecting locality. No other information is known about this taxon.

F **Cineraria lanosa** DC.

Status: **DD**
P.A. Manyama

e**Distribution:** Unknown.

Habitat: Unknown.

Rationale: Known from the type collection made in 1791, which lists Cape Bonae Spei as the collecting locality. Nothing else is known about this species.

F **Cineraria alchemilloides** DC. subsp. **alchemilloides**

Status: **Rare**
P.A. Manyama

e**Distribution:** NC WC. Kouberg to Tulbagh.

Habitat: Steep slopes, below cliffs, usually in shade and sometimes in wet places, rocky soil and on sandstone (often quartzitic sandstone), 800–1 100 m.

Rationale: A habitat specialist known from five subpopulations. Most subpopulations are safe as they occur at high altitudes.

F **Cineraria angulosa** Lam.

Status: **EN** B1ab(ii,iii,iv)
N.A. Helme, D. Raimondo & G.V. Cron

e**Distribution:** WC. Langebaan and St Helena Bay.

Habitat: Granite and shallow granitic sands on granite outcrops near the sea, 30 m.

Rationale: EOO < 150 km^2. Known from three locations that are all threatened by ongoing coastal development.

F **Cineraria atriplicifolia** DC.

Status: **VU** B1ab(iii)
L. von Staden

e**Distribution:** KZN. Between Durban, Pietermaritzburg and Richmond.

Habitat: Grassland, open dry thornveld, or sometimes at the edge of thicket or forest or below steep cliffs in river valleys, 30–800 m.

Rationale: EOO 2 000–7 400 km², but uncertain as species may extend as far north as Richards Bay. Known from seven locations. It has experienced extensive habitat loss as a result of urban expansion, forestry plantations and crop cultivation (mainly sugarcane). Ongoing habitat loss is caused by urban expansion, subsistence agriculture, overgrazing, a deleterious fire regime and invasion by alien plants.

[F] **Cineraria austrotransvaalensis** Cron

Status: **NT** B1ab(iii)

G.V. Cron, M.F. Pfab & J.E. Victor

[e]**Distribution:** G MP NW. Scattered throughout Gauteng and the North West Province and at Standerton in southern Mpumalanga.

Habitat: Amongst rocks on steep hills and ridges, at the edge of thick bush or under trees on a range of rock types (quartzite, dolomite and shale), 1 400–1 700 m.

Rationale: EOO 20 000 km². Known from 12 locations. There is continuing decline in habitat as a result of urban expansion on ridges within Gauteng.

[F] **Cineraria cyanomontana** Cron

Status: **EN** D

N.A. Helme, D. Raimondo & G.V. Cron

[e]**Distribution:** LM. Blouberg.

Habitat: Mistbelt grassland, among rocks and overhangs in ravines near the mountain summit, 1 700–2 000 m.

Rationale: Known from one mountain with less than 250 plants.

[F] **Cineraria dryogeton** Cron

Status: **VU** D2

P.A. Manyama

[e]**Distribution:** EC KZN. Umtamvuna Nature Reserve.

Habitat: Grasslands near forest margins, and forest margins near waterfalls, in sandy loam soil on sandstone, 300–400 m.

Rationale: It has a very restricted distribution and is known from one location at present but is likely to be under-collected. We suspect that it occurs at five locations. It is potentially threatened by a deleterious fire regime.

[F] **Cineraria erodioides** DC. var. **tomentosa** Cron

Status: **Critically Rare**

P.A. Manyama

[e]**Distribution:** LM. Googol in Venda.

Habitat: Occurs near the crest of a mountain on the southern or southeastern aspect, amongst rocks and shrubs, 1 100–1 250 m.

Rationale: Known only from the type locality. It is not threatened as it occurs at high altitudes.

[F] **Cineraria glandulosa** Cron

Status: **VU** D2

P.A. Manyama

[e]**Distribution:** KZN. Pendle, Umlazi and New Hanover districts, as well as near Murchison.

Habitat: Amongst grass and rocks on slopes of river valleys, or at the base of cliffs above river gorges, 1 400–1 800 m.

Rationale: This species occurs in fewer than five locations and is potentially threatened by afforestation, crop cultivation and land degradation due to overgrazing by livestock and a deleterious fire regime.

[F] **Cineraria lobata** L'Hér. subsp. **lasiocaulis** Cron

Status: **Rare**

P.A. Manyama

[e]**Distribution:** WC. Laingsburg district and in the vicinity of Layton in the Great Karoo.

Habitat: Arid rocky ridges.

Rationale: A habitat specialist that occurs at fewer than five sites and is not threatened.

[F] **Cineraria lobata** L'Hér. subsp. **platyptera** Cron

Status: **NT** B1ab(i,iii,iv,v)

P.A. Manyama

[e]**Distribution:** EC. Albany, Uitenhage and Port Elizabeth.

Habitat: Grassy fynbos and thornveld.

Rationale: EOO 4 100 km². Known from 18 locations, most of which are threatened by crop cultivation, urban expansion and habitat degradation from overgrazing by livestock.

[F] **Cineraria longipes** S.Moore

Status: **VU** D2

M.F. Pfab & J.E. Victor

[e]**Distribution:** G. Klipriviersberg and Suikerbosrand.

Habitat: Grassland, amongst rocks and along seepage lines, exclusively on basalt koppies on south-facing slopes.

Rationale: As a result of extensive habitat loss over a long period of time, only six subpopulations of this species now remain, occupying an estimated AOO of 5–14 km². Conservation policies are in place to prevent further destruction of the habitat, but it remains potentially threatened.

Cineraria pinnata O.Hoffm.

Status: **NT*** D2

C.R. Scott-Shaw, G.V. Cron & J.E. Victor

Distribution: KZN. Kosi Bay to Maputo.

Habitat: Coastal grassland.

Rationale: There are three locations in South Africa that are potentially threatened by habitat loss for subsistence crop cultivation. Downgraded to NT as a result of the good dispersal ability of this species and the existence of subpopulations in Mozambique.

[F] **Cineraria vagans** Hilliard

Status: **EN** B1ab(iii)

P.A. Manyama

[e]**Distribution:** EC. Amathole Mountains, Katberg Pass and the Elandsberg.

Habitat: Sourveld grassland, in grass or around rocks on slopes, rocky outcrops or ridges, at the foot of sandstone cliffs in damp grass, on steep south-facing slopes, 1 380–1 750 m.

Rationale: EOO 180 km². Known from only three locations. Threatened by afforestation and ongoing severe habitat degradation by overgrazing by livestock.

Comborhiza Anderb. & K.Bremer

Comborhiza longipes (K.Bremer) Anderb. & K.Bremer

Status: **Rare**

F. Daniels

[e]**Distribution:** WC. Groot Winterhoek to Hex River Mountains.

Habitat: Sandstone slopes above 1 500 m.

Rationale: A range-restricted species (EOO < 500 km²) known from fewer than five sites. Occurs on high mountain slopes and is not threatened.

Corymbium L.

[F] **Corymbium elsiae** Weitz

Status: **Rare**

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Ceres to Bain's Kloof.

Habitat: Steep, rocky slopes, especially in crevices.

Rationale: Known from five sites. A high-altitude mountain species that is not threatened.

[F] **Corymbium laxum** Compton subsp. **bolusii** Weitz

Status: **Rare**

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Franschhoek Mountains.

Habitat: Rocky sandstone slopes.

Rationale: Known from two sites in a very restricted range (EOO 20 km^2). No recorded threats.

Corymbium theileri Markötter

Status: **Critically Rare**

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Piketberg.

Habitat: Rocky sandstone slopes.

Rationale: Known from one site, occurs in rocky areas not suitable for ploughing and is therefore not threatened.

Cotula L.

[F] **Cotula andreae** (E.Phillips) K.Bremer & Humphries **Plate 42**

Status: **Rare**

N.A. Helme

[e]**Distribution:** WC. Hex River Mountains to Klein Swartberg Mountains.

Habitat: Damp, partly shaded sandstone crevices on upper slopes.

Rationale: A habitat specialist known from two sites, not threatened.

Cotula duckittiae (L.Bolus) K.Bremer & Humphries

Status: **VU** B1ab(ii,iii)

N.A. Helme

[e]**Distribution:** WC. Yzerfontein to Bokbaai.

Habitat: Sandy flats.

Rationale: EOO 650 km^2. Known from 10 locations. Declining in EOO and habitat quality as a result of invasive alien plants, crop cultivation (wheat and vineyards) and urban expansion.

[F] **Cotula eckloniana** (DC.) Levyns

Status: **EN** B1ab(ii,iii)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Berg River to Cape Peninsula.

Habitat: Sandy coastal flats.

Rationale: EOO 300 km^2. A lowland species that has lost > 95% of its habitat over the past 80 years to crop cultivation and urban development. Possibly extant at three locations. All remaining subpopulations are severely fragmented, occurring on small remnants separated by agricultural lands and by suburbs in the greater Cape Town area. Loss to urban expansion and invasive alien plants is ongoing.

[F] **Cotula filifolia** Thunb.

Status: **CR** B2ab(ii,iii,v)

N.A. Helme & J.E. Victor

[e]**Distribution:** WC. Darling to Agulhas.

Habitat: Marshy ground, pools and damp places.

Rationale: It has a very small area of occupancy (AOO 10 km^2), is severely fragmented and is facing a severe decline as a result of agriculture (wheat and vineyards), invasion by alien plants and urban expansion.

Cotula loganii Hutch.

Status: **DD**D

P.P.J. Herman & J.E. Victor

[e]**Distribution:** NC. Unknown.

Habitat: Unknown.

Rationale: Known from an old collection by Hutchinson in 1928, with no detailed collecting locality or habitat information.

Cotula myriophylloides Harv. **Plate 42**

Status: **CR** B1ab(iii)

N.A. Helme & D. Raimondo

Distribution: WC. Cape Peninsula to Kleinmond.

Habitat: Primarily seasonal coastal pools, but also in marshes and on wet sand. Mostly in brackish, but also fresh, still or slowly moving water.

Rationale: Most historical collections are from the Cape Peninsula, but all these subpopulations are now extinct as a result of eutrophication, drainage of wetlands and changes in flow dynamics. Extant at only one subpopulation, in a tiny area of 3 ha at the mouth of the Bot River. This species remains threatened by eutrophication and potential future alterations of water flow dynamics.

[F] **Cotula paludosa** Hilliard

Status: **NT** B1ab(iii)

J.E. Victor

[e]**Distribution:** EC. Lesotho and Eastern Cape Drakensberg Mountains.

Habitat: In shallow standing water, often filling depressions, 2 600–3 230 m.

Rationale: EOO 21 000 km^2. Eleven locations known, likely to occur at a few more. Restricted to high-altitude bogs, its habitat is threatened by overgrazing and peat degradation due to trampling by livestock.

Cotula pedunculata (Schltr.) E.Phillips

Status: **VU** D2

J.E. Victor & P.P.J. Herman

[e]**Distribution:** WC. Zuurfontein near Brand-se-baai on the West Coast.

Habitat: Succulent karoo shrubland.

Rationale: Known from fewer than five locations. Potentially threatened by mining.

[F] **Cotula pusilla** Thunb.

Status: **NT** B1ab(ii,iii,iv,v)

N.A. Helme

[e]**Distribution:** WC. Paternoster to Milnerton, and Caledon.

Habitat: Edge of seasonal pools in sandy coastal areas.

Rationale: EOO 6 000 km^2. Known from 15 locations. May be locally common but is restricted in its habitat. Experiencing ongoing habitat loss as a result of urban and industrial expansion on the Vredenburg Peninsula as well as invasion by alien plants throughout its range.

[F] **Cotula vulgaris** Levyns var. **vulgaris**

Status: **CR** B2ab(ii,iii,v)

G. Jakubowsky, E. Sieben, N.A. Helme & J.E. Victor

[e]**Distribution:** WC. Darling to Cape Peninsula.

Habitat: Pools and damp places, tolerating brackish water, 30 m.

Rationale: A range-restricted taxon (EOO < 2 000 km², AOO < 3 km²) now known from only three severely fragmented subpopulations. A number of subpopulations have been lost because of urban expansion on the Cape Peninsula. Of the subpopulations remaining, one is threatened by extraction of groundwater and the others are declining as a result of invasion by alien plants.

Cullumia R.Br. ex Aiton

[F] **Cullumia cirsioides** DC.

Status: **VU** D2

D. Raimondo

[e]**Distribution:** EC. Humansdorp to Port Elizabeth.

Habitat: Sandstone slopes.

Rationale: Currently known from five locations, it has lost habitat to afforestation in the past. Although not currently declining, it remains potentially threatened by future forestry expansion.

Cullumia floccosa E.Mey. ex DC. Plate 44

Status: **CR** A2ac; B1ab(iii); C2a(ii)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Redelinghuys.

Habitat: Deep sands.

Rationale: EOO 400 km². It has lost over 80% of its habitat over the past 25 years (generation length 20 years) to crop cultivation. Loss is continuing as a result of expansion for rooibos tea and potato cultivation; it is also threatened by urban development. Currently known from only two fragmented subpopulations and from 61 plants, 60 of which occur in one subpopulation.

Cullumia micracantha DC. Plate 44

Status: **EN** A2ac; C1

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Olifants River Valley and Piketberg.

Habitat: Sand fynbos, deep sands.

Rationale: There has been a loss of over 70% of suitable deep sand habitat over the past 25 years as a result of potato and rooibos tea cultivation, and the decline is ongoing (generation length is ± 20 years). This species is easily found in suitable habitat, indicating a linear relationship between habitat and population number. The estimated population size is 2 500 plants.

Cullumia pectinata (Thunb.) Less.

Status: **VU** A4ac; B1ab(ii,iii,iv,v)

D. Raimondo

[e]**Distribution:** WC. Bokkeveld Mountains.

Habitat: Deep, sandstone-derived sands on gentle slopes and flats, between rocks.

Rationale: EOO < 400 km². Fewer than seven locations known, declining as a result of rooibos tea cultivation. More than 30% of its habitat has been lost over the past 15 years (generation length 10 years), most over the past five years. The continuing expansion of the rooibos tea market means that the pressure on the habitat of this species would probably worsen.

Cullumia rigida DC.

Status: **Rare**

D. Raimondo

[e]**Distribution:** NC WC. Kamiesberg, Bokkeveld Mountains and Little Karoo.

Habitat: Sandstone slopes up to 1 500 m.

Rationale: A habitat specialist that occurs as highly disjunct subpopulations. Not threatened as it occurs at high altitudes.

Cullumia selago Roessler Plate 44

Status: **EN** A2ac

D. Raimondo & N.A. Helme

[e]**Distribution:** WC. Caledon Swartberg.

Habitat: Arid fynbos on low slopes at the transition of shale and sandstone soils.

Rationale: Known from one location. It is a long-lived resprouter (generation length over 50 years) that has lost > 50% of its habitat to wheat cultivation and dense invasions of alien plants over the past 80 years. Not currently declining.

[F] **Cullumia squarrosa** (L.) R.Br. Plate 44

Status: **EN** B1ab(ii,iii,iv,v)

D. Raimondo

[e]**Distribution:** WC. Cape Peninsula to Gansbaai.

Habitat: Coastal vegetation, deep sands.

Rationale: EOO < 1 700 km². It has lost > 60% of known subpopulations to coastal development over the past 150 years and is currently extant at four locations. Loss to coastal development is continuing.

Cymbopappus B.Nord.

[F] **Cymbopappus hilliardiae** B.Nord.

Status: **VU** D2

D. Raimondo & P.A. Manyama

[e]**Distribution:** EC. Mount Insiswa in the Transkei.

Habitat: Moist grassland on rocky slopes.

Rationale: Known from a single location in the northern Transkei (EOO and AOO < 20 km²). Potentially threatened by habitat degradation due to overgrazing.

Dicoma Cass.

[F] **Dicoma montana** Schweick.

Status: **Rare**

P.F. Matlamela & D.A. Kamundi†

[e]**Distribution:** LM. Soutpansberg and Blouberg Mountains.

Habitat: Crevices in quartzite rocks.

Rationale: A habitat specialist known from fewer than 10 subpopulations. No known threats.

[F] **Dicoma prostrata** Schweick.

Status: **DD**D

P.F. Matlamela & D.A. Kamundi†

[e]**Distribution:** LM. Waterberg.

Habitat: Rocky slopes in open woodland.

Rationale: Known from two old collections made in the Waterberg area in 1930. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

[F] **Dicoma swazilandica** S.Ortíz, Rodr.Oubiña & Pulgar

Status: **Rare**

L. von Staden & D.A. Kamundi†

Distribution: MP. Swaziland and Songimvelo Game Reserve.

Habitat: Stony hillsides, at around 1 685 m.

Rationale: The only known site in South Africa falls within a protected area.

Dimorphotheca Vaill. ex Moench

[F] **Dimorphotheca venusta** (Norl.) Norl. var. **venusta**

Status: **Rare**
N.A. Helme & D. Raimondo
[e]**Distribution**: WC. Wemmershoek, Du Toit's Kloof and Hex River Mountains.
Habitat: Rocky slopes and ledges, upper slopes, 600–1 800 m.
Rationale: Known from four sites from middle and high mountain slopes, not threatened.

Dimorphotheca walliana (Norl.) B.Nord.

Status: **VU** D2
P.P.J. Herman & J.E. Victor
[e]**Distribution**: WC. Gordon's Bay at the foot of the Hottentots Holland Mountains.
Habitat: Steep rocky slopes, on sandstone.
Rationale: Restricted distribution (EOO 20 km^2) and known from two locations. Potentially threatened by coastal development.

Dymondia Compton

Dymondia margaretae Compton **Plate 42**

Status: **EN** B1ab(iii)
N.A. Helme & D. Raimondo
[e]**Distribution**: WC. Bredasdorp to Infanta.
Habitat: Coastal flats, at edges of pans and marshes.
Rationale: EOO 800 km^2. Known from three locations. Declining as a result of invasion by alien plants and agricultural expansion. Two subpopulations have lost part of their habitat to road construction.

Elytropappus Cass.

[F] **Elytropappus sp. nov.**
Voucher: *Koekemoer 1135* PRE

Status: **Rare**
D.A. Kamundi† & J.E. Victor
[e]**Distribution**: WC. Riversdale, Kanetberg.
Habitat: Sandstone slopes, 600–800 m.
Rationale: A range-restricted species (EOO < 50 km^2), known from one subpopulation. This species has no recorded threats.

Emilia Cass.

[F] **Emilia hantamensis** J.C.Manning & Goldblatt

Status: **NT** D2
D. Raimondo & P.A. Manyama
[e]**Distribution**: NC. Nieuwoudtville to Calvinia.
Habitat: Dolerite outcrops on dolerite-clay soils.
Rationale: EOO 2 000 km^2. Known from fewer than 10 locations. Potentially threatened by grazing by livestock and invasive alien annual grasses.

Eriocephalus L.

[F] **Eriocephalus grandiflorus** M.A.N.Müll.

Status: **Rare**
D. Raimondo & J.E. Victor
[e]**Distribution**: WC. Roggeveld to the Little Karoo.
Habitat: Lower foothills in quartz patches.
Rationale: A narrow habitat specialist found mainly in the Little Karoo, where it occurs only in Quartz Apron Veld between the Anysberg and the Warmwatersberg. Also known from the Roggeveld. Its habitat is not threatened.

Eriocephalus tenuipes C.A.Sm.

Status: **Rare**
P.P.J. Herman & J.E. Victor
[e]**Distribution**: EC WC. Uniondale to Port Elizabeth.
Habitat: Rocky slopes.
Rationale: Known from five sites. Occurs mainly in the mountains of the Langkloof. Its rocky habitat is not targeted for agriculture.

Euryops (Cass.) Cass.

Euryops brevilobus Compton

Status: **Rare**
R.C. Turner & D. Raimondo
[e]**Distribution**: WC. Cederberg to Swartruggens.
Habitat: Sandstone slopes.
Rationale: Known from only five collections, restricted to rocky slopes that are not threatened.

Euryops brevipes B.Nord.

Status: **Rare**
D. Raimondo
[e]**Distribution**: KZN. KwaZulu-Natal Drakensberg Mountains, Cathkin Peak.
Habitat: Drakensberg Alpine Tundra, southwest-facing rock ledges, 3 000 m.
Rationale: A habitat specialist known only from the type collected at Monk's Cowl in 1956.

[F] **Euryops calvescens** DC.

Status: **Rare**
D.A. Kamundi† & D. Raimondo
[e]**Distribution**: EC. Steynsburg and Stormsberg.
Habitat: Karroid mountain veld, 1 500–2 000 m.
Rationale: A range-restricted species (EOO 410 km^2), recorded from two sites, this species has no recorded threats.

Euryops ciliatus B.Nord.

Status: **Rare**
D. Raimondo
[e]**Distribution**: EC. Amathole Mountains, Elandsberg.
Habitat: Alpine habitats above 1 800 m.
Rationale: A range-restricted species known only from mountain summits (EOO 70 km^2), not threatened.

Euryops decipiens Schltr.

Status: **VU** D2
P.P.J. Herman, J.E. Victor & R.C. Turner
[e]**Distribution**: WC. Bain's Kloof Mountains.
Habitat: Steep, moist, sandstone slopes, 600–1 375 m.
Rationale: Known from one location. Potentially threatened by a deleterious fire regime and invasion by alien plants.

Euryops dentatus B.Nord.

Status: **VU** D2
R.C. Turner
[e]**Distribution**: EC. Bankberg, Toorberg and Sneeuberg in the Graaff-Reinet district.
Habitat: Arid mountain slopes.
Rationale: Known from three locations. Two are potentially threatened by agriculture and frequent fires and the third falls within the Mountain Zebra National Park.

[F] **Euryops discoideus** Burtt Davy

Status: **DD**D

M. Lötter, J.E. Burrows, L. von Staden, D.A. Kamundi† & J.E. Victor

[e]**Distribution:** MP. Kaapsehoop.

Habitat: Unknown, probably grassland on quartzite sourveld if collected on the escarpment.

Rationale: A very poorly known species recorded only from the type specimen. The exact collecting date is unknown, but it was collected before 1935. The habitat has been significantly transformed by commercial forest plantations and it is likely to be threatened.

[F] **Euryops dyeri** Hutch.

Status: **DD**D

D.A. Kamundi† & D. Raimondo

[e]**Distribution:** EC. Amathole Mountains and adjacent Katberg.

Habitat: Rocks in highland sourveld above 1 650 m.

Rationale: A range-restricted species (EOO 510 km^2), known from four sites. Last collected in 1958. It occurs at altitudes that have been planted with pines and is therefore potentially threatened. Not enough is known about its current population status to assign a threat category.

[F] **Euryops ericifolius** (Bél.) B.Nord.

Status: **EN** B1ab(iii)

D. Raimondo & R.C. Turner

[e]**Distribution:** EC. Uitenhage to Port Elizabeth.

Habitat: Low-altitude flats and slopes.

Rationale: Known from a highly restricted area between Motherwell and Coega (EOO 119 km^2). Declining as a result of overgrazing of its habitat by cattle. It is also potentially threatened by the expansion of low-cost housing and further infrastructure development at Kouga.

[F] **Euryops glutinosus** B.Nord.

Status: **Rare**

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Klein Swartberg Mountains.

Habitat: Steep, rocky, fire-protected slopes, generally on southern aspects.

Rationale: A range-restricted species (EOO 100 km^2), known from four sites. Not threatened because of the inaccessibility of its habitat.

Euryops gracilipes B.Nord.

Status: **VU** D2

P.P.J. Herman & J.E. Victor

[e]**Distribution:** EC. Fish River Valley.

Habitat: Open scrub.

Rationale: Known from two locations, potentially threatened by grazing livestock and crop cultivation at both locations.

[F] **Euryops hebecarpus** (DC.) B.Nord.

Status: **EN** B1ab(iii,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Bredasdorp to Still Bay.

Habitat: Limestone.

Rationale: Known from three locations, this limestone endemic is threatened throughout its range by grazing by livestock and game and by invasive alien plants.

Euryops hypnoides B.Nord.

Status: **VU** D2

J.E. Victor & A.P. Dold

[e]**Distribution:** EC. Grahamstown.

Habitat: Moist mountain slopes in grassy fynbos.

Rationale: Known only from one location and potentially threatened by overgrazing by livestock.

Euryops indecorus B.Nord.

Status: **Critically Rare**

D. Raimondo

[e]**Distribution:** WC. Cape Hangklip.

Habitat: Steep, rocky places, sometimes crevices in cliffs.

Rationale: Known from one site on cliff faces above Rooiels. Not threatened because of the inaccessibility of its habitat.

Euryops integrifolius B.Nord.

Status: **DD**D

D. Raimondo & R.C. Turner

[e]**Distribution:** EC. Kouga Mountains, east of Smutsberg.

Habitat: Rocky sandstone ridges above 1 200 m.

Rationale: Known only from the type, collected in 1944. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Euryops lasiocladus (DC.) B.Nord. **Plate 45**

Status: **CR** B1ab(iii,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Babilonstoring Mountains.

Habitat: Sandstone slopes, shale bands, 300–600 m.

Rationale: Confined to a very specific altitude and habitat. EOO 15 km^2. This species is known from one location and is experiencing ongoing decline as a result of invasion by *Hakea gibbosa*.

Euryops latifolius B.Nord.

Status: **Rare**

J.E. Victor, A.P. Dold & R.C. Turner

[e]**Distribution:** EC. Kirkwood to Jeffreys Bay.

Habitat: Suurberg Quartzite Fynbos, above thicket vegetation.

Rationale: Known from two collections, but additional sites likely as these mountains are under-explored. Occurs in rocky, inaccessible habitat that is not threatened.

Euryops linearis Harv.

Status: **VU** B1ab(iii,v)

F. Daniels & R.C. Turner

[e]**Distribution:** WC. De Hoop to Potberg.

Habitat: Partly shaded limestone ridges and coastal dunes, occasionally on sandstone rocks.

Rationale: A range-restricted species (EOO 200 km^2), known from eight locations in and around De Hoop Nature Reserve. Declining as a result of invasion by *Acacia cyclops*. Despite occurring mostly within De Hoop Nature Reserve, this species is threatened as *A. cyclops* continues to spread in De Hoop, especially on limestone ridges and coastal dunes, the habitat of this species.

[F] **Euryops longipes** DC. var. **lasiocarpus** B.Nord.

Status: **Rare**

D.A. Kamundi† & D. Raimondo

[e]**Distribution:** WC. Witzenberg and Kouebokkeveld Mountains.

Habitat: Rocky slopes, 1 000–1 800 m.

Rationale: A range-restricted taxon (EOO < 355 km^2) known from three subpopulations. No known threats.

Euryops marlothii B.Nord.

Status: **Rare**

P.P.J. Herman, J.E. Victor & R.C. Turner

eDistribution: NC. Roggeveld and Hantamsberg Mountains.

Habitat: Steep or gentle slopes of a mainly southern aspect in low karroid scrub.

Rationale: A range-restricted species (EOO < 500 km^2) known from six sites. Grows on slopes that are not threatened by agriculture.

Euryops mirus B.Nord. **Plate 45**

Status: **CR** A2bc; B1ab(iii,v)+2ab(iii,v)

D. Raimondo, J.H. Vlok, E. Marinus & N.A. Helme

eDistribution: NC. Bokkeveld Plateau.

Habitat: Transition soil between sandstone and tillite clays, on flat ground.

Rationale: Restricted to a 4 km^2 area on the Bokkeveld Escarpment where 85% of its habitat has been lost to wheat cultivation. Most herbarium records are from roadside fragments. Over the past 45 years, the only collection has been on one small roadside remnant, which is threatened by grazing.

Euryops muirii C.A.Sm.

Status: **EN** B1ab(iii,iv,v)+2ab(iii,iv,v)

D. Raimondo & R.C. Turner

eDistribution: WC. Still Bay.

Habitat: Limestone ridges.

Rationale: Occurs at three locations from a restricted area (EOO 126 km^2). Declining as a result of severe infestations of *Acacia cyclops*. A fourth subpopulation was destroyed for a housing development.

[F] **Euryops namaquensis** Schltr.

Status: **VU** B1ab(iii,v)

J.H. Vlok & D. Raimondo

eDistribution: WC. Vanrhynsdorp, Knersvlakte.

Habitat: Quartz patches on hills.

Rationale: Known from fewer than 10 locations from a restricted area (EOO < 1 500 km^2). This slow-growing species is declining as a result of overgrazing by livestock.

Euryops pectinatus (L.) Cass. subsp. **lobulatus** B.Nord.

Status: **VU** D2

R.C. Turner & D. Raimondo

eDistribution: WC. Piketberg.

Habitat: In rock crevices and among large boulders on mountain summits.

Rationale: Known from two locations (EOO 20 km^2). Potentially threatened by frequent fires.

[F] **Euryops petraeus** B.Nord.

Status: **Rare**

D.A. Kamundi† & D. Raimondo

eDistribution: EC NC WC. Sneeuberge and Winterhoek Mountains in the Graaff-Reinet district, and Nuweveld Mountains south of Fraserburg.

Habitat: Rocky mountain summits, 1 650–2 450 m.

Rationale: A habitat specialist, known from fewer than five subpopulations. No known threats.

Euryops pleiodontus B.Nord.

Status: **DD**D

P.P.J. Herman, J.E. Victor & R.C. Turner

eDistribution: NC. Steinkopf.

Habitat: Unknown.

Rationale: Known only from the type specimen, not collected during the 20th century.

Euryops polytrichoides (Harv.) B.Nord.

Status: **DD**D

P.P.J. Herman, A.P. Dold & J.E. Victor

eDistribution: EC. Grahamstown.

Habitat: Unknown.

Rationale: Known only from the type, collected near Grahamstown in the 1800s. It has not been relocated despite targeted searches.

Euryops rosulatus B.Nord.

Status: **CR** PE

D. Raimondo

eDistribution: NC. Nieuwoudtville.

Habitat: Transition soil between sandstone and tillite clays, on flat ground.

Rationale: This species occupies the same habitat and localities as *E. mirus*, but unlike *E. mirus* it has not been collected since 1960. There has been > 90% conversion of its habitat over the past 70 years to crop cultivation. The only remaining habitat are tiny fragments of renosterveld between wheat and rooibos fields. These fragments are currently grazed by sheep and as *Euryops* species are highly palatable, this has probably caused a severe decline in individuals. D. Raimondo and J.P. Roux searched the last remaining fragments extensively in August 2007 but found no plants; this species is possibly extinct.

[F] **Euryops serra** DC.

Status: **Rare**

D.A. Kamundi† & D. Raimondo

eDistribution: WC. Groot Winterhoek Mountains.

Habitat: Fynbos on hillsides, 200–1 000 m.

Rationale: A range-restricted species (EOO < 100 km^2), known from four subpopulations. No recorded threats.

Euryops subcarnosus DC. subsp. **minor** B.Nord.

Status: **DD**D

D. Raimondo & R.C. Turner

eDistribution: NC. Namaqualand, Kamiesberg.

Habitat: Unknown, likely to be granite hills.

Rationale: Known from four early collections in the Kamiesberg. Last collected in 1954, exact habitat not specified. Vulnerability of this taxon to grazing is unknown.

[F] **Euryops tagetoides** (DC.) B.Nord.

Status: **NT** D2

J.H. Vlok & D. Raimondo

eDistribution: WC. Botterkloof Pass to northern Cederberg.

Habitat: Sandy soil between rocks.

Rationale: Known from fewer than 10 locations, occurring as small, scattered subpopulations. A slow-growing reseeder that is potentially threatened by grazing by livestock.

[F] **Euryops tenuilobus** (DC.) B.Nord.

Status: **DD**D

N.A. Helme & D. Raimondo

eDistribution: WC. Caledon district.

Habitat: Unknown.
Rationale: Known only from the type, collected from the Caledon district in the late 1890s. The area has been extensively transformed for wheat cultivation and this species may be highly threatened or even extinct. However, as the habitat is unknown, it is considered too poorly known to assign a threat category.

Euryops ursinoides B.Nord. Plate 45

Status: **VU** D2
D. Raimondo, W. Berrington & R.C. Turner
e**Distribution:** EC. Van Stadens Mountains to Kouga Mountains.
Habitat: Mesic fynbos on steep slopes, mostly on hillsides at low altitudes.
Rationale: Known from four locations. Two are old locations from the Van Stadens Mountains at Longmore and Otterford forest stations, but they have not been relocated and may have been lost as a result of afforestation. A lack of fire at both these locations as well as at Van Stadens Nature Reserve poses a significant potential threat to this fire-dependent recruiter. Without fire, the habitat of this species eventually becomes unsuitable afromontane forest.

Euryops virgatus B.Nord.

Status: **CR** A2cb; D
D. Raimondo
e**Distribution:** NC. Bokkeveld Escarpment.
Habitat: Rocky, sandy flats on Dwyka tillite clay.
Rationale: EOO 30 km^2. Within this range it has lost 83% of available habitat to wheat cultivation. This loss has taken place over the past 70 years, less than three generations of this long-lived resprouter (generation length over 50 years). It is known only from roadside fragments; three plants were counted in surveys in 2006 and 2007.

Euryops zeyheri B.Nord.

Status: **CR** PE
J.H. Vlok & D. Raimondo
e**Distribution:** WC. Gamka River in the Beaufort West district.
Habitat: Clays associated with riverbeds.
Rationale: It has only ever been collected at one site, namely the Gamka River, near Beaufort West. Repeated searches in likely habitat along the Gamka River, often conducted after good rains in the flowering season, have failed to relocate this species. Additionally, several other species collected by Zeyher and Burk on the same day that they collected this species, have been located, but not *E. zeyheri*. We assume that this species is highly sensitive to grazing and may now be extinct. (Note: many members of the genus are highly palatable and do not survive grazing.)

Felicia Cass.

F **Felicia comptonii** Grau

Status: **Rare**
N.A. Helme
e**Distribution:** WC. Langeberg Mountains.
Habitat: Damp, rocky slopes at high altitude.
Rationale: Known from two sites, with only a slight potential threat from invading alien plants.

F **Felicia cymbalarioides** (DC.) Grau

Status: **Rare**
N.A. Helme
e**Distribution:** WC. Cape Peninsula to Hex River Mountains and the Langeberg.
Habitat: Sandstone slopes, on shaded ledges at high altitudes.
Rationale: Occurs as small scattered subpopulations, often with less than 30 plants in each. This species has no recorded threats.

Felicia deserti Schltr. ex Grau

Status: **DD**
D. Raimondo
e**Distribution:** NC. Keimoes near Upington and the Kamiesberg.
Habitat: Unknown.
Rationale: Known from two highly disjunct areas, last collected in 1925. The population status, distribution and habitat of this species are too poorly known to determine its status.

F **Felicia diffusa** (DC.) Grau subsp. **diffusa**

Status: **Rare**
D. Raimondo & D.A. Kamundi†
e**Distribution:** WC. Cederberg and Drakenstein Mountains.
Habitat: Sandstone slopes.
Rationale: Known from three sites, occurring in rocky places on mountain slopes and summits that are not threatened.

Felicia diffusa (DC.) Grau subsp. **khamiesbergensis** Grau

Status: **Critically Rare**
N.A. Helme & D. Raimondo
e**Distribution:** NC. Namaqualand, Kamiesberg.
Habitat: Rocky, east-facing granite slopes, in semishade of boulders, 1 300 m.
Rationale: No known threats, but highly restricted taxon known from one site.

Felicia ebracteata Grau

Status: **VU** D2
N.A. Helme & D. Raimondo
e**Distribution:** WC. De Hoop to Ystervarkpunt.
Habitat: Coastal limestone.
Rationale: Restricted to the limestone patches (AOO < 10 km^2). Potentially threatened by invading alien plants and development of tourism infrastructure.

Felicia elongata (Thunb.) O.Hoffm. Plate 46

Status: **VU** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)
N.A. Helme & D. Raimondo
e**Distribution:** WC. Vredenburg Peninsula, Jacobsbaai to Postberg.
Habitat: Coastal sands associated with limestone.
Rationale: Known from fewer than 10 locations (EOO 78 km^2). Its habitat is being transformed on an ongoing basis by coastal and industrial development, grazing by livestock and cement mining.

Felicia esterhuyseniae Grau

Status: **Rare**
N.A. Helme & J.E. Victor
e**Distribution:** WC. Kammanassie and Gamka Mountains.
Habitat: High-altitude sandstone slopes.
Rationale: Known from two sites. Not threatened because of the inaccessibility of its habitat.

[F] **Felicia josephinae** J.C.Manning & Goldblatt **Plate 46**

Status: **EN** B1ab(iii,v)+2ab(iii,v)
N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Aurora to Leipoldtville.
Habitat: Deep acid sands in sandveld.
Rationale: EOO 1 050 km^2. Known from five locations, all of which are severely threatened by ongoing habitat loss as a result of rooibos and potato cultivation as well as by grazing by livestock that takes place in remnant patches between agricultural fields.

[F] **Felicia microcephala** Grau

Status: **Rare**
D.A. Kamundi† & J.E. Victor

[e]**Distribution:** EC WC. Outeniqua Mountains to Humansdorp.
Habitat: Rocky ravines, 300–950 m.
Rationale: Known from three collections but possibly under-collected. It is still considered rare owing to its specialised habitat.

Felicia nigrescens Grau **Plate 46**

Status: **CR** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)
N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Caledon.
Habitat: Shale renosterveld, in seasonally wet, saline clays with little vegetation.
Rationale: Known from two severely fragmented subpopulations in the area immediately surrounding the town of Caledon (EOO 24 km^2, AOO 0.1 km^2). It is severely threatened by agricultural expansion, low-cost housing developments, quarrying and road expansion, and invasion by alien annual grasses caused by eutrophication from fertiliser runoff. One of the two remaining subpopulations is declining rapidly as a result of overgrazing and trampling by livestock.

Felicia nordenstamii Grau **Plate 46**

Status: **NT** B1ab(ii,iii,iv,v)
N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Agulhas to Potberg.
Habitat: Coastal limestone hills.
Rationale: Known from ± 15 locations from a restricted range (EOO 1 000 km^2), this species has lost a substantial part of its habitat over the past 10 years to urban expansion in the Struisbaai area. It occurs on ridges targeted for development. In addition, its habitat is being degraded throughout its range by invasive alien acacias.

[F] **Felicia oleosa** Grau

Status: **Rare**
N.A. Helme

[e]**Distribution:** WC. Witteberg, Klein and Groot Swartberg Mountains.
Habitat: Upper sandstone slopes amongst rocks.
Rationale: Known from fewer than five sites. Not threatened because of the inaccessibility of its habitat.

[F] **Felicia serrata** (Thunb.) Grau

Status: **Rare**
N.A. Helme

[e]**Distribution:** WC. Kouebokkeveld to Saron, and potentially Piketberg.
Habitat: Damp rocky slopes at high altitude in montane fynbos.
Rationale: Known from fewer than five sites. Not threatened because of the inaccessibility of its habitat.

Felicia tsitsikamae Grau

Status: **VU** D2
P.P.J. Herman, J.E. Victor & N.A. Helme

[e]**Distribution:** WC. Formosa Peak in the Tsitsikamma Mountains.
Habitat: Rocky slopes at high altitudes.
Rationale: Known from one location, which is potentially threatened by aliens.

[F] **Felicia westae** (Fourc.) Grau

Status: **DD**
D.A. Kamundi† & J.E. Victor

[e]**Distribution:** EC WC. Knysna to Humansdorp.
Habitat: Lowland streambanks, 50–250 m.
Rationale: Last collected in 1944 and likely to be highly threatened by agriculture and urban expansion. Not enough is known about this species to determine its status.

Felicia wrightii Hilliard & B.L.Burtt

Status: **Critically Rare**
P.P.J. Herman & J.E. Victor

[e]**Distribution:** KZN. Kamberg Nature Reserve, Estcourt district in the KwaZulu-Natal Drakensberg Mountains.
Habitat: Montane grassland, damp soil on streamsides, 2 100 m.
Rationale: Known only from one site; occurs on mountain slopes and is not threatened.

Gerbera L.

Gerbera aurantiaca Sch.Bip. **Plate 46**

Status: **EN** A2ac
C.R. Scott-Shaw, I.M. Johnson & J.E. Victor

[e]**Distribution:** KZN MP. KwaZulu-Natal Midlands, Carolina and Badplaas.
Habitat: Mistbelt grassland, well-drained doleritic areas.
Rationale: A mistbelt grassland endemic. More than 90% of the habitat of this species has been transformed for commercial forestry plantations and crop and pasture cultivation over the past 120 years. There has also been extensive recent loss of habitat in the KwaZulu-Natal Midlands to urban development. *G. aurantiaca* is a long-lived clonal species whose generation length is suspected to exceed 100 years. Subpopulations are scattered and there is no linear relationship between mistbelt grasslands and the presence of subpopulations. We therefore extrapolate a 50% loss of subpopulations from the 90% loss of habitat. Recent studies by I. Johnson and S. Johnson show that this species is a poor recruiter and has low seed viability and as a result it is unlikely to be able to recover from the past loss of individuals.

Gerbera wrightii Harv.

Status: **Rare**
N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Cape Peninsula.
Habitat: Rocky sandstone mountain slopes.
Rationale: A range-restricted species (EOO 400 km^2) with no significant threats.

Gnaphalium L.

[F] **Gnaphalium declinatum** L.f.

Status: **NT** B1ab(ii,iii,iv,v)
D. Raimondo & R.C. Turner

[e]**Distribution:** WC. Sir Lowry's Pass to Mossel Bay.

Habitat: Seasonal pans on flats or lower slopes.
Rationale: Although fairly widespread (EOO 11 900 km^2) and locally common where it occurs around pans, its habitat is threatened throughout its range by alien species (causing desiccation of pans), trampling by livestock and by crop cultivation. It is known from less than 15 locations.

Gnaphalium griquense Hilliard & B.L.Burtt

Status: **Rare**
J.E. Victor
Distribution: KZN. Southern KwaZulu-Natal and Sehlabathebe (Lesotho).
Habitat: Damp places.
Rationale: Known from four sites. No threats have been recorded for this species.

[F] **Gnaphalium nelsonii** Burtt Davy

Status: **Rare**
J.E. Victor
[e]**Distribution:** G NW. Pretoria to Wolmaransstad.
Habitat: Seasonally wet grasslands.
Rationale: A poorly collected species known from four herbarium records, suspected to be a naturally rare species.

Gnaphalium simii (Bolus) Hilliard & B.L.Burtt

Status: **CR** B1ab(iii)
D. Raimondo
[e]**Distribution:** EC. Hanover.
Habitat: Calcareous vleis.
Rationale: Known from two collections made near Hanover on the outskirts of King William's Town before 1955. This location is experiencing severe, ongoing habitat decline as a result of overgrazing by cattle and the expansion of informal housing.

Gymnostephium Less.

[F] **Gymnostephium corymbosum** (Turcz.) Harv.

Status: **EN** B1ab(iii,v); D
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Riviersonderend Mountains.
Habitat: Damp streamsides and steep, south-facing slopes.
Rationale: EOO 30 km^2. Known from three locations, with less than 50 plants at each location. It is severely threatened by invasive alien pines at one of its three known locations.

[F] **Gymnostephium fruticosum** DC.

Status: **Rare**
D.A. Kamundi† & D. Raimondo
[e]**Distribution:** WC. Langeberg Mountains.
Habitat: Sandstone slopes, along streams, 1 000–1 300 m.
Rationale: A range-restricted species (EOO 380 km^2), known from three subpopulations. No known threats.

[F] **Gymnostephium hirsutum** Less.

Status: **CR** D
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Riviersonderend Mountains.
Habitat: Damp sandstone slopes in broad gullies, 1 300 m.
Rationale: Known from two collections and confined to a restricted habitat. Only 10 plants were counted from the only recent collection by N.A. Helme in 2006; it is therefore currently known from less than 50 extant mature individuals.

[F] **Gymnostephium leve** Bolus

Status: **Rare**
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Kouebokkeveld to Matroosberg Mountains.
Habitat: Rocky mountain slopes.
Rationale: Known from three sites. Not threatened because of the inaccessibility of its habitat.

Haplocarpha Less.

[F] **Haplocarpha oocephala** (DC.) Beyers

Status: **Rare**
D. Raimondo & R.C. Turner
[e]**Distribution:** WC. Pakhuis and northern Cederberg Mountains.
Habitat: Rocky sandstone slopes in moist habitats.
Rationale: A range-restricted habitat specialist (EOO 10 km^2) that has no recorded threats.

Haplocarpha parvifolia (Schltr.) Beauverd **Plate 46**

Status: **VU** B1ab(ii,iii,iv,v)
D. Raimondo, N.A. Helme & R.C. Turner
[e]**Distribution:** WC. Kouebokkeveld and Cederberg Mountains.
Habitat: Wet areas on sandstone slopes, in valleys and on upper slopes.
Rationale: Suspected to occur at 10 locations. Subpopulations on lower slopes are experiencing continuing loss and degradation of habitat as a result of cultivation of deciduous fruit.

Helichrysum Mill.

[F] **Helichrysum albertense** Hilliard

Status: **DD**
D.A. Kamundi† & D. Raimondo
[e]**Distribution:** EC WC. Prince Albert to Leeu Gamka.
Habitat: Unknown.
Rationale: A Karoo species known from four collections, all predating 1967. Population abundance and sensitivity to grazing are unknown.

[F] **Helichrysum album** N.E.Br.

Status: **Rare**
D.A. Kamundi† & J.E. Victor
[e]**Distribution:** KZN. KwaZulu-Natal Drakensberg Mountains.
Habitat: High-altitude grasslands, 2 000–3 355 m.
Rationale: A range-restricted species (EOO < 500 km^2), known from two subpopulations. No known threats.

Helichrysum alticolum Bolus

Status: **NT** B1ab(iii,v)
D. Raimondo
Distribution: EC KZN. Mont-aux-Sources to Loteni, and Katberg Pass.
Habitat: Cliff faces, rock platforms or stony ground, 1 900–3 200 m.
Rationale: This species has a wide range (EOO 28 000 km^2) and is known from 11 locations but is suspected to be under-collected. Subpopulations in Lesotho and the Eastern Cape are likely to continue to decline as a result of overgrazing. It is also threatened by invading alien plants in parts of its range.

Helichrysum amplectens Hilliard

Status: **Rare**

W.G. Welman & J.E. Victor

[e]**Distribution:** KZN. Cathkin Peak, Cleft Peak and Monk's Cowl.

Habitat: Subalpine grassland, on rocky ledges and crannies at the foot of cliffs on steep, rocky, south-facing slopes, 2 400–2 800 m.

Rationale: A Drakensberg endemic known from three sites. Not threatened as it occurs at high altitude.

Helichrysum archeri Compton

Status: **DD**D

W.G. Welman, J.E. Victor & R.C. Turner

[e]**Distribution:** WC. Laingsburg.

Habitat: White quartzite patches.

Rationale: Known from Matjiesfontein and Witteberg in the Karoo. Last collected in 1930. Potentially threatened by habitat degradation as a result of overgrazing.

[F] **Helichrysum aureofolium** Hilliard

Status: **VU** D2

R.C. Turner

[e]**Distribution:** WC. Cederberg, Grootrivier Pass and Matjiesfontein.

Habitat: Rocky sandstone slopes.

Rationale: Known from two locations (EOO < 150 km^2). Its range is predicted to be strongly affected by climate change, presenting a potential threat from the combined effects of frequent fires and drought.

Helichrysum aureum (Houtt.) Merr. var. **argenteum** Hilliard **Plate 47**

Status: **VU** D2

W.G. Welman, J.E. Burrows, M. Lötter, L. von Staden & J.E. Victor

[e]**Distribution:** KZN MP. Wakkerstroom and Steenkampsberg.

Habitat: Montane grassland, 1 800–2 000 m.

Rationale: Until recently this taxon was known only from the type locality near Wakkerstroom on the KwaZulu-Natal–Mpumalanga border. J.E. Burrows (*Helichrysum* expert) has discovered another subpopulation in the Steenkampsberg near Lydenburg. The Wakkerstroom subpopulation is potentially threatened by invading alien plants and the Steenkampsberg subpopulation by development.

[F] **Helichrysum bachmannii** Klatt

Status: **DD**D

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Velddrif, Vredenburg and Hopefield.

Habitat: Grows on sand or rock outcrops.

Rationale: Very seldom collected. Not enough is known about the current population status of this species to determine its status, but its EOO is small (800 km^2) and it is restricted to threatened vegetation types, with transformation averaging over 50%. This species is likely to be threatened.

[F] **Helichrysum calocephalum** Klatt **Plate 47**

Status: **Rare**

J.E. Burrows, M. Lötter & J.E. Victor

Distribution: MP. Barberton Mountains.

Habitat: Rocky sourveld grassland, 1 065–1 465 m.

Rationale: This is one of the smallest helichrysums and may be overlooked, but it is restricted to a very small area (EOO 225 km^2) and is unlikely to occur in many more sites. There is no evidence of current declines. It is legally protected from establishment of more plantations within its range and is therefore unlikely to decline in the near future.

Helichrysum citricephalum Hilliard & B.L.Burtt

Status: **CR** B1ab(i,ii,iii,iv,v)

C.R. Scott-Shaw, L. von Staden & J.E. Victor

[e]**Distribution:** KZN. KwaZulu-Natal Midlands, around Ixopo.

Habitat: Mistbelt grassland, coarse herbage in deeper soils on steep, shady banks in forest-grassland ecotones, 1 200–1 300 m.

Rationale: A highly range-restricted species (EOO 36 km^2) known from one location. Part of the population was destroyed as a result of a road that was widened. It was thought that the entire population had been lost, but some individuals were discovered away from the road. Unfortunately this subpopulation is in the midst of a recently established, illegal informal settlement. The population is therefore expected to decline further because of ongoing development and degradation of the location. Less than 200 individuals of this species remain.

Helichrysum cochleariforme DC.

Status: **NT** B1ab(ii,iii,iv,v)

D. Raimondo & R.C. Turner

[e]**Distribution:** WC. Piketberg southwards and then eastwards along the coast to the Gourits River, Mossel Bay district.

Habitat: Sandy places in coastal scrub or sandy hollows between the dunes.

Rationale: EOO < 4 750 km^2. Known from 15 locations. Many subpopulations have been destroyed by coastal housing development and urban expansion on the Cape Flats. It is also threatened throughout its range by invasive alien acacias.

[F] **Helichrysum drakensbergense** Killick

Status: **Rare**

D.A. Kamundi† & J.E. Victor

[e]**Distribution:** KZN. Bergville and Underberg.

Habitat: Alpine grassland, 1 525–2 740 m.

Rationale: A rare Drakensberg endemic known from four sites. Occurs in high-altitude grasslands that are not threatened.

[F] **Helichrysum dunense** Hilliard

Status: **VU** B1ab(ii,iii,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** NC WC. Elands Bay to Orange River.

Habitat: Coastal calcareous dunes.

Rationale: EOO 1 500 km^2. Known from five locations but suspected to be under-collected and to occur at around 10 locations. It continues to decline because of ongoing habitat loss to diamond and heavy-mineral sand mining and urban expansion around Lambert's Bay, Elands Bay and Port Nolloth.

Helichrysum ephelos Hilliard

Status: **Rare**

L. von Staden, W.G. Welman & J.E. Victor

[e]**Distribution:** EC KZN MP. Fort Nottingham, Mount Insizwa, Lions River, Impendle and Mount Ayliff.

Habitat: Restricted to edges of wetlands and marshy areas around the headwaters of streams, 1 675–2 180 m.

Rationale: A rare habitat specialist known from six isolated sites. This species has no recorded threats.

Helichrysum fourcadei Hilliard

Status: **DD**D

W.G. Welman, J.E. Victor & D. Raimondo

e**Distribution:** EC. Uniondale and Aberdeen.

Habitat: Stony slopes.

Rationale: Known from two disjunct sites and last collected in 1950. The response of this species to the threat of overgrazing is not known.

F **Helichrysum fruticans** (L.) D.Don

Status: **Rare**

N.A. Helme & D. Raimondo

e**Distribution:** WC. Cape Peninsula, Table Mountain.

Habitat: Sandstone slopes, on moist south- and east-facing cliffs.

Rationale: Known from four sites. Its habitat is protected from fire and this species is therefore not threatened.

Helichrysum haygarthii Bolus

Status: **Rare**

D. Raimondo

e**Distribution:** FS KZN. Rensburgskop and Van Reenen's Pass.

Habitat: Weathered basalt cliffs, 2 225 m.

Rationale: Known from two collections from the Drakensberg foothills. Occurs on high-altitude cliffs that are inaccessible to livestock.

F **Helichrysum homilochrysum** S.Moore **Plate 47**

Status: **Rare**

J.E. Burrows, M. Lötter & L. von Staden

Distribution: MP. Mpumalanga Escarpment around Lydenburg, recorded from Mariepskop to Mac Mac between Graskop and Sabie.

Habitat: Cliff faces and ledges, 1 350–1 990 m.

Rationale: Known from nine sites, mostly along the Mpumalanga Escarpment. Can be locally common, but very habitat specific (occurs on cliffs) and known from a small range (EOO 3 776 km^2).

Helichrysum incarnatum DC.

Status: **VU** B1ab(ii,iii,iv,v)

D. Raimondo

e**Distribution:** WC. Upper Breede River Valley to Albertinia.

Habitat: Sandy flats.

Rationale: EOO 2 500 km^2. Known from fewer than 10 locations, most of which are in the Worcester area. It has lost over 70% of its habitat to agriculture (vines, deciduous orchards, olive groves and wheat), and this is ongoing, especially in the Worcester area.

Helichrysum ingomense Hilliard

Status: **EN** B1ab(iii)

C.R. Scott-Shaw, L. von Staden & J.E. Victor

e**Distribution:** KZN. Ngome.

Habitat: Mistbelt grassland, at the edges of dolerite rock sheets where water oozes to the surface, 1 000–1 300 m.

Rationale: Known from the type locality at Ngome Forest. Searches for this species around Ngome and the Louwsburg plateau have not located any other subpopulations, although it is suspected that a few more (fewer than five) subpopulations do exist. Its habitat has been severely reduced owing to crop cultivation and afforestation. Remaining fragments continue to decline as a result of overgrazing by livestock.

Helichrysum isolepis Bolus

Status: **Rare**

W.G. Welman & J.E. Victor

e**Distribution:** EC. Katberg, Amathole and Groot Winterberg Mountains.

Habitat: Stony montane grassland.

Rationale: A range-restricted species (EOO 150 km^2) with no known threats.

Helichrysum jubilatum Hilliard

Status: **Rare**

W.G. Welman & J.E. Victor

e**Distribution:** NC. Richtersveld.

Habitat: Rocky kloofs on hill slopes.

Rationale: Known from two collections, a highly localised species that is not threatened.

F **Helichrysum junodii** Moeser

Status: **Rare**

D.A. Kamundi† & D. Raimondo

e**Distribution:** LM. Mountains between the Wolkberg and the Downs.

Habitat: Rock outcrops in grasslands, 1 100–1 925 m.

Rationale: A range-restricted species (EOO 240 km^2). This species is not threatened because of the inaccessibility of its habitat.

Helichrysum leptorhizum DC.

Status: **DD**D

W.G. Welman & J.E. Victor

e**Distribution:** NC. Namaqualand, Vanrhynsdorp and Springbok districts.

Habitat: Unknown.

Rationale: Collected in northern Namaqualand by Drège and at Eenkokerboom, south of Garies, by Schlechter; last collected in 1897.

F **Helichrysum lesliei** Hilliard **Plate 47**

Status: **EN** C2a(i)

J.E. Burrows, M. Lötter & L. von Staden

e**Distribution:** MP. Lydenburg to Nelspruit.

Habitat: Grassland, restricted to rocky quartzite outcrops.

Rationale: The total population is estimated to be no more than 1 000 individuals. There are two or three known subpopulations, with the largest known subpopulation consisting of less than 200 individuals. This species has lost habitat to commercial pine plantations in the past and its habitat is continually being degraded as a result of a deleterious fire regime and invasive alien plants.

Helichrysum longinquum Hilliard

Status: **Rare**

D. Raimondo & J.E. Victor

e**Distribution:** KZN. Impendle and Underberg.

Habitat: Moist grassland slopes, 2 100–2 300 m.

Rationale: Known from fewer than five sites, from a small area (EOO < 2 000 km^2). Not threatened because of the inaccessibility of its habitat.

F **Helichrysum marifolium** DC.

Status: **Rare**

N.A. Helme

e**Distribution:** WC. Riviersonderend Mountains.

Habitat: Steep, south-facing slopes, cliffs and kloofs in montane fynbos.

Rationale: Endemic of the Riviersonderend Mountains (EOO 250 km^2), occurring in scattered stands. No known threats.

[F] **Helichrysum marmarolepis** S.Moore

Status: **NT** B1ab(ii,iii,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** NC WC. Orange River to Heerenlogements Mountain, north of Clanwilliam.

Habitat: Sands in sandveld vegetation.

Rationale: EOO < 6 000 km^2. The 15 known locations continue to decline because of ongoing habitat loss to diamond and heavy-mineral sand mining.

[F] **Helichrysum montis-cati** Hilliard

Status: **VU** D2

D. Raimondo

[e]**Distribution:** EC. Cata Forest Reserve, Amathole Mountains and Katberg Pass.

Habitat: Montane grasslands.

Rationale: A range-restricted species known from three locations. Potentially threatened by afforestation.

[F] **Helichrysum nimbicola** Hilliard

Status: **Rare**

W.G. Welman, C.R. Scott-Shaw & J.E. Victor

Distribution: KZN. Mount-aux-Sources, Mashai Pass, Sani Pass and Tselanyane.

Habitat: Stony turf, 2 750 m.

Rationale: Known from four sites. The South African sites are not threatened, but those in Lesotho are potentially threatened by overgrazing and trampling by livestock.

Helichrysum outeniquense Hilliard

Status: **EX**

J.H. Vlok, J.E. Victor & R.C. Turner

[e]**Distribution:** WC. Eastern Outeniqua Mountains.

Habitat: Peaty soil.

Rationale: Jan Vlok (expert field botanist in the southern Cape) has searched unsuccessfully near Joubertina in the Outeniqua Mountains for this species over the past five years. A dam has been built at the type locality and apple orchards have been planted in the area surrounding the dam. *H. outeniquense* is therefore considered extinct.

[F] **Helichrysum pagophilum** M.D.Hend.

Status: **Rare**

C.R. Scott-Shaw & J.E. Victor

Distribution: KZN. Drakensberg Mountains, Cathedral Peak to Garden Castle and Black Mountains.

Habitat: Rock pavements and cliff faces of alpine summits, 2 750–3 400 m.

Rationale: A habitat specialist not threatened because of the inaccessibility of its habitat to livestock.

[F] **Helichrysum refractum** Hilliard

Status: **Rare**

W.G. Welman & J.E. Victor

[e]**Distribution:** EC. Addo and Paterson to Atherstone near Grahamstown.

Habitat: In shrub communities and false fynbos on sand flats and inland dunes, 300 m.

Rationale: Recorded from four sites and not known to be threatened.

[F] **Helichrysum rotundatum** Harv.

Status: **Rare**

N.A. Helme

[e]**Distribution:** WC. Western end of the Riviersonderend Mountains.

Habitat: Upper, shaded, rocky outcrops, or on moist places on south-facing cliffs.

Rationale: EOO < 90 km^2. Known from fewer than five sites and not threatened.

Helichrysum saxicola Hilliard **Plate 47**

Status: **Rare**

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Groot Swartberg Mountains, between Tierberg Peak in the east to Osberg in the west.

Habitat: South-facing vertical rocks and tops of boulders near the summit.

Rationale: Known from several sites, always occurring as small subpopulations with few mature individuals. Not threatened.

[F] **Helichrysum solitarium** Hilliard

Status: **VU** D2

W.G. Welman, J.E. Victor & R.C. Turner

[e]**Distribution:** WC. Ceres district, Bokkeveld Tafelberg.

Habitat: Sandy flats.

Rationale: This species is known only from one location where it is potentially threatened by too frequent fires.

[F] **Helichrysum summo-montanum** I.Verd. **Plate 47**

Status: **EN** D

J.E. Burrows, S.M. Burrows, M. Lötter & J.E. Victor

[e]**Distribution:** MP. Formosa Mountain and Mount Anderson in Lydenburg.

Habitat: Rocks on east-facing cliffs, 2 000–2 450 m.

Rationale: A narrow endemic (EOO 8 km^2) known from less than 250 mature individuals and restricted to two mountain peaks.

[F] **Helichrysum tenax** M.D.Hend. var. **pallidum** Hilliard & B.L.Burtt

Status: **Rare**

D.A. Kamundi† & D. Raimondo

[e]**Distribution:** EC KZN. Tabankulu and Insizwa Mountains in the Transkei and Ngele Mountain and the Suurberg near Weza in KwaZulu-Natal.

Habitat: Steep, rocky terrain, often rooted in rocky crevices, 1 500–1 700 m.

Rationale: A habitat specialist known from fewer than five subpopulations. No known threats.

Helichrysum tricostatum (Thunb.) Less.

Status: **NT** B1ab(i,ii,iii,iv,v)

D. Raimondo & R.C. Turner

[e]**Distribution:** NC WC. Namaqualand to Bokbaai.

Habitat: Sandveld, on sandy flats.

Rationale: Occurs in a narrow coastal band on the West Coast (EOO 14 000 km^2), suspected to occur at 15–20 locations. It is currently declining because of severe, ongoing habitat loss to potato cultivation and coastal housing developments. In addition, there is a continuing decline in the northern parts of its range as a result of grazing by livestock.

Heterolepis Cass.

Heterolepis mitis (Burm.) DC.

Status: **Rare**
P.P.J. Herman & J.E. Victor
eDistribution: EC. Klein Winterhoek and Suurberg Mountains.
Habitat: Between rocks in valley bushveld.
Rationale: Known from four sites. Not likely to be threatened as the two mountain ranges in which this species occurs have no known threats.

Heterorhachis Sch.Bip. ex Walp.

F **Heterorhachis aculeata** (Burm.f.) Roessler

Status: **VU** B1ab(i,ii,iii,iv,v)
N.A. Helme & D. Raimondo
eDistribution: NC WC. Bokkeveld Escarpment to Koeberg.
Habitat: Normally deep acid sands, but also in granitic loam/acid sand ecotone areas.
Rationale: EOO 7 500 km^2. Known from fewer than 10 locations. Declining because of crop cultivation (rooibos and cereals), urban expansion and sand quarrying.

F **Heterorhachis sp. nov.**
Voucher: *Helme 4284* NBG
Status: **CR** B1ab(ii,iii,iv,v); D
N.A. Helme & D. Raimondo
eDistribution: WC. Graafwater.
Habitat: Deep sands.
Rationale: A highly localised, undescribed species collected in a small remnant between cultivated fields in 2006. The only other collection is by Compton in the 1940s in the same area. There are less than 50 individuals and habitat loss to agriculture is ongoing.

Hippia L.

Hippia hirsuta DC.

Status: **Rare**
J.E. Victor
eDistribution: WC. Langeberg, Franschhoek and Kleinrivier Mountains.
Habitat: Sandstone slopes.
Rationale: Known from three sites. Occurs on mountain slopes that are not threatened.

F **Hippia hutchinsonii** Merxm.

Status: **Rare**
D. Raimondo & R.C. Turner
eDistribution: WC. Langeberg Mountains.
Habitat: Sandstone slopes.
Rationale: A range-restricted species (EOO 50 km^2), known from two sites, not threatened.

F **Hippia integrifolia** Less.

Status: **Rare**
D. Raimondo & R.C. Turner
eDistribution: WC. Langeberg Mountains.
Habitat: Steep south-facing slopes above 1 300 m.
Rationale: EOO 220 km^2. Known from six high alpine areas. This species has no recorded threats.

F **Hippia sp. nov.**
Voucher: *Forsyth 469* NBG
Status: **Rare**
D. Raimondo & R.C. Turner
eDistribution: WC. Worcester to Louwshoek Mountains.
Habitat: Shallow, sandy soil on summit ridges.
Rationale: Known from fewer than five sites (EOO 150 km^2) in mountainous areas. Not threatened.

F **Hippia trilobata** Hutch.

Status: **Rare**
D.A. Kamundi† & D. Raimondo
eDistribution: WC. Riversdale, Kampscheberg.
Habitat: Sandstone slopes in shady areas, 400–500 m.
Rationale: A range-restricted species (EOO 400 km^2), known from two subpopulations. It has no recorded threats.

Hoplophyllum DC.

Hoplophyllum ferox Sond.

Status: **DD**D
F. Daniels
eDistribution: WC. Vanrhynsdorp.
Habitat: Unknown.
Rationale: A poorly known species collected from two sites in the Western Cape portion of the Great Karoo over 110 years ago. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Hydroidea P.O.Karis

F **Hydroidea elsiae** (Hilliard) P.O.Karis **Plate 45**

Status: **Rare**
N.A. Helme & D. Raimondo
eDistribution: WC. Du Toit's Mountains
Habitat: Sandstone cliffs.
Rationale: A range-restricted species (EOO 61 km^2) known from six subpopulations. Not threatened because of the inaccessibility of its habitat.

Hymenolepis Cass.

F **Hymenolepis cynopus** K.Bremer & Källersjö

Status: **Critically Rare**
N.A. Helme & D. Raimondo
eDistribution: WC. Touwsberg.
Habitat: Arid fynbos on upper slopes.
Rationale: Recorded from one location. This species has no known threats.

Inezia E.Phillips

Inezia speciosa Brusse

Status: **EN** B1ab(iii)+2ab(iii)
L. von Staden & P.J.D. Winter
eDistribution: LM. Iron Crown, in the Wolkberg Mountains.
Habitat: Mistbelt grassland, mountain slopes above 1 700 m.
Rationale: EOO 5 km^2, AOO < 3.8 km^2. Known from two locations. Continuing decline in habitat at one location as a result of unmanaged encroachment from invasive alien pines and wattles. This location is also potentially threatened by mining and expansion of pine plantations. The habitat is continuous between the two locations and the subpopulations are fairly large and therefore not severely fragmented.

Inulanthera Källersjö

[F] **Inulanthera montana** (J.M.Wood) Källersjö

Status: **Rare**
D.A. Kamundi† & D. Raimondo
[e]**Distribution:** KZN. KwaZulu-Natal Drakensberg Mountains, Cathedral Peak to the Giant's Castle.

Habitat: Grassy slopes, 1 500–2 285 m.
Rationale: A range-restricted species (EOO 30 km^2), known from two subpopulations. This species has no recorded threats.

Laevicarpa (Koekemoer) Koekemoer

Laevicarpa sp. nov.
Voucher: *Koekemoer 486* PRE

Status: **Critically Rare**
F. Daniels & N.A. Helme
[e]**Distribution:** WC. Montagu, Moedverlorenberg.

Habitat: Well-drained, sandy soil on sandstone slopes.
Rationale: Known from one site. Locally common but restricted to one mountain summit. No recorded threats.

Lamprocephalus B.Nord.

[F] **Lamprocephalus montanus** B.Nord. **Plate 45**

Status: **Rare**
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Cederberg to Hex River Mountains.

Habitat: Upper sandstone slopes, 1 200–2 100 m.
Rationale: EOO 3 300 km^2. Recorded from fewer than 10 sites restricted to high-altitude areas and therefore not threatened.

Lasiopogon Cass.

Lasiopogon minutus (B.Nord.) Hilliard & B.L.Burtt

Status: **VU** D2
D. Raimondo, P.P.J. Herman & J.E. Victor
[e]**Distribution:** WC. Koekenaap.

Habitat: Quartz patches.
Rationale: Recorded from one location. Potentially threatened by expansion of vineyards and mining.

Lasiopogon ponticulus Hilliard

Status: **Rare**
P.P.J. Herman & J.E. Victor
Distribution: NC. Southern Namibia (Lüderitz, Aus), Boegoeberge and Richtersveld.
Habitat: Sandy areas.
Rationale: Known from three sites. This species has no recorded threats.

Leucoptera B.Nord.

[F] **Leucoptera nodosa** (Thunb.) B.Nord.

Status: **VU** D2
N.A. Helme & D. Raimondo
[e]**Distribution:** NC WC. Elands Bay to Hondeklip Bay.

Habitat: Alkaline coastal sands.
Rationale: Known from fewer than five locations. Potentially threatened by heavy-mineral sand and diamond mining.

[F] **Leucoptera oppositifolia** B.Nord.

Status: **Rare**
D.A. Kamundi† & D. Raimondo
[e]**Distribution:** WC. Knersvlakte.
Habitat: Quartzite outcrops, 0–500 m.
Rationale: A range-restricted habitat specialist (EOO 365 km^2), known from three subpopulations. This species has no recorded threats.

[F] **Leucoptera subcarnosa** B.Nord.

Status: **Rare**
D.A. Kamundi† & D. Raimondo
[e]**Distribution:** WC. Knersvlakte.
Habitat: Quartzite outcrops, 0–500 m.
Rationale: A habitat specialist known from five subpopulations. No known threats.

Lidbeckia P.J.Bergius

[F] **Lidbeckia pectinata** P.J.Bergius

Status: **Rare**
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Groot Winterhoek Mountains to Roodezandberg.
Habitat: Shady sandstone slopes in Olifants Sandstone Fynbos.
Rationale: EOO 150 km^2. Endemic to one vegetation type. Not threatened.

[F] **Lidbeckia sp. nov.**
Voucher: *Helme 2698* NBG

Status: **EN** B1ab(ii,iii,v)
N.A. Helme, J.H. Vlok & D. Raimondo
[e]**Distribution:** WC. Robertson to Mossel Bay.
Habitat: South-facing granite loams.
Rationale: Known from three locations (EOO 600 km^2). It is large, showy and difficult to miss, indicating that it is a naturally rare species with disjunct subpopulations. We suspect that much of its habitat has been lost to agriculture and invasion by alien plants in the past. One of the three known subpopulations is threatened by agriculture and quarrying.

Lopholaena DC.

[F] **Lopholaena longipes** (Harv.) Thell.

Status: **DD**D
N.A. Helme & D. Raimondo
[e]**Distribution:** NC WC. Kamiesberg and Knersvlakte.
Habitat: Unknown.
Rationale: A poorly known species from Namaqualand, last collected by Compton in the 1940s. Not enough is known about the distribution, specific habitat or population status of this species to determine its status, but it is potentially threatened by overgrazing.

Macledium Cass.

[F] **Macledium pretoriense** (C.A.Sm.) S.Ortíz

Status: **EX**
J.E. Victor, N.C. Netnou & M.F. Pfab
[e]**Distribution:** G. Pretoria.
Habitat: Hillsides.
Rationale: The only known locality of this species has been transformed by urban development. It was last collected in 1925.

Macowania Oliv.

Macowania conferta (Benth.) E.Phillips

Status: **DD**D

P.P.J. Herman & J.E. Victor

e**Distribution:** EC KZN. Ngele Mountain.

Habitat: Montane grassland, rock outcrops on steep slopes.

Rationale: A poorly known species not collected for the past 75 years. Potentially threatened by afforestation.

Macowania deflexa Hilliard & B.L.Burtt

Status: **Rare**

C.R. Scott-Shaw & J.E. Victor

e**Distribution:** KZN. Tugela Gorge and Monk's Cowl Forest Station.

Habitat: Montane grassland.

Rationale: A range-restricted species (EOO 100 km^2) known from two sites. This species has no recorded threats.

Macowania hamata Hilliard & B.L.Burtt

Status: **Rare**

C.R. Scott-Shaw & J.E. Victor

e**Distribution:** KZN. Garden Castle Nature Reserve.

Habitat: Montane grassland near streams.

Rationale: Known from five sites but suspected to occur at a few more. Not threatened.

F **Macowania revoluta** Oliv.

Status: **DD**D

D. Raimondo

e**Distribution:** EC. Amathole Mountains.

Habitat: Rocky slopes, 650–1 200 m.

Rationale: Known from old collections made before 1949. Not enough is known about the distribution, specific habitat or population status of this species to determine its status. It is likely to be threatened by afforestation.

Marasmodes DC.

F **Marasmodes sp. nov.**

Voucher: *Manning 2747* PRE

Status: **CR** D

J.C. Manning, D. Raimondo & R.C. Turner

e**Distribution:** WC. Eendekuil.

Habitat: Quartz patches on loamy soils.

Rationale: Known from one site, occurring in a tiny area with less than 20 mature individuals. The surrounding areas have been heavily transformed by wheat cultivation.

F **Marasmodes sp. nov.**

Voucher: *Walton 273* NBG

Status: **EN** D

J.C. Manning & D. Raimondo

e**Distribution:** WC. Wellington.

Habitat: Seasonally waterlogged clay soils.

Rationale: This species was recently discovered and is known from one site, the Elandsberg Private Nature Reserve. There are less than 250 extant mature individuals.

Marasmodes dummeri Bolus ex Hutch. **Plate 49**

Status: **EN** B1ab(iii,v)

D. Raimondo

e**Distribution:** WC. Klipheuwel to Muldersvlei.

Habitat: Stony gravel.

Rationale: Few historical records of this species exist as it is a very cryptic, uncharismatic species not widely collected. However, it is a lowland renosterveld endemic with a restricted range (EOO 300 km^2). Its habitat has been highly transformed by wheat and vineyard cultivation and urban expansion (over 90% transformed) and as a result it is now highly threatened. It occurs in five tiny fragments that are burnt infrequently, causing a continuing decline in habitat quality and numbers of mature individuals.

Marasmodes oligocephala DC. **Plate 49**

Status: **CR** B1ab(ii,iii,v)+2ab(ii,iii,v)

N.A. Helme, D. Raimondo & R.C. Turner

e**Distribution:** WC. Paarl and Malmesbury.

Habitat: Clay flats, often with silcrete.

Rationale: A highly range-restricted species (EOO 20 km^2) that occurs on silcrete outcrops in the Swartland. It has lost most of its range (98%) over the past 100 years as a result of wheat and vineyard cultivation and is now known from four small, severely fragmented subpopulations where it is undergoing a continuing decline because of invasive alien acacias and poor land management.

Marasmodes undulata Compton **Plate 49**

Status: **CR** A2a; B1ab(iii,v)+2ab(iii,v); C2a(i,ii)

D. Raimondo, N.A. Helme & R. Koopman

e**Distribution:** WC. Paarl.

Habitat: Gravelly flats.

Rationale: Only one population is known at the New Orleans campsite east of Paarl. This is the only remaining patch of natural vegetation in this area and we suspect that over 95% of the habitat of this species has been lost to urban expansion over the past 60 years (generation length 20 years). Only 4 ha of its habitat remains. It is experiencing ongoing habitat degradation as a result of invasion by alien plants and poor management. The number of mature individuals has declined from 200 in the 1990s to 17 in 2005. This species may require fire to recruit.

Metalasia R.Br.

F **Metalasia adunca** Less.

Status: **NT** B1ab(i,ii,iii,iv,v)

N.A. Helme

e**Distribution:** NC WC. Hondeklip Bay to Cape Flats.

Habitat: Lowland acid sand flats.

Rationale: Declining throughout its range as it occurs on sand flats that have been transformed primarily for agriculture but in some areas also for urban development and mining. EOO 17 500 km^2. Of the 18 recorded locations, five have been lost to urban expansion and crop cultivation.

F **Metalasia albescens** P.O.Karis

Status: **Rare**

N.A. Helme

e**Distribution:** WC. Southern Cederberg.

Habitat: Stony and sandy slopes, 700 m.

Rationale: Highly range-restricted endemic from the southern Cederberg (EOO < 90 km^2), occurring in the Krom River Peak and Matjies River area and known from five sites. Not threatened as it occurs on rocky slopes.

Metalasia alfredii Pillans

Status: **Rare**
N.A. Helme

Distribution: WC. Riviersonderend Mountains, Pilaarkop and Baviaanskloof above Genadendal.
Habitat: Sandstone slopes above 1 500 m.
Rationale: Restricted to high-altitude ridges (EOO 25 km^2), known from two sites and not threatened.

Metalasia bodkinii L.Bolus **Plate 48**

Status: **VU** D2
N.A. Helme & D. Raimondo

Distribution: WC. Caledon Swartberg.
Habitat: Sandstone slopes, peaty soils on north-facing slopes, 700–900 m.
Rationale: This species was previously known from two collections made on the Caledon Swartberg, both in 1894. It was rediscovered there in 2007. It occurs only at high altitudes and is potentially threatened by encroachment from invasive alien pines and hakeas.

F **Metalasia capitata** (Lam.) Less.

Status: **VU** A2c
N.A. Helme & D. Raimondo

Distribution: WC. Piketberg to Paarl.
Habitat: Acid sand flats.
Rationale: EOO < 6 000 km^2. There are many sites listed in SANBI's electronic database of herbarium specimens and the revision of *Metalasia* (Karis 1989), but > 70% of the collections are over 30 years old and most of them have been lost to urban expansion, crop cultivation and invasive alien plants. At least 30% of the habitat of this species and recorded subpopulations have been lost over the past 30 years (generation length suspected to be 10 years).

F **Metalasia distans** (Schrank) DC.

Status: **CR** B1ab(iii)
N.A. Helme & D. Raimondo

Distribution: WC. Malmesbury.
Habitat: Acid sand flats.
Rationale: This species used to occur from Kraaifontein to Malmesbury, but it is now extant at only two locations near Malmesbury, Riverlands and Rooivlei. Most of its habitat has been lost to urban expansion and wheat cultivation. At the remaining two locations, its habitat is severely threatened by invasive alien plants.

Metalasia erectifolia Pillans

Status: **NT** B1ab(ii,iii,iv,v)
N.A. Helme & D. Raimondo

Distribution: WC. Agulhas to Mossel Bay.
Habitat: Limestone and shale hills in transitional areas with limestone, below 500 m.
Rationale: EOO < 4 000 km^2. Known from 11 locations. Declining as a result of invasive alien plants and crop cultivation throughout its range and owing to urban expansion around Mossel Bay and Struisbaai.

F **Metalasia galpinii** L.Bolus

Status: **VU** D2
N.A. Helme, J.H. Vlok & A.L. Schutte-Vlok

Distribution: WC. Langeberg, Garcia's Pass.
Habitat: North-facing sandstone slopes, 350–750 m.
Rationale: A rare, range-restricted endemic known from five locations in very close proximity to one another (EOO < 150 km^2). Potentially threatened by invading alien plants and harvesting for the cut flower industry.

F **Metalasia humilis** P.O.Karis

Status: **Critically Rare**
N.A. Helme

Distribution: WC. Houwhoek Mountains.
Habitat: Rocky sandstone slopes.
Rationale: Only ever collected from one site on Caledon Houwhoek Mountain peak. It has been collected here a number of times over the past 30 years but has never been found elsewhere. Occurs on the summit of this mountain and is therefore not threatened.

F **Metalasia juniperoides** Pillans

Status: **EN** B1ab(ii,iii,v)
N.A. Helme & D. Raimondo

Distribution: WC. Northern Kouebokkeveld.
Habitat: Sandy flats, in deep sands, 800–1 200 m.
Rationale: EOO < 700 km^2. Known from four subpopulations. It has lost one subpopulation to crop cultivation near Keeroms and there is a continuing decline of habitat throughout its range as a result of rooibos and protea cultivation and commercial forestry plantations.

F **Metalasia lichtensteinii** Less.

Status: **Rare**
D.A. Kamundi† & D. Raimondo

Distribution: WC. Kogelberg and Hottentots Holland Mountains.
Habitat: Fynbos on low to medium-altitude sandstone slopes, 50–600 m.
Rationale: A range-restricted species (EOO 140 km^2), known from three subpopulations. This species has no recorded threats.

Metalasia luteola P.O.Karis

Status: **EN** B1ab(iii)
N.A. Helme & D. Raimondo

Distribution: WC. Still Bay.
Habitat: Limestone hills.
Rationale: Known from four locations on the limestone hills north of Still Bay (EOO < 460 km^2). Experiencing ongoing habitat degradation as a result of invasion by alien plants.

F **Metalasia montana** P.O.Karis

Status: **Rare**
N.A. Helme & D. Raimondo

Distribution: WC. Stettynsberg and Wemmershoek Mountains.
Habitat: Sandstone plateau above 1 500 m.
Rationale: EOO 900 km^2. Known from four mountain summits, not threatened.

Metalasia octoflora DC. **Plate 48**

Status: **EN** B1ab(ii,iii,v)
N.A. Helme & D. Raimondo

Distribution: WC. Durbanville to Hopefield and inland to Wolseley.
Habitat: Renosterveld, clay flats.
Rationale: A Swartland endemic (EOO 166 km^2), known from four small fragments. It has lost over 90% of its habitat to agriculture and urban expansion over the past 80 years. Remaining subpopulations are declining as a result of invasion by alien plants and overgrazing by livestock. The generation length of this species is not known.

Plate 42



N.A. Helme

Arctotheca marginata VU



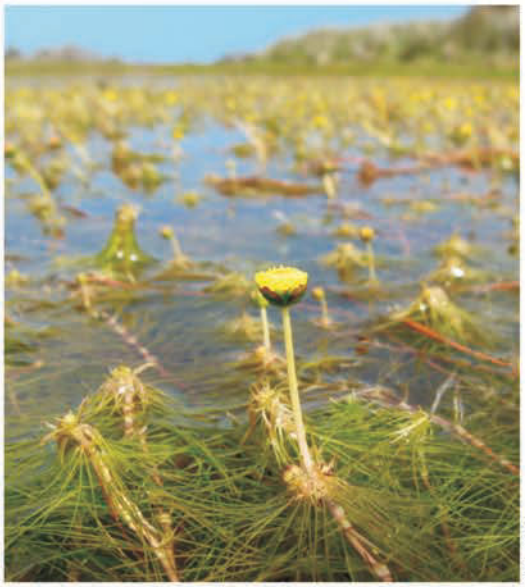
N.A. Helme

Arctotheca forbesiana CR



N.A. Helme

Dymondia margaretae EN



N.A. Helme

Cotula myriophylloides CR



N.A. Helme

Cotula andreae Rare



N.A. Helme

Cadiscus aquaticus CR



N.A. Helme

Poecilolepis maritima VU

Plate 43


C. Burgers

Athanasia capitata EN


N.A. Helme

Athanasia adenantha EN


N.A. Helme

Athanasia scabra VU


N.A. Helme

Athanasia spathulata EN


N.A. Helme

Athanasia oocephala VU


N.A. Helme

Athanasia sertulifera EN


J.H. Vlok

Athanasia cochlearifolia EN

Plate 44



N.A. Helme

Cullumia floccosa CR



C. Paterson-Jones

Cullumia squarrosa EN



N.A. Helme

Cullumia selago EN



C. Paterson-Jones

Berkheya francisci Rare



N.A. Helme

Cullumia micracantha EN



J.H. Vlok

Oedera resinifera Rare



C. Burgers

Relhania rotundifolia CR

Plate 45



N.A. Helme

Calotesta alba Critically Rare



N.A. Helme

Hydroidea elsiae Rare



W. Berrington

Euryops ursinoides VU



E. Marinus

Euryops mirus CR



N.A. Helme

Euryops lasiocladus CR



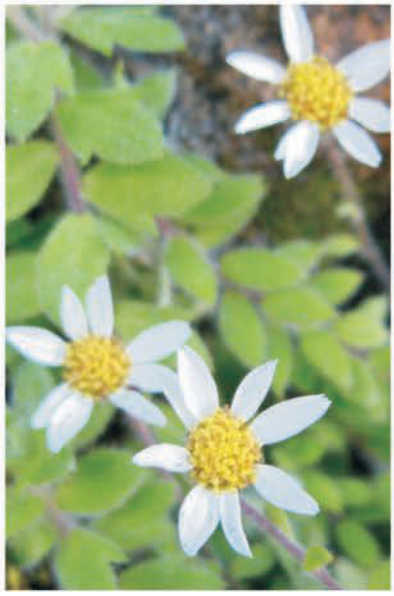
N.A. Helme

Lamprocephalus montanus Rare



N.A. Helme

Roodebergia kitamurana EN



N.A. Helme

Osmitopsis tenuis Rare

Plate 46



N.A. Helme

Felicia nordenstamii NT



N.A. Helme

Felicia josephinae EN



N.A. Helme

Felicia nigrescens CR



N.A. Helme

Felicia elongata VU



P. Wragg

Senecio exuberans EN



C. Paterson-Jones

Haplocarpha parvifolia VU



W. Berrington

Aster laevigatus VU



P. Wragg

Senecio dregeanus VU



I. Johnson

Gerbera aurantiaca EN

Plate 47


J.E. Burrows

Helichrysum summo-montanum EN


W. Berrington

Syncarpha recurvata EN


J.H. Vlok

Helichrysum saxicola Rare


J.E. Burrows

Helichrysum aureum var. *argenteum* VU


C. Paterson-Jones

Syncarpha chlorochrysum NT


J.E. Burrows

Helichrysum lesliei EN


J.E. Burrows

Helichrysum calocephalum Rare


J.E. Burrows

Helichrysum homilochrysum Rare


J.H. Vlok

Syncarpha montana Rare

Plate 48



J.H. Vlok

Metalasia tricolor Critically Rare



N.A. Helme

Metalasia bodkinii VU



N.A. Helme

Metalasia oligocephala Critically Rare



N.A. Helme

Metalasia tenuifolia VU



C. Paterson-Jones

Metalasia octoflora EN



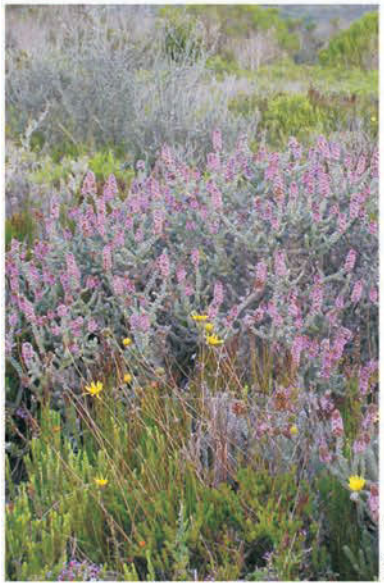
N.A. Helme

Stoebe rosea Rare



N.A. Helme

Stoebe rugulosa EN



I. Ebrahim

Stoebe muirii VU

Plate 49



C. Burgers

Marasmodes undulata CR



R. Koopman

Marasmodes dummeri EN



N.A. Helme

Marasmodes oligocephala CR



N.G. Bergh

Amphiglossa callunoides VU



J.C. Manning

Steirodiscus gamolepis EN

Metalasia oligocephala P.O.Karis **Plate 48**

Status: **Critically Rare**
N.A. Helme & J.E. Victor

e**Distribution:** WC. Langeberg near Swellendam, between Protea Valley and Nooitgedacht.

Habitat: Sandstone slopes or on shale bands.

Rationale: Known only from the type locality, this species has no recorded threats.

F **Metalasia phillipsii** L.Bolus subsp. **phillipsii**

Status: **Rare**
D.A. Kamundi† & D. Raimondo

e**Distribution:** WC. Hex River Mountains.

Habitat: Low, windswept montane fynbos, 1 500–2 200 m.

Rationale: A range-restricted taxon (EOO 495 km^2), known from four subpopulations. No recorded threats.

Metalasia plicata P.O.Karis

Status: **EN** B1ab(ii,iii,v)
N.A. Helme

e**Distribution:** WC. Houwhoek to Bredasdorp.

Habitat: Sandstone-clay ecotones, on the transitions between fynbos and renosterveld.

Rationale: EOO < 200 km^2. Known from four locations: the Houwhoek Mountains, Caledon Swartberg, the foothills of the Riviersonderend Mountains and the former Bontebok National Park near De Mond. It is threatened by agricultural expansion, afforestation and invasion by alien plants.

F **Metalasia rhoderoides** T.M.Salter

Status: **Rare**
D.A. Kamundi† & D. Raimondo

e**Distribution:** WC. Bain's Kloof.

Habitat: Sandstone slopes, 700–1 500 m.

Rationale: A range-restricted species (EOO 200 km^2), known from four subpopulations. No recorded threats.

Metalasia seriphiifolia DC.

Status: **VU** D2
N.A. Helme

e**Distribution:** WC. Kleinrivier Mountains.

Habitat: Lower sandstone slopes, 50–100 m.

Rationale: Known from three locations and potentially threatened by urban expansion and invasion by alien plants.

F **Metalasia serrulata** P.O.Karis

Status: **Rare**
N.A. Helme

e**Distribution:** WC. Groot Winterhoek and Witzenberg Mountains.

Habitat: Rocky sandstone slopes.

Rationale: A range-restricted species (EOO 250 km^2), known from three high-altitude mountain sites, not threatened.

F **Metalasia tenuifolia** DC. **Plate 48**

Status: **VU** D2
D. Raimondo & N.A. Helme

e**Distribution:** WC. Houwhoek, Caledon Swartberg and Riviersonderend Mountains.

Habitat: Sandstone slopes.

Rationale: Known from three locations and potentially threatened by invading alien plants at all locations.

F **Metalasia tenuis** P.O.Karis

Status: **VU** D2
N.A. Helme & D. Raimondo

e**Distribution:** WC. Riviersonderend Mountains from west of Genadendal to around Riviersonderend, and on the Caledon Swartberg.

Habitat: Slopes in low fynbos, 100–1 000 m.

Rationale: A range-restricted species (EOO 400 km^2), known from three subpopulations, potentially threatened by invasive alien plants.

Metalasia tricolor Pillans **Plate 48**

Status: **Critically Rare**
D. Raimondo & N.A. Helme

e**Distribution:** WC. Rooiberg.

Habitat: Sandstone slopes.

Rationale: Known from the type collection made on Rooiberg Pass. Occurs on rocky arid slopes and is not threatened.

Metalasia umbelliformis P.O.Karis

Status: **VU** D2
N.A. Helme

e**Distribution:** WC. Pearly Beach to Brandfontein.

Habitat: Low-altitude limestone ridges.

Rationale: EOO 150 km^2. This limestone endemic is known from four locations: Brandfontein, Rietfontein, Hagelkraal and Pearly Beach. Its habitat is potentially threatened by urban expansion and invasion by alien plants.

Monticapra Koekemoer

F **Monticapra sp. nov.**
Voucher: *Esterhuysen EE 28615* BOL

Status: **VU** D2
N.G. Bergh & D. Raimondo

e**Distribution:** WC. Matroosberg.

Habitat: Montane fynbos slopes.

Rationale: Known from one location, this is a high-altitude, slow-growing species that is potentially threatened by frequent fires.

F **Monticapra sp. nov.**
Voucher: *Esterhuysen 35788* BOL

Status: **EN** B1ab(ii,iii,iv,v)
N.A. Helme, N.G. Bergh & D. Raimondo

e**Distribution:** WC. Groot Winterhoek Mountains.

Habitat: Restioid fynbos on flat, quartzitic sands, 1 000 m.

Rationale: Known from three locations (EOO 200 km^2). There is a continuing loss of habitat at two of the locations as a result of ploughing for protea orchards and cultivation of berries.

Oedera L.

Oedera conferta (Hutch.) Anderb. & K.Bremer

Status: **VU** D1
N.A. Helme & D. Raimondo

e**Distribution:** NC. Namaqualand, Kamiesberg.

Habitat: In rock crevices on steep south- and southwest-facing granite slopes, 1 500–1 600 m.

Rationale: Known from the two highest peaks of the Kamiesberg. Subpopulations are small, consisting of less than 250 individuals each.

[F] **Oedera epaleacea** Beyers
Status: **Critically Rare**
D. Raimondo
[e]**Distribution:** WC. Swartruggens.
Habitat: Arid fynbos, in crevices between rock sheets.
Rationale: A recently described species known from only one site and not threatened.

Oedera foveolata (K.Bremer) Anderb. & K.Bremer
Status: **DD**D
D. Raimondo & F. Daniels
[e]**Distribution:** WC. Karoopoort.
Habitat: Rocky slopes.
Rationale: Known from one collection made at Karoopoort in 1938. Bremer (Asteraceae taxonomist) suspects that the locality statement may be inexact.

Oedera laevis DC.
Status: **DD**D
D. Raimondo
[e]**Distribution:** WC. Langeberg, near Garcia's Pass.
Habitat: Rocky sandstone slopes.
Rationale: Last collected in 1923. This genus has not been revised and its species are very poorly known.

Oedera multipunctata (DC.) Anderb. & K.Bremer
Status: **NT** B1ab(ii,iii,iv,v)
D. Raimondo
[e]**Distribution:** WC. Bokkeveld Mountains to Swartruggens.
Habitat: On sandy and stony mountain slopes.
Rationale: EOO 2 700 km^2. Known from less than 15 locations. Subpopulations that occur on sandy flats are currently declining as a result of rooibos tea cultivation. At least half of the subpopulations occur in sandy areas and are likely to be threatened by agriculture.

Oedera nordenstamii (K.Bremer) Anderb. & K.Bremer
Status: **Rare**
D. Raimondo
[e]**Distribution:** NC. Springbok.
Habitat: Arid mountain summits.
Rationale: Known from two collections at high altitudes in the Richtersveld. This species has no recorded threats.

Oedera resinifera (K.Bremer) Anderb. & K.Bremer **Plate 44**
Status: **Rare**
F. Daniels
[e]**Distribution:** WC. Klein Swartberg and Touwsberg Mountains.
Habitat: Karroid lower slopes.
Rationale: Known from seven sites in the Little Karoo, occurs only on low, arid foothills and is not threatened.

Oedera silicicola (K.Bremer) Anderb. & K.Bremer
Status: **VU** D2
D. Raimondo
[e]**Distribution:** WC. Western Knersvlakte.
Habitat: Stony quartzite outcrops.
Rationale: EOO 35 km^2. Known from two locations and potentially threatened by mining.

Oedera steyniae (L.Bolus) Anderb. & K.Bremer
Status: **VU** B1ab(ii,iii,iv,v)
D. Raimondo
[e]**Distribution:** WC. Still Bay to Gouritsmond.
Habitat: Limestone rocks.
Rationale: EOO < 300 km^2. Known from seven locations and threatened by ongoing coastal development and invasion by alien plants.

[F] **Oedera viscosa** (L'Hér.) Anderb. & K.Bremer
Status: **NT** B1ab(ii,iii,iv,v)
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Piketberg to Tulbagh and Tygerberg.
Habitat: Clay and sandy flats.
Rationale: EOO 13 800 km^2. Known from 15 locations. Threatened by a continuing decline of habitat due to agriculture (wheat and vineyards), urban expansion, invasion by alien plants and quarrying.

Oligothrix DC.

[F] **Oligothrix gracilis** DC.
Status: **Rare**
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Cederberg to Kouebokkeveld.
Habitat: Sandstone slopes above 1 000 m.
Rationale: Known from two collections. Occurs on high-altitude peaks, which are not threatened.

Oncosiphon Källersjö

[F] **Oncosiphon africanum** (P.J.Bergius) Källersjö
Status: **VU** B1ab(ii,iii,iv,v)
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Mouth of the Berg River to Cape Peninsula.
Habitat: Coastal sands, salt marshes and inland sandy areas.
Rationale: EOO 4 800 km^2. Known from fewer than 10 locations. A few locations have been lost as a result of invasion by alien plants, coastal and urban expansion and agricultural expansion, especially in the sandveld. Habitat loss is ongoing.

Oncosiphon schlechteri (Bolus) Källersjö
Status: **EN** B1ab(ii,iii,v)
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Lambert's Bay to Hondeklip Bay.
Habitat: Seasonally wet, saline coastal sands.
Rationale: EOO < 400 km^2. Known from five locations. Experiencing ongoing habitat loss as a result of diamond and heavy-mineral sand mining, salt mining and off-road vehicles.

Osmitopsis Cass. emend. K.Bremer

[F] **Osmitopsis dentata** (Thunb.) K.Bremer
Status: **Rare**
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Cape Peninsula.
Habitat: Sandstone cliffs, usually on damp, mossy, south-east-facing ledges.
Rationale: A range-restricted species (EOO < 300 km^2). Not threatened because of the inaccessibility of its habitat.

[F] **Osmitopsis glabra** K.Bremer
Status: **Rare**
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Kogelberg to Palmiet River Mountains.
Habitat: Rocky, south-facing sandstone slopes.

Rationale: EOO 80 km². Known from four sites. Occurs primarily within in the Kogelberg Biosphere Reserve and is not threatened.

F **Osmitopsis nana** Schltr.

Status: **Rare**

N.A. Helme & D. Raimondo

e**Distribution:** WC. Groot Winterhoek to Genadendal.

Habitat: South-facing, rocky sandstone crevices.

Rationale: A habitat specialist, EOO < 633 km². Known from six sites. Not threatened because of the inaccessibility of its habitat.

F **Osmitopsis parvifolia** (DC.) Hofmeyr

Status: **Rare**

D.A. Kamundi† & D. Raimondo

e**Distribution:** WC. Kogelberg.

Habitat: Stony sandstone slopes and rock crevices, 420–1 250 m.

Rationale: A range-restricted species (EOO 200 km²), known from three subpopulations. This species has no recorded threats.

F **Osmitopsis pinnatifida** (DC.) K.Bremer subsp. **angustifolia** (DC.) K.Bremer

Status: **Rare**

D.A. Kamundi† & J.E. Victor

e**Distribution:** WC. Stellenbosch and Paarl.

Habitat: Moist and shady areas, 600–1 100 m.

Rationale: A range-restricted taxon (EOO 80 km²) known from two subpopulations. No recorded threats.

F **Osmitopsis pinnatifida** (DC.) K.Bremer subsp. **pinnatifida**

Status: **VU** D2

N.A. Helme & D. Raimondo

e**Distribution:** WC. Drakenstein Mountains.

Habitat: Damp rocks at the base of waterfalls and along streams.

Rationale: Known from three locations within a very restricted range (EOO < 80 km²). Potentially threatened by invading alien plants.

F **Osmitopsis pinnatifida** (DC.) K.Bremer subsp. **serrata** K.Bremer

Status: **Critically Rare**

N.A. Helme, D. Raimondo & D.A. Kamundi†

e**Distribution:** WC. Wemmershoek Mountains.

Habitat: Dry rocky outcrops and cliff faces.

Rationale: Recorded only from one site. Not threatened because of the inaccessibility of its habitat.

F **Osmitopsis tenuis** K.Bremer **Plate 45**

Status: **Rare**

N.A. Helme, D.A. Kamundi† & D. Raimondo

e**Distribution:** WC. Bain's Kloof to Du Toit's Kloof.

Habitat: Damp, south-facing cliffs.

Rationale: Known from a small area around the Slanghoek Mountains (EOO 60 km²) and from four collections. Not threatened as its cliff habitat has not been invaded by alien pines or hakeas.

Osteospermum L.

Osteospermum aciphyllum DC.

Status: **NT** D2

D. Raimondo

e**Distribution:** WC. Piketberg, Stettynsberg and Klein Drakenstein Mountains to the Caledon Swartberg.

Habitat: Lower rocky sandstone slopes, 300–600 m.

Rationale: Known from five locations but a few more are likely to exist on the unexplored mountain slopes within the range of this species. Potentially threatened by invading alien plants at all known locations.

Osteospermum attenuatum Hilliard & B.L.Burtt

Status: **Rare**

C.R. Scott-Shaw & J.E. Victor

e**Distribution:** KZN. Underberg and Polela.

Habitat: Moist places at high altitudes, 1 675–2 300 m.

Rationale: A Drakensberg endemic with a specialised habitat, known from five sites and not threatened.

F **Osteospermum burttianum** B.Nord.

Status: **Rare**

D.A. Kamundi† & D. Raimondo

e**Distribution:** WC. Langeberg Mountains.

Habitat: Sandstone slopes.

Rationale: A range-restricted species (EOO < 500 km²), known from two collections. This species has no recorded threats.

Osteospermum elsieae Norl.

Status: **Critically Rare**

J.E. Victor & D. Raimondo

e**Distribution:** WC. Potberg.

Habitat: Rocky southern slopes in gullies.

Rationale: Known only from one site and not threatened.

Osteospermum hafstroemii Norl.

Status: **VU** D2

D. Raimondo & J.E. Victor

e**Distribution:** WC. Bredasdorp.

Habitat: Rocky coastline.

Rationale: Known from two locations on the Cape Agulhas coastline (EOO 5 km²). Potentially threatened by coastal development and invasion by alien plants.

Osteospermum hirsutum Thunb.

Status: **EX**

P.P.J. Herman & J.E. Victor

e**Distribution:** WC. Unknown.

Habitat: Unknown.

Rationale: This species was collected in 1775 by Thunberg at an unspecified site in the then Cape Colony, possibly on the Cape Flats. Not collected since. There are excellent, well-preserved specimens of *O. hirsutum* in various herbaria and there is therefore no doubt about its taxonomic validity. As it has not been reported for over 100 years and most of the Cape Flats has been developed, we conclude that this species is extinct.

Osteospermum hispidum Harv. var. **viride** Norl.

Status: **DD**D

D. Raimondo

e**Distribution:** WC. Stellenbosch.

Habitat: Unknown.

Rationale: The only known collection is by Herre in 1933 at 'Rustenburg' in Stellenbosch, but this site cannot be traced. Hence we do not know whether it is extinct as a result of urban expansion and agriculture or safe on the slopes of mountains.

[F] **Osteospermum potbergense** A.R.Wood & B.Nord.

Status: **Critically Rare**
N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Potberg.
Habitat: Lower sandstone slopes.
Rationale: EOO 10 km^2. The range of this species falls within De Hoop Nature Reserve and is therefore protected. It faces a slight threat of grazing because game concentrate in the area in which it occurs. However, it is a resprouter and is unlikely to be very sensitive to grazing.

Osteospermum pterigoideum Klatt

Status: **EN** B1ab(ii,iii,v)
D. Raimondo

[e]**Distribution:** WC. George and Humansdorp.
Habitat: Low sandstone slopes.
Rationale: EOO 300 km^2. Of six historical locations, four have been lost as a result of afforestation and crop cultivation. Only two possibly extant locations remain, both threatened by ongoing loss and degradation of habitat because of invasive alien plants.

[F] **Osteospermum pyrifolium** Norl.

Status: **VU** D2
N.A. Helme, D.A. Kamundi† & D. Raimondo

[e]**Distribution:** WC. Langeberg Mountains.
Habitat: Low- to medium-altitude sandstone slopes.
Rationale: A Langeberg endemic, (EOO 550 km^2), known from fewer than five locations and potentially threatened by agriculture and invasion by alien plants.

Othonna L.

Othonna armiana Van Jaarsv.

Status: **Critically Rare**
D. Raimondo

[e]**Distribution:** NC. Richtersveld, northeast of Eksteenfontein.
Habitat: Rock crevices on upper slopes.
Rationale: Known from one mountain summit, this species has no recorded threats.

Othonna cacalioides L.f.

Status: **VU** D2
E.J. van Jaarsveld, N.A. Helme & D. Raimondo

[e]**Distribution:** NC WC. Bokkeveld Escarpment to Gifberg.
Habitat: Shallow rock pans with a thin layer of coarse sand in quartzite pavement rocks of the Table Mountain Sandstone Formation.
Rationale: Restricted to a specific habitat (AOO < 20 km^2). Potentially threatened by collecting and trampling by livestock.

Othonna cakilifolia DC.

Status: **VU** D2
D. Raimondo

[e]**Distribution:** NC WC. Vanrhynsdorp and Hondeklip Bay.
Habitat: Flat areas with deep, red sands.
Rationale: Known from the area around Nuwerus, from fewer than five locations. Potentially threatened by wheat cultivation.

[F] **Othonna ciliata** L.f.

Status: **VU** B1ab(ii,iii,v)
N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Piketberg to Cape Flats and Wolseley.
Habitat: Shales and sandy flats.
Rationale: A renosterveld species from the Swartland and Ceres areas (EOO < 2 350 km^2) that has lost many subpopulations to crop cultivation, urban development and invasion by alien plants. It is known from 10 locations. Decline is ongoing; a subpopulation in Malmesbury was lost as recently as 2006 as a result of urban development.

[F] **Othonna cyclophylla** Merxm.

Status: **Rare**
D.A. Kamundi† & D. Raimondo
Distribution: NC. Richtersveld and southern Namibia.
Habitat: Arid cliffs.
Rationale: A habitat specialist known from four collections. This species has no recorded threats.

[F] **Othonna divaricata** Hutch.

Status: **DD**
P.F. Matlamela & D.A. Kamundi†

[e]**Distribution:** NC. Namaqualand.
Habitat: Rocky slopes.
Rationale: Known from two old collections made before 1932. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

[F] **Othonna diversifolia** (DC.) Sch.Bip.

Status: **Rare**
P.F. Matlamela, D. Raimondo & D.A. Kamundi†

[e]**Distribution:** NC. Hondeklip Bay to Springbok.
Habitat: Namaqualand Klipkoppe Shrubland.
Rationale: A range-restricted species (EOO < 500 km^2), known from two collections. This species has no recorded threats.

Othonna hallii B.Nord.

Status: **VU** D2
D. Raimondo

[e]**Distribution:** WC. Vanrhynsdorp district, between Hol River and Koekenaap.
Habitat: Quartz patches.
Rationale: Known from fewer than five locations (EOO < 100 km^2). There has been an observed loss of part of a subpopulation as a result of to mining in the past, and mining remains a potential threat to this species.

[F] **Othonna herrei** Pillans

Status: **Rare**
D. Raimondo & D.A. Kamundi†

[e]**Distribution:** NC. Richtersveld.
Habitat: Arid mountain slopes.
Rationale: A range-restricted species (EOO 160 km^2), known from two sites and not threatened because of the inaccessibility of its habitat to goats.

[F] **Othonna humilis** Schltr.

Status: **Rare**
D.A. Kamundi† & J.E. Victor

[e]**Distribution:** WC. Cederberg.
Habitat: Stony shale band, 1 220–2 150 m.
Rationale: A range-restricted habitat specialist (EOO < 500 km^2), known from three subpopulations, this species has no recorded threats.

Othonna lepidocaulis Schltr.

Status: **Rare**
P.P.J. Herman & J.E. Victor

[e]**Distribution:** NC WC. Komkans near Vredendal and the Knersvlakte.

Habitat: Quartz patches on slopes.
Rationale: A range-restricted habitat specialist (EOO < 320 km^2), known from fewer than five sites, with no threats recorded.

Othonna linearifolia (DC.) Sch.Bip.
Status: **DD**D
P.P.J. Herman & J.E. Victor
[e]**Distribution:** WC. Cape
Habitat: Unknown
Rationale: Known only from the type, collected at an unspecified locality. Habitat and distribution unknown.

Othonna membranifolia DC.
Status: **DD**D
D. Raimondo & J.E. Victor
[e]**Distribution:** EC. Van Stadens and Swartkops Rivers.
Habitat: Steep fynbos slopes near rivers.
Rationale: Last collected in 1932. It is highly likely to be threatened by lack of fire, crop cultivation, urban expansion and severe infestations of alien plants within both the river systems in which it occurs.

Othonna papaveroides Hutch.
Status: **DD**D
P.P.J. Herman & J.E. Victor
[e]**Distribution:** WC. Gifberg and Nardous Mountain.
Habitat: Unknown.
Rationale: Last collected in 1933. Herbarium specimen labels are insufficiently detailed to determine the habitat of this species and therefore its threat status cannot be determined.

[F] **Othonna pavelkae** Lavranos
Status: **Rare**
P.F. Matlamela, D. Raimondo & D.A. Kamundi†
[e]**Distribution:** NC. Steinkopf.
Habitat: Quartz outcrops.
Rationale: A range-restricted species (EOO < 500 km^2), known from two subpopulations. This species has no recorded threats.

Othonna petiolaris DC.
Status: **EN** B1ab(ii,iii,iv,v)
D. Raimondo
[e]**Distribution:** WC. Gifberg to Clanwilliam.
Habitat: Sandy flats and gentle slopes, sometimes near boulders.
Rationale: Extant at two of eight historical locations. It has been heavily affected by citrus and rooibos tea cultivation. Decline is ongoing.

Othonna retrorsa DC. var. **spektakelensis** (Compton) G.D.Rowley
Status: **Rare**
D. Raimondo, P.P.J. Herman & J.E. Victor
[e]**Distribution:** NC. Spektakel, Eselsfontein, Kamieskroon, Springbok.
Habitat: Rocky sandstone slopes.
Rationale: Widely scattered subpopulations occurring north of Springbok. This taxon has no recorded threats.

Othonna tephrosioides Sond.
Status: **DD**D
P.P.J. Herman & J.E. Victor
[e]**Distribution:** WC. Matjiesfontein.
Habitat: Unknown.
Rationale: Known from the type, collected near Matjiesfontein in the late 1800s. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Pentatrichia Klatt

[F] **Pentatrichia alata** S.Moore
Status: **DD**D
P.P.J. Herman & D. Raimondo
[e]**Distribution:** LM MP. Pilgrim's Rest, Abel Erasmus Pass and Wolkberg Mountains.
Habitat: Grassland or savanna, on rocky slopes and sandy ground.
Rationale: A poorly known species, collected five times, mostly before 1957. Not enough is known about the current population status of this species to determine its status.

Phaneroglossa B.Nord.

[F] **Phaneroglossa bolusii** (Oliv.) B.Nord.
Status: **Rare**
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Skurweberg and Hex River Mountains.
Habitat: High-altitude sandstone slopes.
Rationale: A habitat specialist known from five sites and not threatened.

Phymaspermum Less. emend. Källersjö

[F] **Phymaspermum peglerae** (Hutch.) Källersjö
Status: **DD**D
D.A. Kamundi† & D. Raimondo
[e]**Distribution:** EC. Mthatha district.
Habitat: Unknown.
Rationale: Known from the type collection made by Pegler near Mthatha in 1910. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Phymaspermum schroeteri Compton
Status: **Rare**
D. Raimondo, P.P.J. Herman & J.E. Victor
[e]**Distribution:** NC WC. Beaufort West, Fraserburg, Sutherland and Laingsburg.
Habitat: Arid rocky slopes and summits.
Rationale: Known from five sites in the central Karoo. Not threatened as it occurs on slopes that are not overgrazed by livestock.

Phymaspermum villosum (Hilliard) Källersjö
Status: **Rare**
J.E. Victor & C.R. Scott-Shaw
[e]**Distribution:** KZN. Northern Pondoland and Ngele Mountain.
Habitat: Grassland, rock outcrops or stony slopes.
Rationale: A habitat specialist, known from six sites. It has good seed dispersal abilities and occurs only on rocky habitats with shallow soils that are refuges from threats such as forestry plantations and fire.

Planea P.O.Karis

Planea schlechteri (L.Bolus) P.O.Karis
Status: **CR** PE
F. Daniels, N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Bain's Kloof to Klapmuts.

Habitat: Slopes at 300 m.
Rationale: Known from two herbarium collections. The subpopulation at Klapmuts is extinct. The Bain's Kloof subpopulation is an old collection from the lower slopes of the Kloof and the site description is insufficiently detailed to know exactly where it occurs. However, large tracts of this habitat have been lost to afforestation, infestations of invasive alien plants and crop cultivation, and this species may well be extinct.

Poecilolepis Grau

[F] **Poecilolepis maritima** (Bolus) Grau **Plate 42**
Status: **VU** D2
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Cape Peninsula to Agulhas.
Habitat: Edges of seasonal salt pans.
Rationale: Five of eight subpopulations (four on the Cape Flats and one more recently at Struisbaai) have been lost to urban development. The three extant subpopulations are on the Agulhas Plain. These subpopulations face a potential threat from invasive alien acacias, should alien clearing management currently being implemented be stopped.

Polyarrhena Cass.

[F] **Polyarrhena prostrata** Grau subsp. **dentata** Grau
Status: **Rare**
D. Raimondo & R.C. Turner
[e]**Distribution:** WC. Du Toit's Peak, Wemmershoek Mountains and Stettynsberg.
Habitat: Steep shale slopes.
Rationale: Known from three sites within a restricted range (EOO 52 km^2). It occurs on steep mountain slopes and is not threatened.

[F] **Polyarrhena prostrata** Grau subsp. **prostrata**
Status: **Rare**
D. Raimondo & R.C. Turner
[e]**Distribution:** WC. Bain's Kloof to Brandwacht.
Habitat: Scree slopes.
Rationale: Known from three sites within a restricted range (EOO 110 km^2). It occurs on steep mountain slopes and is not threatened.

[F] **Polyarrhena reflexa** (L.) Cass. subsp. **brachyphylla** (Sond. ex Harv.) Grau
Status: **VU** D2
D. Raimondo & R.C. Turner
[e]**Distribution:** WC. Caledon to Villiersdorp.
Habitat: Streamsides.
Rationale: Known from four locations, all from streamsides, a habitat that is potentially threatened by invading alien plants.

Pteronia L.

[F] **Pteronia anisata** B.Nord.
Status: **Rare**
D.A. Kamundi† & D. Raimondo
[e]**Distribution:** NC. Richtersveld, Cornellskop between Numees and Helskloof.
Habitat: Arid rocky slopes.
Rationale: A range-restricted species (EOO < 5 km^2) known from one subpopulation. This species has no recorded threats.

[F] **Pteronia beckeoides** DC.
Status: **DD**D
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Swellendam.
Habitat: Unknown.
Rationale: Known only from the type collected in 1835. The locality description is vague, listing only Swellendam. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

[F] **Pteronia centauroides** DC.
Status: **VU** D2
D. Raimondo
[e]**Distribution:** WC. Du Toit's Kloof.
Habitat: Granite slopes.
Rationale: Endemic to lower granitic slopes in Du Toit's Kloof (EOO < 15 km^2). Known from one plant, last recorded in 2004. The location was burnt in 2007 and it is likely that the population will have more individuals in the near future. Potentially threatened by invading alien plants.

Pteronia diosmifolia Brusse
Status: **VU** D2
P.P.J. Herman, J.E. Victor & R.C. Turner
[e]**Distribution:** WC. De Hoop and Elandsvlei farm near Bredasdorp.
Habitat: Limestone outcrops.
Rationale: Known from two locations. Both subpopulations are small, extremely localised colonies that are potentially threatened by encroachment from invasive alien acacias.

[F] **Pteronia elata** B.Nord.
Status: **Rare**
D.A. Kamundi† & D. Raimondo
[e]**Distribution:** NC. Richtersveld.
Habitat: Rocky arid slopes.
Rationale: A range-restricted species (EOO 120 km^2), known from two subpopulations. This species has no recorded threats.

[F] **Pteronia hutchinsoniana** Compton
Status: **Rare**
D.A. Kamundi† & D. Raimondo
[e]**Distribution:** WC. Klein Swartberg and Ladismith.
Habitat: Dry sandstone slopes.
Rationale: A range-restricted species (EOO < 500 km^2), known from fewer than five subpopulations. No recorded threats.

Pteronia pillansii Hutch.
Status: **DD**D
R.C. Turner
[e]**Distribution:** WC. Garies and Vanrhynsdorp.
Habitat: Unknown.
Rationale: Last collected in 1910, known from two collections, almost 100 years ago. Not enough is known about the distribution, specific habitat or current population status of this species to determine its status.

Pteronia scabra Harv.
Status: **EN** B1ab(ii,iii,iv,v)
R.C. Turner
[e]**Distribution:** WC. Houwhoek to Elim.
Habitat: Rocky slopes.

Rationale: Known from three locations. Its habitat has undergone significant transformation to wheat and protea cultivation since it was last collected in 1962. Threats from invasive alien plants, a deleterious fire regime and crop cultivation are ongoing.

Pteronia tenuifolia DC.

Status: **EN** A2bc; B1ab(iii)+2ab(iii)
N.A. Helme & D. Raimondo

eDistribution: WC. Caledon, Bredasdorp and Hermanus.
Habitat: Flats, acid sands over clays.
Rationale: Confined to lowland habitats (EOO < 2 000 km^2). There is an extremely high probability that this species is extinct at four of the six historical locations as a result of agriculture, urban expansion and invasion by alien plants. Habitat loss has taken place over the past 80 years, less than three generations of this long-lived resprouter (generation length is estimated to be over 50 years).

[F] **Pteronia utilis** Hutch.

Status: **Rare**
D.A. Kamundi† & J.E. Victor

eDistribution: WC. Cederberg.
Habitat: Sandstone mountain slopes.
Rationale: A range-restricted species (EOO < 10 km^2), known from one subpopulation. This species has no recorded threats.

Relhania L'Hér. emend. K.Bremer

Relhania decussata L'Hér.

Status: **Rare**
R.C. Turner & D. Raimondo

eDistribution: EC WC. Kammanassie, Baviaanskloof, Kouga, Anthoniesberg and Swartberg Mountains.
Habitat: Stony, fairly high mountain slopes.
Rationale: A habitat specialist, known from fewer than 10 sites. This species has no recorded threats.

Relhania garnotii (Less.) K.Bremer

Status: **VU** A2bc
N.A. Helme & D. Raimondo

eDistribution: WC. Agulhas to Mossel Bay.
Habitat: Lowland shale areas, especially silcretes.
Rationale: A slow-growing, Overberg-endemic shrub. Common in suitable habitat, but it has lost a minimum of 40% of its habitat to wheat cultivation over the past 60 years and its habitat continues to be ploughed up. The minimum generation length is suspected to be 20 years.

Relhania rotundifolia Less. **Plate 44**

Status: **CR** B1ab(iii)+2ab(iii)
D. Raimondo & I. Ebrahim

eDistribution: WC. Malmesbury.
Habitat: Seasonally wet, sandy flats, 100–150 m.
Rationale: Known from one location at Riverlands Nature Reserve (EOO and AOO < 5 km^2). There is a continuing decline of its habitat as a result of encroachment from invasive alien acacias and inappropriate fire management.

Relhania spathulifolia K.Bremer

Status: **EN** B1ab(ii,iii,iv,v)
R.C. Turner

eDistribution: WC. Agulhas Plain.
Habitat: Damp lowland areas near salt pans.
Rationale: EOO < 70 km^2. Known from four locations. Declining as a result of agriculture (wheat, vineyards and proteas), invasion by alien plants and road construction.

Relhania tricephala (DC.) K.Bremer

Status: **NT** B1ab(i,ii,iii,iv,v)
D. Raimondo, N.A. Helme & R.C. Turner

eDistribution: WC. Ceres to Witteberg Mountains.
Habitat: Sandy or clay soil on flats below mountains.
Rationale: EOO < 3 600 km^2. Known from ± 10 locations but suspected to occur at 15–20 locations. Although it is abundant at one location, Pypsteelfontein (Waboomsberg), at the others it has been affected by agriculture and road construction. Agricultural expansion is causing a continuing decline.

Rennera Merxm. emend P.P.J.Herman

Rennera stellata P.P.J.Herman

Status: **VU** D2
L. von Staden & P.P.J. Herman

eDistribution: NC NW. Vryburg, Koopmansfontein and Potfontein.
Habitat: Seasonally waterlogged pans, unweathered calcrete rocks, full sun.
Rationale: Known from three locations. Potentially threatened by trampling by cattle as all three locations are on stock farms.

Roodebergia B.Nord.

[F] **Roodebergia kitamurana** B.Nord. **Plate 45**

Status: **EN** D
N.A. Helme & D. Raimondo

eDistribution: WC. Roodeberg in the Hex River Mountains.
Habitat: Shale bands in montane fynbos.
Rationale: Known from a highly restricted range (EOO < 2 km^2), from one site where there are less than 100 mature individuals.

Schistostephium Less.

[F] **Schistostephium scandens** Hutch.

Status: **DD**
P.F. Matlamela & D.A. Kamundi†

eDistribution: LM. Soutpansberg Mountains.
Habitat: Northern Mistbelt Forest.
Rationale: Known only from an old, written description. There are no specimens of this species in South African herbaria. Not enough is known about the distribution and current population status to determine its status.

Senecio L.

[F] **Senecio albifolius** DC.

Status: **Rare**
D.A. Kamundi† & D. Raimondo

eDistribution: WC. Cederberg to Klein Swartberg Mountains.
Habitat: Rock ledges at high altitudes.
Rationale: A habitat specialist, known from four subpopulations with no recorded threats.

Senecio albo-punctatus Bolus

Status: **DD**D
D. Raimondo & R.C. Turner

[e]**Distribution**: NC. Klipfontein, Namaqualand.

Habitat: Unknown, possibly occurs on rocky outcrops.

Rationale: Known from one site in a remote, poorly explored region. Last collected in 1930, but no threat information or habitat data are available. It may be sensitive to grazing.

Senecio austromontanus Hilliard

Status: **Rare**
C.R. Scott-Shaw & J.E. Victor

Distribution: EC KZN. Drakensberg Mountains, from Underberg to Elliot districts, also in Lesotho.

Habitat: Subalpine grassland. Seepages over rock sheets in damp grassland, 2 300–2 500 m.

Rationale: A high-altitude grassland endemic occurring in a localised habitat, not threatened.

[F] **Senecio brevilorus** Hilliard

Status: **Rare**
D.A. Kamundi† & D. Raimondo

[e]**Distribution**: KZN. KwaZulu-Natal Drakensberg Mountains, between Giant's Castle Game Reserve and the Underberg district.

Habitat: Among boulders on the edge of rocky streambeds, or on boulder beds in streams, sometimes submerged by floodwater, 2 100–2 440 m.

Rationale: A range-restricted habitat specialist (EOO 70 km^2), known from two subpopulations. No recorded threats.

[F] **Senecio cicatricosus** Sch.Bip.

Status: **Rare**
D.A. Kamundi† & D. Raimondo

[e]**Distribution**: NC. Hol River and Kleinsee.

Habitat: In cracks and under rocks and shrubs on steep quartzite slopes.

Rationale: Known from three collections. A rare habitat specialist with no recorded threats.

[F] **Senecio dregeanus** DC. **Plate 46**

Status: **VU** B1ab(iii)+2ab(iii)
L. von Staden

[e]**Distribution**: KZN. KwaZulu-Natal Midlands and southern KwaZulu-Natal coastal areas, from Greytown to Umdoni Park.

Habitat: Open grasslands, often on sandstone plateaus but also recorded from moister mistbelt grassland, 0–1 200 m.

Rationale: EOO 6 880 km^2, AOO (based on remaining untransformed grasslands within the known range) < 1 500 km^2. It probably occurs at fewer than 10 locations, based on herbarium records and habitat maps. At least 67% of its grassland habitat has been transformed, and all remaining subpopulations are on small habitat fragments that are subject to ongoing degradation as a result of frequent fires, overgrazing, subsistence agriculture and the effects of fragmentation. Habitat loss has taken place over a period longer than three generations. Data on population size and trends are urgently needed.

[F] **Senecio eminens** Compton

Status: **DD**D
J.E. Victor & R.C. Turner

Distribution: MP. Piet Retief to Mbabane (Swaziland).

Habitat: Grasslands.

Rationale: Last collected in 1949. It could be threatened as much of its grassland habitat has been transformed. Not enough is known about its distribution, specific habitat or current population status to determine its status.

Senecio exuberans R.A.Dyer **Plate 46**

Status: **EN** B1ab(ii,iii,iv)
L. von Staden, C.R. Scott-Shaw, P. Wragg & J.E. Victor

[e]**Distribution**: KZN. Formerly around Pietermaritzburg, now restricted to Drummond.

Habitat: Sandstone grasslands, 800–1 000 m.

Rationale: Known from five or fewer locations, from a very small area (EOO < 200 km^2). It is undergoing a continuing decline as a result of urban expansion, industrial development, invasion by alien plants and a deleterious fire regime. It has also lost habitat to crop cultivation and afforestation.

Senecio foeniculoides Harv.

Status: **EN** B1ab(iii)
D. Raimondo & R.C. Turner

[e]**Distribution**: WC. Mamre to Cape Peninsula.

Habitat: Sandy flats and lower slopes.

Rationale: Occurs in a restricted area (EOO 800 km^2) and known from two subpopulations, but historically from four (± 50% range reduction has taken place over the past 100 years as a result of urban expansion). This species is under threat from severe invasion by alien plants and future housing development.

[F] **Senecio gariepiensis** Cron

Status: **DD**D
L. von Staden

Distribution: NC. Near the Orange River in the Northern Cape or Namibia.

Habitat: Unknown.

Rationale: Known only from the type specimen, which was collected at an unspecified locality in 1830. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

[F] **Senecio hallianus** G.D.Rowley

Status: **Rare**
D.A. Kamundi† & D. Raimondo

[e]**Distribution**: NC WC. Central Karoo, Loxton to Fraserburg.

Habitat: Rock clefts, 800–1 400 m.

Rationale: A habitat specialist recorded from two herbarium collections. It has no known threats.

Senecio hederiformis Cron

Status: **Rare**
P.J.D. Winter, G.V. Cron & J.E. Victor

[e]**Distribution**: LM MP. Blouberg and Graskop.

Habitat: Cracks of quartzite rock faces in mistbelt.

Rationale: A habitat specialist occurring as naturally disjunct subpopulations. No significant threats.

[F] **Senecio hirtifolius** DC.

Status: **CR** PE
D. Raimondo & R.C. Turner

[e]**Distribution**: EC. Uitenhage, Swartkops River.

Habitat: Unknown, possibly riverbanks.

Rationale: Known from the type, collected in 1895. It has

not been recorded since and is probably extinct because the type area has now been almost completely transformed by urban expansion and crop cultivation.

Senecio kalingenwae Hilliard & B.L.Burtt

Status: **Critically Rare**

C.R. Scott-Shaw, D. Raimondo & R.C. Turner

[e]**Distribution:** KZN. Gxalingenwa Valley between Sani Pass and Polela Valley.

Habitat: Montane and subalpine grassland. In grass tussocks of moist rocky stream gullies, 2 000–2 500 m.

Rationale: Only one site known, it is locally common and not threatened.

[F] **Senecio latissimifolius** S.Moore

Status: **DD**D

P.F. Matlamela & D.A. Kamundi†

[e]**Distribution:** MP. Pilgrim's Rest.

Habitat: Unknown.

Rationale: Known only from the type, which was collected somewhere near Pilgrim's Rest by Moore in 1918. Not enough is known about the distribution, specific habitat or population status of this species to determine its status, but it is potentially threatened by afforestation.

[F] **Senecio lycopodioides** Schltr.

Status: **VU** B1ab(iii,v)

D. Raimondo & R.C. Turner

[e]**Distribution:** WC. Agulhas to De Hoop.

Habitat: Limestone rocks.

Rationale: Occurring between Agulhas and Still Bay (EOO 2 900 km^2), known from three locations, but is likely to exist at around 10 locations. It is threatened by invasive alien acacias throughout its range.

[F] **Senecio mauricei** Hilliard & B.L.Burtt

Status: **Rare**

D.A. Kamundi† & D. Raimondo

[e]**Distribution:** KZN. KwaZulu-Natal Drakensberg Mountains.

Habitat: Grassy slopes below sandstone cliffs, 1 675–2 440 m.

Rationale: A range-restricted Drakensberg endemic (EOO 360 km^2), recorded from six subpopulations. No known threats.

Senecio muirii L.Bolus

Status: **Rare**

W.G. Welman, J.E. Victor & R.C. Turner

[e]**Distribution:** WC. Calitzdorp to Gourits River.

Habitat: Shale cliffs.

Rationale: A narrow habitat specialist known from six sites. Not threatened because of the inaccessibility of its habitat.

[F] **Senecio ngoyanus** Hilliard

Status: **VU** B1ab(i,ii,iii,iv,v)

C.R. Scott-Shaw & L. von Staden

Distribution: KZN. Formerly widespread along the coast of KwaZulu-Natal from Stanger northwards, now occurring only around St Lucia and Ngoye Forest. It also occurs in southern Mozambique.

Habitat: Coastal grassland, marshy depressions, sometimes on granite domes.

Rationale: Restricted to coastal grasslands of northern KwaZulu-Natal that have been extensively transformed. EOO has declined from 17 600 km^2 to 13 600 km^2, because of habitat loss in the southern end of the range. Extant at 6–9 locations, and there is a continuing decline in the habitat outside reserves as a result of small-scale subsistence agriculture and overgrazing.

[F] **Senecio odontopterus** DC.

Status: **DD**D

P.F. Matlamela, D. Raimondo & D.A. Kamundi†

[e]**Distribution:** WC. Paarl Mountain.

Habitat: Rocky slopes.

Rationale: The only available species description is from *Flora capensis* in 1865. It is also known from two old herbarium collections on Paarl Mountain made before 1929. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Senecio saniensis Hilliard & B.L.Burtt

Status: **Rare**

C.R. Scott-Shaw, J.E. Victor & R.C. Turner

Distribution: KZN. Drakensberg Mountains, Loteni River to Sani Pass.

Habitat: Subalpine grassland, below moist basalt cliffs, 2 300–2 900 m.

Rationale: A rare Drakensberg species known from two sites in South Africa. Occurs in high-altitude areas and is not threatened.

Senecio scaposus DC. var. **addoensis** (Compton) G.D.Rowley

Status: **EN** B1ab(iii)

J.E. Victor & W. Berrington

[e]**Distribution:** EC. Addo Elephant National Park and Port Elizabeth.

Habitat: Sandstone rocks.

Rationale: Restricted to an area of ± 200 km^2. Known from two locations. This taxon is declining as a result of trampling by people in the Baakens Valley in Port Elizabeth. It is not known whether it is declining at Addo Elephant National Park, nor whether it occurs at other locations nearby.

Senecio serrurioides Turcz.

Status: **DD**D

R.C. Turner, W.G. Welman & J.E. Victor

[e]**Distribution:** EC. Van Stadens Mountain.

Habitat: Sandstone slopes in grassland.

Rationale: The type was collected in 1830 in the Van Stadens Mountains and the species has not been recorded again. A record from the Kouga Mountains may represent this species, but this needs verification.

[F] **Senecio speciosissimus** J.C.Manning & Goldblatt

Status: **Rare**

P.A. Manyama

[e]**Distribution:** WC. Bain's Kloof to Kogelberg.

Habitat: Moist fynbos vegetation, in seepage areas or along streams, 600–1 500 m.

Rationale: A short-lived, postfire pioneer species known from two sites (EOO < 100 km^2). In the past, it has lost habitat to afforestation but currently there are no threats that have an impact on it.

[F] **Senecio triodontiphyllus** C.Jeffrey

Status: **VU** D2

M. Lötter, J.E. Burrows & L. von Staden

[e]**Distribution:** MP. Barberton to Kaapmuiden.

Habitat: Steep slopes in grasslands.

Rationale: Known from three collections made before 1930. Recently (2008) rediscovered at one of the historical locations where it is potentially threatened by invasive alien plants and expanding forestry plantations.

[F] **Senecio verbascifolius** Burm.f.

Status: **EN** D

N.A. Helme, D. Raimondo & R.C. Turner

[e]**Distribution:** WC. Cape Peninsula.

Habitat: Sheltered rocky slopes.

Rationale: Less than 250 plants are known from Table Mountain.

Senecio villifructus Hilliard

Status: **EN** B1ab(iii)

C.R. Scott-Shaw, I.M. Johnson & L. von Staden

[e]**Distribution:** KZN. Louwsburg.

Habitat: Mistbelt grassland, rocky, doleritic sites on mountain tops, 1 000–1 200 m.

Rationale: Known from a small area around the type locality (EOO 120 km^2) where the population is partly protected within a nature reserve. The two subpopulations outside the reserve are threatened by a severe, continuing decline in habitat quality as a result of heavy overgrazing. Surveys in similar habitat on surrounding mountaintops have not located additional subpopulations, but if other locations exist, they are likely to be similarly threatened.

[F] **Senecio wittebergensis** Compton

Status: **DD**

R.C. Turner

[e]**Distribution:** WC. Witteberg Mountains.

Habitat: Sandstone slopes in arid fynbos.

Rationale: Known from Compton's collections in the early 1940s, close to Laingsburg. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Steirodiscus Less.

[F] **Steirodiscus gamolepis** Bolus ex Schltr. **Plate 49**

Status: **EN** D

J.C. Manning, D. Raimondo & R.C. Turner

[e]**Distribution:** WC. Tulbagh.

Habitat: Seasonally wet, lowland shales.

Rationale: Collected by J. Manning in the spring of 2006; only 100 plants were seen. Its seasonally wet, lowland habitat has been mostly lost to ploughing for vineyards and cereal crops in the past.

[F] **Steirodiscus linearilobus** DC.

Status: **DD**

P.F. Matlamela, D. Raimondo & D.A. Kamundi†

[e]**Distribution:** WC. Olifants River.

Habitat: Unknown.

Rationale: The only available species description is from *Flora capensis* in 1865, which notes Olifants River as the distribution of this species. There are no specimens in South African herbaria. This species is likely to be highly threatened as the Olifants River has been mostly transformed for agriculture.

Steirodiscus schlechteri Bolus ex Schltr.

Status: **VU** D2

N.A. Helme, D. Raimondo, P.P.J. Herman & J.E. Victor

[e]**Distribution:** WC. Vanrhynsdorp.

Habitat: Sandy flats.

Rationale: Known from three locations and potentially threatened by crop cultivation and grazing by livestock.

Steirodiscus speciosus (Pillans) B.Nord.

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

D. Raimondo & N.A. Helme

[e]**Distribution:** WC. Malmesbury.

Habitat: Sandy flats.

Rationale: EOO < 400 km^2, AOO < 20 km^2. Occurs at five lowland locations in sandy soils that are threatened by wheat and pasture cultivation and invasion by alien plants. Three of five known locations are severely affected by aliens.

[F] **Steirodiscus tagetes** (L.) Schltr.

Status: **VU** B1ab(ii,iii,iv,v)

D. Raimondo & N.A. Helme

[e]**Distribution:** WC. Hopefield to Cape Flats.

Habitat: Sandy flats.

Rationale: EOO < 5 000 km^2. Extinct at six of 13 locations because of urban expansion on the Cape Flats. It has also lost significant amounts of habitat to wheat cultivation. Extant subpopulations continue to decline as a result of further urban expansion and eutrophication from fertiliser runoff from surrounding crop fields and the subsequent invasion of habitat by invasive alien annual grasses and acacias. The only recent collecting location, Macassar, is heavily invaded by woody acacias and is continuously under pressure for the development of low-cost housing (20% of this location was lost in 2005).

Stoebe L.

Stoebe gomphrenoides (Lam.) P.J.Bergius

Status: **EN** B1ab(iii)

N.G. Bergh, F. Daniels & D. Raimondo

[e]**Distribution:** WC. Malmesbury to Pella.

Habitat: Lowland sand plain fynbos.

Rationale: Known from a very restricted area (EOO 82 km^2) from four locations. Declining as a result of severe infestations of invasive alien plants.

[F] **Stoebe montana** Schltr. ex Levyns

Status: **Rare**

P.A. Manyama

[e]**Distribution:** WC. Hex River Mountains.

Habitat: Table Mountain Sandstone rocks, 1 700–2 300 m.

Rationale: Known from three collections (EOO 120 km^2). Not threatened as the habitat is inaccessible.

Stoebe muirii Levyns **Plate 48**

Status: **VU** B1ab(ii,iii,iv,v)

D. Raimondo

[e]**Distribution:** WC. Still Bay to Bredasdorp.

Habitat: Coastal limestone ridges below 100 m.

Rationale: EOO 4 600 km^2. A habitat specialist extant at fewer than 10 locations and declining because of coastal development and the spread of invasive alien plants.

[F] **Stoebe rosea** Wolley-Dod **Plate 48**

Status: **Rare**

N.G. Bergh, D. Raimondo & F. Daniels

[e]**Distribution:** WC. Cape Peninsula.

Habitat: South-facing slopes on Table Mountain Sandstone, 300–800 m.

Rationale: A highly range-restricted species (EOO < 40 km²) from the central mountain block of the Cape Peninsula, known from fewer than five subpopulations. Not threatened as it occurs within the Table Mountain National Park.

[F] **Stoebe rugulosa** Harv. **Plate 48**

Status: **EN** B1ab(ii,iii,iv,v)
N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Caledon to Albertinia.
Habitat: Alluvial terrace gravels, usually overlying clays, possibly also stony shales.
Rationale: An eastern Overberg endemic (EOO < 5 000 km²), known from five locations. Declining as a result of invasion by alien plants and habitat loss to crop cultivation. More than 70% of its habitat has been lost to wheat cultivation over the past 80 years. The generation length of this species is unknown.

Stoebe schultzii Levyns

Status: **VU** B1ab(ii,iii,iv,v)
D. Raimondo & N.A. Helme

[e]**Distribution:** WC. Gansbaai to De Hoop.
Habitat: Damp coastal flats.
Rationale: EOO 2 996 km². Known from fewer than 10 locations. Declining as a result of crop cultivation, coastal development and invasion by alien plants.

Syncarpha DC.

[F] **Syncarpha chlorochrysum** (DC.) B.Nord. **Plate 47**

Status: **NT** B1ab(ii,iii,iv,v)
D. Raimondo

[e]**Distribution:** WC. Bredasdorp to Still Bay.
Habitat: Limestone hills in fynbos.
Rationale: A limestone endemic (EOO < 2 300 km²) known from 15 locations. A significant proportion of locations fall within De Hoop Nature Reserve and in pristine areas outside the reserve. There is nonetheless continuing decline as a result of coastal development around Struisbaai, Still Bay and Agulhas as well as from alien plant infestations, especially in the Lekkerwater region and around Still Bay.

[F] **Syncarpha dykei** (Bolus) B.Nord.

Status: **Rare**
D. Raimondo

[e]**Distribution:** WC. Skurweberg and Hex River Mountains.
Habitat: Rocky sandstone slopes above 1 600 m. Occurs in rock crevices in shale bands.
Rationale: A range-restricted, high-altitude shale band endemic, known from five sites (EOO < 60 km²). Not threatened.

[F] **Syncarpha lepidopodium** (Bolus) B.Nord.

Status: **VU** D2
D. Raimondo & N.A. Helme

[e]**Distribution:** WC. Franschhoek Mountains.
Habitat: Rocky upper slopes above 1 500 m.
Rationale: Known from a restricted range (EOO < 100 km²) from five locations, potentially threatened by invasive alien plants.

[F] **Syncarpha marlothii** (Schltr.) B.Nord.

Status: **Rare**
D.A. Kamundi† & D. Raimondo

[e]**Distribution:** WC. Kouebokkeveld to Villiersdorp.
Habitat: Sandstone rocks on south-facing slopes, 1 200–1 830 m.
Rationale: A rare, high-altitude habitat specialist, known from five subpopulations, this species has no recorded threats.

[F] **Syncarpha montana** (B.Nord.) B.Nord. **Plate 47**

Status: **Rare**
L. Potter & R.C. Turner

[e]**Distribution:** EC WC. Swartberg and Kammanassie Mountains.
Habitat: Sandstone rocks above 1 600 m.
Rationale: Confined to five sites on high-altitude summits, this species has no recorded threats.

Syncarpha recurvata (L.f.) B.Nord. **Plate 47**

Status: **EN** B1ab(ii,iii,iv,v)
W. Berrington & J.E. Victor

[e]**Distribution:** EC. Port Elizabeth, Uitenhage and Addo.
Habitat: Calcrete pavements.
Rationale: EOO 2 700 km². Known from eight severely fragmented subpopulations. Declining as a result of cement mining, urban expansion and invasion by alien plants. The Coega subpopulation will lose habitat to quarrying as part of the development of the Coega Industrial Zone.

[F] **Syncarpha sordescens** (DC.) B.Nord.

Status: **VU** B1ab(ii,iii,iv,v)
D. Raimondo

[e]**Distribution:** EC. Port Elizabeth to Alexandria.
Habitat: Dunes and sandy slopes.
Rationale: Known from fewer than 10 locations, from a restricted range (EOO 730 km²). Declining because of coastal development and invasive alien plants.

[F] **Syncarpha zeyheri** (Sond.) B.Nord.

Status: **Rare**
D. Raimondo

[e]**Distribution:** WC. Cape Peninsula to Hermanus.
Habitat: Sandstone flats and slopes.
Rationale: A montane species known from eight sites. Not threatened as it occurs only within protected areas: Kogelberg Biosphere Reserve, Table Mountain National Park and Fernkloof Nature Reserve.

Thaminophyllum Harv.

Thaminophyllum latifolium Bond

Status: **Rare**
P.P.J. Herman, J.E. Victor, N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Kleinrivier Mountains.
Habitat: South-facing, stony slopes and along streams.
Rationale: Known from three sites within a tiny range (EOO 11 km²). Occurs in two nature reserves above Hermanus and is not threatened.

Thaminophyllum multiflorum Harv.

Status: **Rare**
N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Hottentots Holland Mountains.
Habitat: Permanent seepages on sandstone.
Rationale: A habitat specialist, known from fewer than 10 sites. It has lost habitat to forestry plantations and dam construction in the past, but these threats have ceased and no significant current or future threats are expected.

Thaminophyllum mundii Harv.

Status: **VU** D2

N.A. Helme & D. Raimondo

e**Distribution:** WC. Kogelberg to Caledon Swartberg.

Habitat: Fynbos, damp sandstone slopes.

Rationale: Known from five locations, this species lost habitat to afforestation in the past and remains potentially threatened by invasive alien plants.

Trichogyne Less.

Trichogyne lerouxiae Beyers

Status: **Rare**

P.P.J. Herman & J.E. Victor

e**Distribution:** NC. Namaqualand, Soebatsfontein and Kookfontein districts.

Habitat: Sandy soil, 150–250 m.

Rationale: Known from two sites within the Namaqua National Park. Not threatened.

Troglophyton Hilliard & B.L.Burtt

Troglophyton acocksianum Hilliard

Status: **Rare**

P.P.J. Herman & J.E. Victor

e**Distribution:** NC. Akkerendam and Hantamsberg Mountain.

Habitat: Base of cliffs.

Rationale: A range-restricted habitat specialist (EOO < 60 km^2), known from two sites and not threatened.

F **Troglophyton elsiae** Hilliard

Status: **Rare**

D. Raimondo & R.C. Turner

e**Distribution:** WC. Cederberg, Bokkeveld Tafelberg in Ceres district, and the Hex River Mountains.

Habitat: Damp, sheltered slopes under rock overhangs, 1 500–2 000 m.

Rationale: A habitat specialist known from fewer than 10 sites. Occurs as small, scattered subpopulations.

Ursinia Gaertn.

F **Ursinia caledonica** (E.Phillips) Prassler

Status: **VU** B1ab(ii,iii)

R.C. Turner

e**Distribution:** WC. Groot Drakenstein to Hottentots Holland Mountains.

Habitat: Damp sandstone slopes, often in seeps and marshes, above 600 m.

Rationale: A range-restricted species (EOO < 150 km^2) known from six locations. There is a continuing decline in habitat as a result of invasive alien pines and forestry plantations.

Ursinia coronopifolia (Less.) N.E.Br.

Status: **Rare**

P.P.J. Herman, J.E. Victor & R.C. Turner

e**Distribution:** WC. Groot Winterhoek and Klein Winterhoek Mountains.

Habitat: Sandstone slopes above 600 m, near streams.

Rationale: A range-restricted habitat specialist (EOO 40 km^2), known from four sites and not threatened.

F **Ursinia dregeana** (DC.) N.E.Br.

Status: **Rare**

D.A. Kamundi† & D. Raimondo

e**Distribution:** NC WC. Bokkeveld Mountains to Gifberg.

Habitat: Sandstone pavement, 500–1 500 m.

Rationale: A range-restricted species (EOO 347 km^2), known from four subpopulations. No recorded threats.

F **Ursinia filipes** (E.Mey. ex DC.) N.E.Br.

Status: **Rare**

D.A. Kamundi† & D. Raimondo

e**Distribution:** WC. Hex River Mountains to Franschhoek.

Habitat: Sandstone slopes along streams, 610–1 065 m.

Rationale: A habitat specialist, recorded from seven subpopulations and not threatened.

F **Ursinia hispida** (DC.) N.E.Br.

Status: **VU** D2

R.C. Turner

e**Distribution:** WC. Swellendam to Riversdale.

Habitat: Sandstone slopes.

Rationale: A Langeberg endemic, occurring at five locations (EOO < 510 km^2, AOO < 20 km^2). Potentially threatened by invasive alien pines and forestry plantations.

F **Ursinia merxmuelleri** Prassler

Status: **Critically Rare**

R.C. Turner & D. Raimondo

e**Distribution:** WC. Hex River Mountains.

Habitat: Sandstone slopes above 1 200 m, in gullies near streams.

Rationale: Known from one herbarium specimen from the Mostertshoek Twins, collected in 1961. Owing to the moist habitat of this species, it is unlikely to be affected by frequent fires, the only potential threat.

F **Ursinia oreogena** Schltr. ex Prassler

Status: **Rare**

R.C. Turner

e**Distribution:** WC. Bain's Kloof to Hottentots Holland Mountains.

Habitat: Sandstone slopes.

Rationale: Occurs in at least four different mountain ranges and four subpopulations have been recorded. All known subpopulations are conserved within nature reserves.

Ursinia pygmaea DC.

Status: **Rare**

D. Raimondo, P.P.J. Herman & J.E. Victor

e**Distribution:** NC WC. Vanrhynsdorp to Kamiesberg.

Habitat: Sandy flats or slopes.

Rationale: Known from fewer than 10 sites, occurs as small, sparse, disjunct subpopulations. Not threatened.

Ursinia subflosculosa (DC.) Prassler

Status: **EN** B1ab(iii)

R.C. Turner & D. Raimondo

e**Distribution:** WC. Clanwilliam and Vanrhynsdorp.

Habitat: Sandstone slopes and sandy soils.

Rationale: Known from four historical locations, probably extinct at one of them. EOO has contracted by at least 30% as a result of wheat and rooibos tea cultivation. One location is threatened by ongoing agricultural expansion. The generation length of this species is not known.

Vellereophyton Hilliard & B.L.Burtt

Vellereophyton felinum Hilliard

Status: **Rare**

P.P.J. Herman & J.E. Victor

e**Distribution:** WC. Swartruggens.

Habitat: Arid fynbos in deep orange sand.
Rationale: Known from only one site but it is likely to be under-collected and to occur at a few more. Not threatened as the area is too arid for agriculture.

Vellereophyton lasianthum (Schltr. & Moeser) Hilliard

Status: **DD**D
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Kouebokkeveld.
Habitat: Arid fynbos on sandstones.
Rationale: Known from the type collection on the farm Klyn Vley (Klein Vlei) collected by Schlechter in the late 1800s. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Vellereophyton pulvinatum Hilliard

Status: **DD**D
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Klawer.
Habitat: Unknown.
Rationale: Known from the type collection near Klawer made by Smith in 1926. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Vernonia Schreb.

Vernonia africana (Sond.) Druce

Status: **EX**
C.R. Scott-Shaw, L. von Staden, P.P.J. Herman & J.E. Victor
[e]**Distribution:** KZN. Durban to Tongaat.
Habitat: Coastal grassland, 50–100 m.
Rationale: Last collected in 1895. Its coastal habitat has been almost entirely transformed by agriculture and urban development. Exhaustive searches of the few remaining degraded grassland fragments in the area failed to relocate any individuals.

Zyrphelis Cass.

Zyrphelis decumbens (Schltr.) G.L.Nesom

Status: **Rare**
P.P.J. Herman & D. Raimondo
[e]**Distribution:** WC. Bain's Kloof.
Habitat: Rocky sandstone slopes.
Rationale: A range-restricted species (EOO < 100 km^2), known from two sites and not threatened.

[F] **Zyrphelis montana** (Schltr.) G.L.Nesom

Status: **Rare**
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Elandskloof to Wemmershoek Mountains.
Habitat: Rocky sandstone slopes.
Rationale: A range-restricted species (EOO < 300 km^2), known from five collections and not threatened.

[F] **Zyrphelis sp. nov.**
Voucher: *Barker 10860* NBG

Status: **VU** D2
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Bredasdorp.
Habitat: Rocky sandstone slopes.
Rationale: Known from two collections. One refers to a rocky area near Elim. A second collection was made in 1971, from the southern slopes of the Bredasdorp Mountains. It is likely that the Elim collection was from the same mountains and that this species is a Bredasdorp Mountains/Soetmuisberg endemic. It is potentially threatened by invading alien plants.

[F] **Zyrphelis sp. nov.**
Voucher: *Esterhuysen 33669* NBG

Status: **Rare**
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Montagu to Keeromsberg and north to the Witteberg Mountains.
Habitat: Arid rocky sandstone slopes.
Rationale: A range-restricted species (EOO 181 km^2) that is not threatened.

[F] **Zyrphelis taxifolia** (L.) Nees

Status: **Rare**
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Cape Peninsula to Hangklip.
Habitat: Damp sandstone slopes.
Rationale: A montane fynbos species known from six sites. Not threatened.

BALANITACEAE

Balanites Delile

[FS] **Balanites maughamii** Sprague

Status: **Declining**
V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya
Distribution: KZN LM MP. Northern KwaZulu-Natal to Mpumalanga and northwards through Mozambique to Tanzania.
Habitat: Open woodland, dry forest, thorn thicket and coastal forest.
Rationale: A large amount of habitat has been lost in northern KwaZulu-Natal and, in the light of bark harvesting for the commercial medicinal plant trade and poor wound recovery, the species is declining and should be monitored.

BALSAMINACEAE

Impatiens L.

Impatiens flanaganiae Hemsl.

Status: **VU** D2
L. von Staden, J.E. Victor & E. Cloete
[e]**Distribution:** EC KZN. Pondoland and southern KwaZulu-Natal.
Habitat: Scarp forest, in leaf litter among large boulders near the base of waterfalls in deep, moist, shaded sandstone gorges.
Rationale: Known from five locations and potentially threatened by harvesting for medicinal use, invasion by alien plants and extraction of water from river systems.

BEGONIACEAE

Begonia L.

Begonia dregei Otto & A.Dietr.

Status: **EN** C2a(i)
V.L. Williams, N.R. Crouch, T. McLellan & L. von Staden
[e]**Distribution:** EC KZN. East London to Durban.
Habitat: Rocky cliffs, steep earth banks and among rocks in forest below 600 m.

Rationale: Population size is estimated to be < 2 500 mature individuals and no single subpopulation is estimated to have more than 250 plants. These estimates are derived from counts of 12 subpopulations at sites across the range, where the maximum subpopulation size was 100. Its caudices are used for traditional medicine and have been occasionally recorded on the KwaZulu-Natal traditional medicine markets. Small subpopulations are declining because of destructive harvesting.

Begonia homonyma Steud.

Status: **EN** C2a(i)

V.L. Williams, N.R. Crouch, T. McLellan & L. von Staden

e**Distribution:** EC KZN. Eastern Cape and KwaZulu-Natal coast, from the Kei River to Stanger and around Pietermaritzburg. Isolated record from the southern foot of the Lebombo Mountains in northern KwaZulu-Natal.

Habitat: Deeply shaded sites on south-facing slopes in forests, rocky sites, 20–900 m.

Rationale: Population size is estimated to be < 2 500 mature individuals and no one subpopulation is estimated to have more than 250 plants. These estimates are derived from counts of plants in nine subpopulations at sites across the range. The maximum recorded number of plants per subpopulation is 50. The species is rare in its forest habitat. Caudices are used for traditional medicine and have been occasionally recorded on the KwaZulu-Natal traditional medicine markets. Small populations are declining as a result of destructive harvesting.

BIGNONIACEAE

Podranea Sprague

F **Podranea ricasoliana** (Tanfani) Sprague

Status: **VU** D2

L. von Staden

e**Distribution:** EC. Port St Johns.

Habitat: Coastal forest margins on shales.

Rationale: A highly localised endemic found in a restricted habitat (forest margins), AOO < 10 km^2. Potentially threatened by habitat degradation from subsistence farming, wood harvesting, invasion by alien plants and a deleterious fire regime. It is locally common, but not formally protected in a reserve.

BORAGINACEAE

Echiostachys Levyns

F **Echiostachys ecklonianus** (H.Buek) Levyns

Status: **EN** B1ab(iii)

N.A. Helme & D. Raimondo

e**Distribution:** WC. Somerset West, Elim flats to Bredasdorp.

Habitat: Fynbos, gravelly or sandy slopes, probably on seasonally wet soils.

Rationale: EOO 2 760 km^2. Known from five locations, all of which are experiencing severe invasion by alien plants.

F **Echiostachys incanus** (Thunb.) Levyns

Status: **VU** A2ac; B1ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

e**Distribution:** WC. Citrusdal to Gordon's Bay.

Habitat: Seasonally damp clay flats, sometimes overlain by sands.

Rationale: EOO 14 900 km^2. This species grows in a very specialised habitat and subpopulations are typically isolated. Agriculture and urban development have led to high levels of habitat loss over the last decade and before, leaving current extant subpopulations on small isolated fragments. Based on the observed habitat loss over the past 10 years and the loss of known historical records from herbaria, we infer that there has been a 30% decline over the past 60 years. Generation length is suspected to be 20 years as the plants have large woody tubers. Loss to urban expansion and agriculture is ongoing.

Echiostachys spicatus (Burm.f.) Levyns

Status: **EN** B1ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

e**Distribution:** WC. St Helena Bay to Somerset West.

Habitat: Seasonally damp sandy flats overlying clays.

Rationale: EOO 1 700 km^2. Known from six severely fragmented subpopulations with ongoing habitat loss to agriculture and urban development. Its habitat is also highly sensitive to invasion by woody and annual alien plants.

Lobostemon Lehm.

Lobostemon belliformis M.H.Buys

Status: **CR** A2c; D

J.H. Vlok, M.H. Buys, N.A. Helme & D. Raimondo

e**Distribution:** WC. Gourits River, Gouriqua.

Habitat: Sandstone koppies.

Rationale: A highly restricted species known from one small sandstone outcrop on the Riversdale Plain. Over 80% of its habitat has been lost to mining since 1980. There are only 22 extant plants. The site is not currently mined but this remains a potential threat. It appears to be a slow-growing species that escapes fire by growing on rocky outcrops and by having thick bark (generation length is estimated to be 40 years).

Lobostemon capitatus (L.) H.Buek

Status: **VU** B1ab(i,ii,iii,iv)

M.H. Buys, N.A. Helme & D. Raimondo

e**Distribution:** WC. Porterville to Bredasdorp.

Habitat: Transition zone between montane fynbos and renosterveld.

Rationale: EOO 9 000 km^2. Known from ± 15 small, severely fragmented subpopulations. Declining as a result of agriculture and urban development, especially in the Durbanville area.

Lobostemon collinus Schltr. ex C.H.Wright

Status: **EN** B1ab(i,ii,iii,iv,v)

M.H. Buys, N.A. Helme & D. Raimondo

e**Distribution:** WC. Bredasdorp to Elim.

Habitat: Sandy coastal flats.

Rationale: EOO 1 244 km^2. Known from five locations. Ploughing of the habitat of this species for wheat and proteas has been severe in the past and is ongoing in the Bredasdorp region. It is also threatened by invasive alien plants, and around Elim it is threatened by the expansion of a road (the only subpopulation in the area occurs on a road verge).

F **Lobostemon daltonii** M.H.Buys

Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v)

M.H. Buys, N.A. Helme & D. Raimondo

e**Distribution:** WC. Malgas to Cape Infanta.

Habitat: Fynbos-renosterveld ecotone in loamy soils.

Rationale: A highly range-restricted species (EOO 20 km^2) known from four locations. Continuing declines as a result of agricultural expansion, development of holiday homes and severe infestations of invasive alien acacias.

Lobostemon gracilis Levyns

Status: **NT** D2

M.H. Buys, N.A. Helme & D. Raimondo

e**Distribution:** WC. Worcester to Robertson and Jonaskop.

Habitat: Transitional zones between montane fynbos and mountain renosterveld, mainly in disturbed habitats.

Rationale: Known from seven locations and potentially threatened by vineyard expansion.

Lobostemon hottentoticus Levyns

Status: **EN** B1ab(ii,iii,iv,v)

M.H. Buys, N.A. Helme, D. Raimondo & J.E. Victor

e**Distribution:** WC. Somerset West to Gordon's Bay.

Habitat: Stony lower slopes.

Rationale: A range-restricted species (EOO 195 km^2), known from seven locations, three of which have been lost to urban development. This remains the main threat to this species but it is also threatened by expanding agriculture and invasion by alien plants.

Lobostemon lucidus (Lehm.) H.Buek

Status: **VU** B1ab(i,iii,v); C2a(i)

M.H. Buys, N.A. Helme & D. Raimondo

e**Distribution:** WC. Agulhas to Potberg.

Habitat: Sandy soils, on transitions between sands and clays.

Rationale: EOO 1 067 km^2. Known from seven locations. This species grows in areas with high densities of invasive alien plants and aliens have been observed to affect subpopulations close to Napier and Bredasdorp. Grazing and trampling by livestock threaten populations around Napier and the species has also lost habitat to pasture cultivation throughout its range.

Lobostemon muirii Levyns

Status: **Rare**

M.H. Buys, N.A. Helme & D. Raimondo

e**Distribution:** WC. Langeberg Mountains, between Phesantefontein and Witboois River.

Habitat: Sandy, north-facing mountain slopes.

Rationale: A range-restricted Langeberg endemic (EOO $<$ 500 km^2) known from six sites. Not threatened.

Lobostemon regulareflorus (Ker Gawl.) M.H.Buys

Status: **VU** D2

M.H. Buys, N.A. Helme & D. Raimondo

e**Distribution:** WC. Stellenbosch and Du Toit's Kloof Mountains.

Habitat: Mainly in moist, shaded kloofs, but not directly in water.

Rationale: Known from fewer than five locations. It has lost habitat to vineyards and invading alien plants and they remain potential threats.

Lobostemon sanguineus Schltr.

Status: **VU** D1+2

M.H. Buys, N.A. Helme, D. Raimondo & F. Daniels

e**Distribution:** WC. Bredasdorp.

Habitat: Confined to relatively sandy soils on slopes or hilltops.

Rationale: EOO 700 km^2. Known from four sites. It has lost habitat to agriculture. Potentially threatened by invading alien plants.

BRASSICACEAE

Cycloptychis E.Mey. ex Sond.

F **Cycloptychis virgata** (Thunb.) E.Mey. ex Sond.

Status: **EN** A2ac; B1ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

e**Distribution:** WC. Bokkeveld plateau to northern Cederberg, including Gifberg and Piketberg.

Habitat: Deep sandy flats.

Rationale: It has lost 50% of its AOO over 30 years, which is less than three generations (generation length 20 years). This loss is ongoing because of rapid expansion of rooibos tea cultivation, which targets its habitat of deep sands.

Heliophila L.

Heliophila affinis Sond.

Status: **DD**D

D. Raimondo & J.E. Victor

e**Distribution:** NC. Namaqualand, Kamiesberg.

Habitat: Granitic soils.

Rationale: A Kamiesberg endemic, last collected in 1941. May have been affected by overgrazing but we do not know the extent to which this annual species is vulnerable to grazing.

Heliophila arenaria Sond. var. **agtertuinensis** (O.E.Schulz) Marais

Status: **DD**D

D. Raimondo & R.C. Turner

e**Distribution:** WC. Clanwilliam.

Habitat: Unknown.

Rationale: Known from three sites in the northern Olifants River Valley, last collected in 1941. No accurate habitat information is available. Likely to be severely threatened by citrus and rooibos tea cultivation.

Heliophila cedarbergensis Marais

Status: **Rare**

D. Raimondo

e**Distribution:** WC. Cederberg.

Habitat: Sandstone ledges, 1 200–1 650 m.

Rationale: Known from three collections in the Central Cederberg (Wolfberg, Langeberg and Tafelberg). Occurs in fire-protected habitats: sandstone ledges and rocks in shaded habitats.

Heliophila cinerea Marais

Status: **Rare**

J.E. Victor & R.C. Turner

e**Distribution:** WC. Cape Peninsula.

Habitat: Sandy coastal slopes.

Rationale: Known from four sites on the southern tip of the Cape Peninsula. Well conserved within Table Mountain National Park.

Heliophila cornellsbergia B.J.Pienaar & Nicholas

Status: **Rare**

D. Raimondo

e**Distribution:** NC. Richtersveld.

Habitat: Stony places in well-drained, clay loam soils.

Rationale: Endemic to peaks of the Richtersveld, known from one site. Not threatened because of the inaccessibility of its habitat.

Heliophila cuneata Marais

Status: **Critically Rare**

D. Raimondo

[e]**Distribution:** WC. Jonkershoek Valley.

Habitat: Forest fringes on boulders.

Rationale: An extremely restricted distribution, known from one kloof in the Jonkershoek Valley. This area falls within a protected area and the species is not threatened.

[FS] **Heliophila elata** Sond.

Status: **EN** A2c

N.A. Helme & D. Raimondo

[e]**Distribution:** NC WC. Bokkeveld Mountains to Worcester.

Habitat: Sandy flats.

Rationale: EOO 12 000 km^2. Known from 10 subpopulations from the sandveld, Olifants River Valley and the Bokkeveld Escarpment. Threatened by the ongoing loss of its deep sand habitat to rooibos and potato cultivation, with 70% lost over the past 20 years. Generation length of this long-lived, woody perennial species is at least 15 years.

[F] **Heliophila ephemera** P.A.Bean

Status: **VU** D1

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Swartberg Mountains.

Habitat: Montane fynbos on upper sandstone slopes.

Rationale: Known only from one subpopulation, estimated by Bean (1990) to comprise 200 plants. Conservatively, we suspect that there are less than 1 000 plants.

Heliophila filicaulis Marais

Status: **VU** D2

J.E. Victor & R.C. Turner

[e]**Distribution:** WC. Hex River Mountains.

Habitat: Southern, southeastern and eastern aspects on rocky, upper slopes.

Rationale: EOO < 21 km^2. Known from two locations. Faces a potential threat from the combined effect of frequent fires and drought.

[F] **Heliophila katbergensis** Marais

Status: **DD**

D.A. Kamundi† & J.E. Victor

[e]**Distribution:** EC. Katberg.

Habitat: Rocky slopes, 1 650–1 850 m.

Rationale: Known from one collection made from the top of Katberg by Hutchinson in 1928. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Heliophila leptophylla Schltr.

Status: **VU** D2

D. Raimondo

[e]**Distribution:** WC. Vanrhynsdorp.

Habitat: Red sands.

Rationale: Known from the sandy soils associated with the Sout River on the Knersvlakte. Potentially threatened by agriculture (vineyards, onions and tomato cultivation).

[F] **Heliophila linearis** (Thunb.) DC. var. **reticulata** (Eckl. & Zeyh.) Marais

Status: **VU** B1ab(ii,iii,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Hawston to Still Bay.

Habitat: Coastal sands.

Rationale: EOO < 3 500 km^2. Known from eight locations, most of which are declining as a result of coastal development and invasive alien plants.

[F] **Heliophila promontorii** Marais

Status: **VU** D2

D. Raimondo, N.A. Helme & D.A. Kamundi†

[e]**Distribution:** WC. Cape Peninsula.

Habitat: Sand dunes or sandy flats.

Rationale: A minimum of 30% of subpopulations have gone extinct as a result of urban expansion on the Cape Flats. The remaining subpopulations are within the Table Mountain National Park, but occur in areas with invasive alien plants. Constant management by the South African National Parks staff has halted decline of habitat, but should this management stop, declines will resume. Extant at three, possibly four locations.

Heliophila ramosissima O.E.Schulz

Status: **DD**

J.E. Victor, L. Potter & R.C. Turner

[e]**Distribution:** WC. Houwhoek Mountains.

Habitat: Unknown.

Rationale: Known only from old collections from the Hottentots Holland Mountains. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Heliophila rimicola Marais

Status: **Rare**

J.E. Victor & R.C. Turner

[e]**Distribution:** WC. Gamka Mountain, Seweweekspoort and Towerkop.

Habitat: Moist crevices on rock faces, 1 800–2 100 m.

Rationale: A rare habitat specialist known from three subpopulations. The range suggests that additional subpopulations may exist, especially in the Groot Swartberg. Not threatened.

Heliophila schulzii Marais

Status: **Rare**

J.E. Victor

[e]**Distribution:** NC. Namaqualand, Kamiesberg.

Habitat: Sandy soil derived from granite.

Rationale: A range-restricted species (EOO < 500 km^2). It can survive in slightly disturbed areas and is therefore not considered threatened.

Heliophila tabularis Wolley-Dod

Status: **VU** D2

D. Raimondo & R.C. Turner

[e]**Distribution:** WC. Cape Peninsula.

Habitat: Sandstone mountain slopes.

Rationale: Last collected in 1970. There is one old collection with a vague location and one collection from Froggy Pond (near Simon's Town). The latter subpopulation is potentially threatened by expansion of housing and by invading alien plants.

Heliophila tricuspidata Schltr.

Status: **Rare**

D. Raimondo & R.C. Turner

[e]**Distribution:** WC. Riviersonderend and Hottentots Holland Mountains.

Habitat: Damp rock crevices.

Rationale: A range-restricted habitat specialist (EOO 420 km^2) known from fewer than 10 sites, not threatened.

Lepidium L.

[F] **Lepidium mossii** Thell.
Status: **DD**D
J.E. Victor & M.F. Pfab
[e]**Distribution:** FS G. Nancefield and Free State.
Habitat: Unknown.
Rationale: Known from two disjunct collections, one from Gauteng and another from the Free State. The subpopulation in Gauteng is probably extinct, while there are probably no serious threats to the subpopulation in the Free State. Not enough is known about the distribution, specific habitat or current population status of this species to determine its status.

Silicularia Compton

[F] **Silicularia polygaloides** (Schltr.) Marais
Status: **Rare**
D.A. Kamundi† & J.E. Victor
[e]**Distribution:** WC. Kouebokkeveld and Swartruggens Mountains.
Habitat: Arid sandstone slope, 950–1 500 m.
Rationale: A range-restricted species (EOO < 500 km^2), known from fewer than five subpopulations. No recorded threats.

Thlaspeocarpa C.A.Sm.

Thlaspeocarpa namaquensis Marais
Status: **Rare**
D. Raimondo
[e]**Distribution:** NC. Steinkopf north to the Richtersveld.
Habitat: Quartzitic hillsides.
Rationale: Known from three collections. Not threatened because of the inaccessibility of its habitat.

BRUNIACEAE

Audouinia Brongn.

Audouinia capitata (L.) Brongn. **Plate 50**
Status: **Rare**
N.A. Helme, R.C. Turner & D. Raimondo
[e]**Distribution:** WC. Cape Point to Caledon.
Habitat: Rocky flats and slopes.
Rationale: Occurs as widely scattered, small (often fewer than 10 individuals) subpopulations. At least 15 subpopulations are known. No recorded threats.

Berzelia Brongn.

[F] **Berzelia burchellii** Dummer
Status: **VU** B1ab(ii,iii,iv,v)
R.C. Turner
[e]**Distribution:** WC. Langeberg Mountains at Riversdale.
Habitat: Lower sandstone slopes, in marshy places.
Rationale: Although this plant is common on damp, south-facing, middle and upper slopes on the Perdeberg and above Garcia State Forest plantation, it occurs in a very restricted area (EOO 138 km^2). Furthermore, it has potentially lost one historical location as a result of agriculture and is subject to an ongoing threat from forestry plantations, invasive alien pines and the invasive alien *Acacia mearnsii* at lower altitudes.

Berzelia cordifolia Schltdl.
Status: **VU** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)
R.C. Turner
[e]**Distribution:** WC. Potberg in the De Hoop Nature Reserve to the mouth of the Breede River at Cape Infanta.
Habitat: Sandstone and limestone slopes.
Rationale: EOO 150 km^2. Occurs at eight locations. Threatened by invading alien plants and coastal housing development.

Berzelia dregeana Colozza
Status: **Rare**
F. Daniels & R.C. Turner
[e]**Distribution:** WC. Kogelberg to Betty's Bay.
Habitat: Sandstone slopes.
Rationale: A range-restricted species (EOO 210 km^2), known from five sites. Well conserved in the Kogelberg Biosphere Reserve.

Berzelia ecklonii Pillans
Status: **Rare**
F. Daniels & R.C. Turner
[e]**Distribution:** WC. Kogelberg to Kleinmond.
Habitat: Marshy sandstone slopes.
Rationale: A range-restricted species that can be locally common within its range (EOO 200 km^2). Well conserved within the Kogelberg Biosphere Reserve.

[F] **Berzelia galpinii** Pillans
Status: **Rare**
R.C. Turner
[e]**Distribution:** WC. Langeberg Mountains.
Habitat: Damp areas on upper, north-facing sandstone slopes.
Rationale: Frequently in extensive stands in high-altitude wetlands between Suurbraak Mountain and Garcia's Pass, Langeberg Mountains, but still a range-restricted species (EOO 300 km^2) known from fewer than 10 subpopulations. Not threatened.

[F] **Berzelia incurva** Pillans **Plate 50**
Status: **VU** B1ab(iii)
R.C. Turner
[e]**Distribution:** WC. Babilonstoring to Stanford.
Habitat: Sandstone.
Rationale: EOO 80 km^2. Known from nine locations. Severely threatened by encroachment from invasive alien pines and hakeas in the Babilonstoring Mountains as well as in the Kleinrivier Mountains above Stanford.

[F] **Berzelia rubra** Schltdl. **Plate 50**
Status: **VU** D2
R.C. Turner & D. Raimondo
[e]**Distribution:** WC. Kleinrivier Mountains.
Habitat: Mainly seepage areas and streambanks.
Rationale: Known from four locations with an EOO < 10 km^2. Potentially threatened by encroachment from invasive aliens pines and hakeas.

Linconia L.

[F] **Linconia alopecuroidea** L. **Plate 50**
Status: **EN** D
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Langeberg to Gourits River.

Habitat: Peaty, sandy soils on middle to upper mountain slopes, 700–1 000 m.
Rationale: Known from four subpopulations. We strongly suspect that there are less than 250 mature individuals, because two of the four subpopulations have specimen collecting notes that say 'very rare' and one that says 'only one plant'. It is a paleoendemic resprouter that typically has tiny subpopulations (usually less than 20 plants in each).

[F] **Linconia ericoides** Oliv.

Status: **CR** D
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Riviersonderend Mountains.
Habitat: Southwest-facing rocky outcrops, 500 m.
Rationale: Known from one subpopulation accurately counted by E.G.H. Oliver (Ericaceae and Bruniaceae expert), who also searched for additional populations but found none. The population consists of 25 mature individuals.

Lonchostoma Wikstr.

Lonchostoma esterhuyseniae Strid

Status: **EN** D
R.C. Turner & D. Raimondo
[e]**Distribution:** WC. Riviersonderend Mountains, Pilaarkop.
Habitat: Wet sandstone rocks above 1 500 m.
Rationale: This species is known from only one subpopulation with less than 100 mature individuals.

[F] **Lonchostoma myrtoides** (Vahl) Pillans

Status: **VU** D1
R.C. Turner & D. Raimondo
[e]**Distribution:** WC. Ceres.
Habitat: Montane marshes.
Rationale: Known from four locations. The population consists of less than 1 000 mature individuals. It has lost 30% of the population to deciduous fruit cultivation.

Lonchostoma purpureum Pillans

Status: **Rare**
R.C. Turner & D. Raimondo
[e]**Distribution:** WC. Bain's Kloof to Kogelberg.
Habitat: Moist areas, often on or below shale bands or among rocks, ranging from summits to valleys and on various aspects, 1 160–2 000 m.
Rationale: A range-restricted species (EOO 305 km^2), known from fewer than 10 subpopulations. Not threatened.

Mniothamnea Nied.

[F] **Mniothamnea bullata** Schltr.

Status: **CR** D
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Langeberg Mountains, Suurbraak to Lemoenshoek Peak.
Habitat: Steep, rocky, south-facing slopes at high altitudes, above 1 400 m.
Rationale: A very rare species known only from three high-altitude peaks. It is a slow-growing, reseeding species with tiny subpopulations (fewer than 10 plants in each). Potentially threatened by frequent fires.

[F] **Mniothamnea callunoides** (Oliv.) Nied.

Status: **VU** D2
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Langeberg Mountains.
Habitat: South-facing, peaty seepages above 700 m.
Rationale: Known from fewer than five locations and potentially threatened by invasive alien pines.

Nebelia Neck. ex Sweet

[F] **Nebelia laevis** (E.Mey.) Kuntze

Status: **VU** D2
D. Raimondo & R.C. Turner
[e]**Distribution:** WC. Riviersonderend Mountains.
Habitat: Rocky upper mountain slopes.
Rationale: A highly range-restricted species (EOO < 10 km^2) known from two locations. Potentially threatened by invading alien pines and frequent fires.

[F] **Nebelia sphaerocephala** (Sond.) Kuntze **Plate 50**

Status: **Rare**
D. Raimondo & R.C. Turner
[e]**Distribution:** WC. Hottentots Holland, Wemmershoek and the Bain's Kloof Mountains.
Habitat: Sandstone slopes, typically above 1 000 m.
Rationale: Localised to high alpine areas (EOO 200 km^2), occurring in naturally disjunct subpopulations. No recorded threats.

[F] **Nebelia stokoei** Pillans

Status: **Rare**
D. Raimondo & R.C. Turner
[e]**Distribution:** WC. Kouebokkeveld and Hex River Mountains.
Habitat: Marshes at high altitude, on shale bands.
Rationale: Known from three subpopulations, restricted to shale bands (EOO < 50 km^2). No significant threats recorded.

Pseudobaeckea Nied.

Pseudobaeckea stokoei Pillans

Status: **DD**D
F. Daniels
[e]**Distribution:** WC. Kleinrivier Mountains.
Habitat: Sandstone slopes near streams.
Rationale: Known from one collection, made in 1920. It has not been relocated despite occurring in a well explored area. Not enough is known about the current population status of this species to determine its status.

Raspalia Brongn.

Raspalia barnardii Pillans

Status: **EN** D
N.A. Helme & R.C. Turner
[e]**Distribution:** WC. Langeberg, Goedgeloof Peak.
Habitat: Sandstone slopes, damp peaty soils at high altitudes, 2 000 m.
Rationale: Known from only one site and may have low numbers of individuals. R.C. Turner (Ericaceae and Bruniaceae expert) observed only five plants, but did not search extensively. We therefore suspect that there are less than 250 individuals.

[F] **Raspalia oblongifolia** Pillans

Status: **Rare**
D.A. Kamundi† & D. Raimondo
[e]**Distribution:** WC. Waaihoek and Hex River Mountains.
Habitat: Among rocks at high altitude, 1 200–1 900 m.
Rationale: A range-restricted species (EOO 210 km^2), known from seven subpopulations. No known threats.

Raspalia schlechteri Dummer

Status: **Rare**

N.A. Helme & J.E. Victor

[e]**Distribution:** WC. Langeberg Mountains.

Habitat: Rocky streams and damp areas at high altitude.

Rationale: A range-restricted habitat specialist (EOO < 500 km^2) known from only two subpopulations and not threatened.

Raspalia trigyna (Schltr.) Dummer **Plate 50**

Status: **CR** B1ab(v)+2ab(v); C2a(i); D

A.T.D. Abbott, L. von Staden & J.E. Victor

[e]**Distribution:** EC KZN. Formerly from Murchison district to Magwa Gorge, now only Umtamvuna Nature Reserve and Mkambati.

Habitat: Pondoland, grassland on sandstone, seasonally moist areas in open grassland along streambanks, generally in sites protected from fire, 350–450 m.

Rationale: This species has been declining since the early 1900s because of habitat destruction and reached critically low numbers by the 1960s. The recent discovery of one healthy breeding population brought hope that the species might recover, but *ex situ* plants introduced near isolated wild individuals have yet to prove able to boost the reproductive output of these subpopulations. The single reproductively active subpopulation of ± 12 mature individuals is not protected and may still rapidly decline if the habitat were to be threatened in any way. It has an EOO of 100 km^2, an AOO of less than 0.1 km^2 and occurs at three locations. Subpopulations are severely fragmented. There are three remaining wild subpopulations, the largest consisting of 12 mature individuals, the other having only two and one plant respectively. The total population of mature individuals is 15.

Staavia Dahl

Staavia brownii Dummer **Plate 50**

Status: **VU** D1+2

D. Raimondo

[e]**Distribution:** WC. Kogelberg.

Habitat: Lower sandstone slopes in river valleys.

Rationale: Known from three subpopulations within the Kogelberg Biosphere Reserve. Two subpopulations have not been recorded in over 50 years and may be extinct. One subpopulation, found in 1997, has 400 plants and is not experiencing any current decline, but it is potentially threatened by too frequent fires.

Staavia dodii Bolus **Plate 50**

Status: **Rare**

F. Daniels, N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Southern Cape Peninsula.

Habitat: Rocky sandstone flats.

Rationale: A highly range-restricted endemic known from two sites (EOO 25 km^2). Occurs within the Cape Point section of the Table Mountain National Park and is not threatened.

Staavia glutinosa (L.) Dahl **Plate 50**

Status: **Rare**

D. Raimondo, N.A. Helme & F. Daniels

[e]**Distribution:** WC. Cape Peninsula.

Habitat: South- and east-facing sandy slopes, often in slightly damp places, above 700 m.

Rationale: This Table Mountain endemic has a highly restricted range (EOO < 70 km^2) and is known from fewer than five sites. It occurs within the Table Mountain National Park and is not threatened.

Staavia phylicoides Pillans

Status: **EN** D

D. Raimondo & E. Marinus

[e]**Distribution:** NC WC. Bokkeveld Mountains.

Habitat: Moist south-facing overhangs on sandstone plateaus, above 800 m.

Rationale: The known population consists of five plants. Moist, south-facing overhangs above 800 m within the range of this species are exceptionally rare, and it is highly unlikely that there are more than 250 individuals in the wild. Climate change could lead to the drying out of its moist habitat.

Staavia verticillata (L.f.) Pillans

Status: **Rare**

D. Raimondo & N.A. Helme

[e]**Distribution:** WC. Witteberg Mountains west of Slanghoek.

Habitat: Rocky sandstone slopes.

Rationale: EOO 240 km^2. This is a rare alpine species that occurs at altitudes above 1 000 m and is not threatened.

Staavia zeyheri Sond.

Status: **CR** D

J.E. Victor

[e]**Distribution:** WC. Riviersonderend Mountains.

Habitat: Southwest-facing, rocky sandstone slopes.

Rationale: Known from one site with a very small subpopulation, estimated to consist of less than 50 mature individuals.

Thamnea Sol. ex Brongn.

Thamnea depressa Oliv.

Status: **EX**

D. Raimondo & J.E. Victor

[e]**Distribution:** WC. Genadendal.

Habitat: Rocky outcrops.

Rationale: Known from Burchell's 1815 collection from Genadendal. The collecting site was converted to a pine plantation and the surrounding vegetation is severely infested with alien plants. This species is therefore considered extinct.

Thamnea hirtella Oliv.

Status: **Rare**

D. Raimondo & N.A. Helme

[e]**Distribution:** WC. Witzenberg Mountains.

Habitat: Sandstone rocks, well-drained stony ridges at high altitudes.

Rationale: EOO 280 km^2. Known only from four subpopulations. No recorded threats.

[F] **Thamnea massoniana** Dummer

Status: **VU** D1

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Du Toit's Kloof to Hottentots Holland Mountains.

Habitat: Rocky outcrops.

Rationale: A very rare, resprouting alpine species that occurs only as tiny subpopulations, each consisting of 20 mature individuals. There are only six known subpopulations and it is highly unlikely that more than 20 subpopulations exist. We therefore suspect that there are less than 1 000 mature individuals in the population.

[F] **Thamnea thesioides** Dummer

Status: **Rare**
D. Raimondo

[e]**Distribution:** WC. Ceres district, Michell's Pass and Mostertshoek Twins.
Habitat: Rocky summits at high altitudes.
Rationale: A range-restricted species (EOO < 500 km^2), known from fewer than five subpopulations. No recorded threats.

Tittmannia Brongn.

[F] **Tittmannia esterhuyseniae** Powrie

Status: **VU** D2
D. Raimondo & R.C. Turner

[e]**Distribution:** WC. Worcester.
Habitat: Shale soil on south-facing slopes below sandstone cliffs.
Rationale: A rare montane resprouter, known from two locations. It may have very low numbers, but subpopulations have to be surveyed before this plant can be listed under Criterion D. There is a severe pine infestation close to one of the known subpopulations, posing a potential threat to this species.

[F] **Tittmannia laxa** (Thunb.) C.Presl var. **langebergensis** Pillans

Status: **Rare**
D. Raimondo

[e]**Distribution:** WC. Langeberg Mountains near Montagu.
Habitat: Mountain summits.
Rationale: Known from three sites (EOO < 100 km^2). This taxon naturally has very low abundance and typically only a handful of individuals are seen.

CAMPANULACEAE

Merciera A.DC.

[F] **Merciera azurea** Schltr.

Status: **EN** B1ab(ii,iii,iv,v)
D. Raimondo, C.N. Cupido & F. Daniels

[e]**Distribution:** WC. Sir Lowry's Pass to Bredasdorp.
Habitat: Sandy or stony soils, on low-altitude slopes, 100–650 m.
Rationale: EOO 2 600 km^2. This species has lost half of its eight historical locations to crop cultivation and urban development. The remaining four locations are threatened by ongoing expansion of coastal housing and invasion by alien plants.

[F] **Merciera brevifolia** A.DC.

Status: **EN** B1ab(iii,v)
D. Raimondo, C.N. Cupido & F. Daniels

[e]**Distribution:** WC. Houwhoek to Caledon.
Habitat: Stony, sandy soils on sandstone.
Rationale: EOO 503 km^2. Possibly extant at five locations, most of which are threatened by invasive alien plants.

[F] **Merciera leptoloba** A.DC. **Plate 51**

Status: **NT** B1ab(ii,iii,iv,v)
C.N. Cupido & F. Daniels

[e]**Distribution:** WC. Kogelberg to Bredasdorp.
Habitat: Sandy or stony flats and hills derived from Table Mountain Sandstone.
Rationale: EOO 2 500 km^2. Known from 10–15 locations. Declining as a result of urban expansion, invasion by alien plants and crop cultivation.

[F] **Merciera tenuifolia** (L.f.) A.DC. var. **tenuifolia** **Plate 51**

Status: **VU** D2
C.N. Cupido, F. Daniels & D. Raimondo

[e]**Distribution:** WC. Kogelberg to Bot River.
Habitat: Fynbos, on sandstone, 110–600 m.
Rationale: EOO 125 km^2. Known from four locations. This taxon has lost habitat to commercial forestry plantations in the past and faces potential threats from invasive alien plants and a deleterious fire regime.

[F] **Merciera tetraloba** C.N.Cupido **Plate 51**

Status: **EN** B1ab(ii,iii,iv,v)
C.N. Cupido, D. Raimondo & F. Daniels

[e]**Distribution:** WC. Malmesbury to Stellenbosch and Gordon's Bay.
Habitat: Clay soils on shale, 60 m.
Rationale: EOO 2 547 km^2. Known from four extant subpopulations. It has lost large areas of habitat to urban expansion and viticulture. Subpopulations are highly fragmented and inadequately managed, with a continuing decline in habitat quality and habitat loss taking place as a result of ongoing urban development.

Prismatocarpus L'Hér.

[F] **Prismatocarpus altiflorus** L'Hér.

Status: **EN** B1ab(ii,iii,iv,v)
R.C. Turner & D. Raimondo

[e]**Distribution:** WC. Cederberg and Kouebokkeveld Mountains.
Habitat: Sandy soils at low altitudes.
Rationale: EOO 1 800 km^2. Known from fewer than five locations. Historical locations in the Cederberg and Kouebokkeveld are from valley floors, which have been heavily affected by agriculture (orchards). Two locations in particular (Grootfontein and Onderboskloof) are likely to have been transformed over the past 25 years. Loss to crop cultivation is ongoing throughout its range.

[F] **Prismatocarpus campanuloides** (L.f.) Sond. var. **dentatus** Adamson

Status: **DD**
R.C. Turner & D.A. Kamundi†

[e]**Distribution:** WC. Riviersonderend Mountains near Genadendal.
Habitat: Unknown.
Rationale: Known from two very old collections from the Genadendal area, not collected for 80 years. Not enough is known about the distribution, habitat or population status of this taxon to determine its status.

[F] **Prismatocarpus cliffortioides** Adamson **Plate 51**

Status: **EN** B1ab(ii,iii)
R.C. Turner

[e]**Distribution:** WC. Langeberg Mountains.
Habitat: Stony areas, often shale slopes.
Rationale: EOO 40 km^2. Known from two locations. Declining because of agriculture, invasion by alien plants and burning for grazing.

Prismatocarpus cordifolius Adamson

Status: **Rare**
C.N. Cupido, J.E. Victor & R.C. Turner

[e]**Distribution:** WC. Betty's Bay.
Habitat: Seep areas close to streams.

Plate 50



C. Paterson-Jones

Raspalia trigyna CR



R.C. Turner

Staavia dodii Rare



C. Paterson-Jones

Linconia alopecuroidea EN



R.C. Turner

Berzelia incurva VU



C. Paterson-Jones

Nebelia sphaerocephala Rare



R.C. Turner

Staavia glutinosa Rare



R.C. Turner

Berzelia rubra VU



C. Paterson-Jones

Audouinia capitata Rare



C. Paterson-Jones

Staavia brownii VU

Plate 51



C. Paterson-Jones

Prismatocarpus spinosus Rare



J.H. Vlok

Prismatocarpus rogersii NT



J.H. Vlok

Prismatocarpus cliffortioides EN



C. Cupido

Merciera tetraloba EN



C. Cupido

Merciera leptoloba NT



N.A. Helme

Roella goodiana VU



C. Paterson-Jones

Merciera tenuifolia VU

Rationale: A range-restricted species (EOO 60 km²), well conserved in the Kogelberg Biosphere Reserve. Infrequently collected as it flowers only after fire.

Prismatocarpus decurrens Adamson

Status: **VU** D1+2

R.C. Turner & D. Raimondo

eDistribution: WC. Cederberg Mountains.

Habitat: Sandstone slopes above 1 000 m.

Rationale: A high-alpine, range-restricted species (EOO 45 km²), occurring in 3–5 small subpopulations. We suspect that there are less than 1 000 individuals in the population. This species is a slow-growing reseeder potentially threatened by frequent fires.

Prismatocarpus fastigiatus C.Presl ex A.DC.

Status: **DD**D

D. Raimondo & R.C. Turner

eDistribution: WC. Bredasdorp.

Habitat: Unknown.

Rationale: Known from the type, collected in the 1800s at 'Uienvallei', apparently in the Caledon–Bredasdorp area. We have been unable to trace this site and therefore do not know whether this species is threatened or not.

Prismatocarpus implicatus Adamson

Status: **Rare**

D. Raimondo & R.C. Turner

eDistribution: WC. Groot Winterhoek, Hex River and Hottentots Holland Mountains.

Habitat: Ravines and steep mountain slopes.

Rationale: Known from four subpopulations but a few more likely in unexplored ravines within its range. A rare species restricted to a very specific habitat, but not threatened.

[F] **Prismatocarpus lasiophyllus** Adamson

Status: **Rare**

R.C. Turner

eDistribution: WC. Langeberg Mountains.

Habitat: Sheltered sandstone crevices.

Rationale: Localised on two peaks of the Langeberg Mountains (EOO 70 km²). Not threatened.

Prismatocarpus lycioides Adamson

Status: **DD**D

C.N. Cupido, F. Daniels & D. Raimondo

eDistribution: WC. Hills near Worcester.

Habitat: Foothills of dry, north-facing sandstone slopes.

Rationale: Known from Hammanshof near Worcester, but not collected over the last 60 years. Not enough is known about the current population status to determine its status, but it is potentially threatened by invasive alien plants and crop cultivation.

[F] **Prismatocarpus lycopodioides** A.DC. var. **hispidus** Adamson

Status: **Rare**

D.A. Kamundi† & D. Raimondo

eDistribution: WC. Wemmershoek Mountains.

Habitat: Sandstone slopes on sand between rocks.

Rationale: A range-restricted taxon (EOO < 10 km²) known from two subpopulations. No recorded threats.

Prismatocarpus pauciflorus Adamson

Status: **VU** D2

R.C. Turner

eDistribution: WC. Northern Cederberg.

Habitat: Sandstone slopes, on rocks, 1 000–1 300 m.

Rationale: Although this species occurs in the Cederberg Wilderness Area, there are only two known locations (EOO 64 km²) and it is potentially threatened by frequent fires and climate change.

Prismatocarpus pilosus Adamson

Status: **DD**D

R.C. Turner & D. Raimondo

eDistribution: WC. Kouebokkeveld.

Habitat: Rocky mountain slopes.

Rationale: Known from three historical collections but not collected over the last 50 years. Not enough is known about the current population status to determine its status. Parts of the Kouebokkeveld Mountains have burnt three times within the past 10 years and this could be causing a decline to the population.

[F] **Prismatocarpus rogersii** Fourc. **Plate 51**

Status: **NT** B1ab(iii)

J.H. Vlok, R.C. Turner & D. Raimondo

eDistribution: WC. Outeniqua Mountains, between Robinson Pass and Montagu Pass.

Habitat: Sheltered sandstone slopes.

Rationale: Outeniqua endemic (EOO 150 km²) that occurs in an area owned and managed by two agencies: Cape Nature and Mountain to Ocean Forestry, with different fire management (including block burning) and invasive alien plant-clearing practices. Based on different management units, we estimate that there are 10–15 locations. There is a continuing decline of habitat from invading alien pines, especially in the central parts of the range.

Prismatocarpus spinosus Adamson **Plate 51**

Status: **Rare**

C.N. Cupido, J.E. Victor & R.C. Turner

eDistribution: WC. Potberg.

Habitat: Sandstone slopes.

Rationale: Known from three locations (EOO < 60 km²). Not threatened.

Rhigiophyllum Hochst.

Rhigiophyllum squarrosum Hochst.

Status: **VU** B1ab(i,ii,iii,iv,v)

N.A. Helme & D. Raimondo

eDistribution: WC. Akkedisberg and Bredasdorp Mountains.

Habitat: Damp sandstone slopes, 200–350 m.

Rationale: EOO 516 km². Known from 7–10 locations. Declining as a result of invasive alien plants and viticulture.

Roella L.

[F] **Roella arenaria** Schltr.

Status: **VU** B1ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

eDistribution: WC. Malmesbury to Bredasdorp.

Habitat: Sandy flats and low slopes.

Rationale: An Agulhas Plain and Overberg endemic (EOO 700 km²), known from fewer than 10 locations. Declining as a result of encroachment from invasive alien acacias, sand mining, urban expansion and agriculture (proteas and vineyard cultivation).

[F] **Roella decurrens** L'Hér.

Status: **VU** D2

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Cape Peninsula.

Habitat: Wooded slopes.

Rationale: Endemic to the eastern slopes of Table Mountain, known from fewer than five locations. Potentially threatened by a lack of fire and invasive alien plants.

Roella goodiana Adamson **Plate 51**

Status: **VU** D2

W.G. Welman & J.E. Victor

[e]**Distribution:** WC. Cape Peninsula, Klawer Valley near Simon's Town.

Habitat: Sandy slopes, 200 m.

Rationale: Known only from one location and potentially threatened by invasive alien plants.

Roella latiloba A.DC.

Status: **DD**D

W.G. Welman & J.E. Victor

[e]**Distribution:** WC. Clanwilliam and Bredasdorp.

Habitat: Low hills.

Rationale: Not collected since 1927, with a very strange disjunction between the only two known collections, one from Clanwilliam and the other from Bredasdorp.

[F] **Roella recurvata** A.DC.

Status: **Rare**

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Cape Peninsula, south of Steenberg.

Habitat: Sandy flats.

Rationale: Southern Peninsula endemic (EOO < 200 km^2), known from fewer than five subpopulations, all within the Cape Point section of the Table Mountain National Park. Not threatened.

Wahlenbergia Schrad. ex Roth

Wahlenbergia adamsonii Lammers

Status: **Rare**

D. Raimondo

[e]**Distribution:** WC. Pakhuis and Cederberg Mountains.

Habitat: Flat areas on sandstone slopes above 1 700 m.

Rationale: A range-restricted species (EOO 320 km^2), known from two subpopulations. A high-altitude species with no known threats.

[F] **Wahlenbergia asparagoides** (Adamson) Lammers

Status: **VU** B1ab(ii,iii,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** NC WC. Olifants River to Hondeklip Bay.

Habitat: Sandveld in acid/alkaline sand ecotones.

Rationale: EOO < 6 000 km^2. Known from six locations. This sandveld endemic is threatened by mining of heavy-mineral sands at Brand-se-baai. A proposed mining expansion will destroy around 60% of known subpopulations. Substantial portions of habitat have already been destroyed by mining. This threat is ongoing.

Wahlenbergia brachycarpa Schltr.

Status: **DD**D

D. Raimondo

[e]**Distribution:** WC. Pakhuis and Cederberg Mountains.

Habitat: Stony flats and slopes.

Rationale: Uncertainty exists about the correct assignment of sandveld collections from Redelinghuys and Bokwater by Acocks and Barker. If it did occur at these sites, this species qualifies for EN under Criterion B. However, if it is only from the Pakhuis Pass area, it should be listed as Rare. Until a revision is completed for this genus we cannot tell the exact range and therefore the threat status.

Wahlenbergia brachyphylla (Adamson) Lammers

Status: **Rare**

W.G. Welman & J.E. Victor

[e]**Distribution:** WC. Kouebokkeveld.

Habitat: Rocky mountain slopes, occasionally on sand.

Rationale: EOO < 500 km^2. Known from two sites in mountainous areas without any apparent threats.

Wahlenbergia brehmeri Lammers

Status: **DD**D

D. Raimondo

[e]**Distribution:** WC. Table Mountain.

Habitat: Unknown.

Rationale: Known only from the type, collected more than 100 years ago. Its habitat is unknown and therefore the status of this species cannot be determined.

Wahlenbergia buseriana Schltr. & Brehmer

Status: **Rare**

D. Raimondo & C.N. Cupido

[e]**Distribution:** NC. Eksteenfontein.

Habitat: Windblown dunes.

Rationale: EOO 1 500 km^2. Known from five collections in Namaqualand. Possibly under-collected. No known threats.

Wahlenbergia constricta Brehmer

Status: **DD**D

C.N. Cupido, D. Raimondo, R. Koopman & F. Daniels

[e]**Distribution:** WC. Olifants River Valley and Graafwater to Redelinghuys.

Habitat: Deep sands.

Rationale: Known from three collections, all made before 1945. The locality descriptions on the herbarium records are vague and cannot be traced accurately, but there has been extensive habitat loss to fruit cultivation and dam construction in the Olifants River Valley and to rooibos and potato cultivation in the sandveld and this species is highly likely to be very threatened.

Wahlenbergia doleritica Hilliard & B.L.Burtt

Status: **Rare**

R. Scott-Shaw & J.E. Victor

Distribution: KZN. Bushman's Nek and Sehlabathebe.

Habitat: Subalpine grassland.

Rationale: Known from three records from high-altitude grasslands in the Drakensberg. Not threatened.

Wahlenbergia effusa (Adamson) Lammers

Status: **DD**D

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Langeberg Mountains.

Habitat: Kloofs at the foot of mountains.

Rationale: Known from one collection made over 70 years ago. More precise habitat and site information are needed to assess this species correctly.

Wahlenbergia kowiensis R.A.Dyer

Status: **Rare**

W.G. Welman, J.E. Victor & A.P. Dold

[e]**Distribution:** EC. Coast between Peddie and Alexandria.

Habitat: Coastal thornveld and grassland, sandy soil, 30–200 m.

Rationale: EOO < 2 000 km². Four sites known but likely to occur at a few more. Although this species occurs on the coast, development of coastal towns within its range is unlikely to be spreading outwards at a fast enough rate to be of concern to this species; much habitat remains intact.

Wahlenbergia levynsiae Lammers

Status: **EN** B1ab(ii,iii)

D. Raimondo & C.N. Cupido

e**Distribution:** WC. Agulhas to Still Bay.

Habitat: Limestone flats.

Rationale: EOO 1 400 km². Known from two locations. It has lost habitat to crop cultivation on the Agulhas Plain and continues to decline because of ongoing habitat loss and degradation as a result of invasion by alien plants and coastal development.

Wahlenbergia microphylla (Adamson) Lammers

Status: **VU** D2

D. Raimondo, C.N. Cupido & F. Daniels

e**Distribution:** WC. Bontebok National Park.

Habitat: Sandy soils at low altitudes.

Rationale: Known from only one collection, collected over 50 years ago in the Bontebok National Park, which used to be on the Agulhas Plain. This area is no longer conserved as the park has been moved to an area near Swellendam. This species is potentially threatened by invasive alien plants.

Wahlenbergia minuta Brehmer

Status: **Rare**

W.G. Welman & J.E. Victor

e**Distribution:** NC. Namaqualand.

Habitat: Namaqualand Klipkoppe Shrubland.

Rationale: A range-restricted species (EOO 210 km²) that is not threatened.

Wahlenbergia namaquana Sond.

Status: **DD**D

C.N. Cupido, D. Raimondo & F. Daniels

e**Distribution:** WC. Namaqualand, Kamiesberg.

Habitat: Sands at low altitudes.

Rationale: No collections of this species have been made for over 60 years. It may be threatened by overgrazing in some areas of the Kamiesberg that are communally owned, but more data are required for accurate assessment of this species.

Wahlenbergia oligantha Lammers

Status: **DD**D

D. Raimondo

e**Distribution:** WC. Langeberg Mountains.

Habitat: Sandstone slopes.

Rationale: No collections made of this species for over 60 years. There is uncertainty whether a specimen from Albertinia is correctly assigned to this taxon. If so, it is threatened by agriculture. The genus is urgently in need of revision.

F **Wahlenbergia pilosa** H.Buek

Status: **DD**D

D. Raimondo

e**Distribution:** WC. Olifants River Valley.

Habitat: Sandy flats and slopes.

Rationale: Known from a few collections, some of which appear to be misidentified. If this species is restricted to sandy flats and slopes, as indicated in Goldblatt & Manning (2000), then it is likely to be threatened by agriculture. Until this genus is revised and the exact range and habitat described, this species will remain Data Deficient.

Wahlenbergia pinnata Compton

Status: **NT*** D2

C.R. Scott-Shaw & J.E. Victor

Distribution: KZN. Louwsburg and Forbes Reef (Swaziland).

Habitat: Mistbelt grassland.

Rationale: Known from one location in KwaZulu-Natal where it is potentially threatened by commercial afforestation. This subpopulation is not very isolated from the Swaziland subpopulations.

Wahlenbergia polyantha Lammers

Status: **VU** B1ab(ii,iii,iv,v)

D. Raimondo

e**Distribution:** WC. Kleinmond to Knysna.

Habitat: Sandy flats.

Rationale: EOO 5 400 km². Known from eight locations. Declining as a result of invasive alien plants, crop cultivation and coastal development.

Wahlenbergia polyclada A.DC.

Status: **DD**D

D. Raimondo, W.G. Welman & J.E. Victor

e**Distribution:** WC. Klawer.

Habitat: Coastal sands.

Rationale: Only two collections exist, both predating 1945. It occurs in sandy flats in areas where vineyard expansion is a threat. More collections are required for an accurate assessment of the range of this species and the threats it faces.

Wahlenbergia riversdalensis Lammers

Status: **CR** B1ab(iii)

A.L. Schutte-Vlok, J.H. Vlok & D. Raimondo

e**Distribution:** WC. Langeberg, Garcia's Pass.

Habitat: Sheltered sandstone slopes.

Rationale: EOO < 10 km². The only known location is heavily invaded by black wattles and pines, and this species continues to decline.

F **Wahlenbergia subulata** (L'Hér.) Lammers var. **congesta** (Adamson) W.G.Welman

Status: **VU** D2

D.A. Kamundi† & D. Raimondo

e**Distribution:** WC. Cape Infanta.

Habitat: On sand over limestone near the coast.

Rationale: Known from one location and potentially threatened by coastal development and invasive alien plants.

F **Wahlenbergia subulata** (L'Hér.) Lammers var. **tenuifolia** (Adamson) W.G.Welman

Status: **DD**D

D.A. Kamundi† & D. Raimondo

e**Distribution:** WC. Franschhoek Pass and Hawaqua Peak.

Habitat: Sandstone slopes.

Rationale: This taxon has not been collected since 1955. It may be naturally rare, but more collections are required to determine its distribution.

Wahlenbergia tetramera Thulin

Status: **Rare**

W.G. Welman & J.E. Victor

e**Distribution:** KZN. Central Drakensberg Mountains.

Habitat: Basalt cliffs, subalpine grassland, 2 200 m.

Rationale: A habitat specialist, known from two sites and not threatened.

Wahlenbergia tumida Brehmer

Status: **DD**D

D. Raimondo, W.G. Welman & J.E. Victor

e**Distribution:** NC WC. Bokkeveld Escarpment and Vanrhynsdorp.

Habitat: Unknown.

Rationale: Known from two collections before 1954; no habitat information is known. If this species occurs in sandy soils it may be threatened by rooibos tea cultivation.

F **Wahlenbergia uitenhagensis** (H.Buek) Lammers var. **filifolia** (Adamson) W.G.Welman

Status: **Rare**

J.E. Victor

e**Distribution:** EC. Groot Winterhoek Mountains north of Uitenhage to near Grahamstown.

Habitat: Alluvial soils near rivers.

Rationale: A habitat specialist, known from five sites, most of which are from untransformed areas. It is not likely to be declining.

Wahlenbergia umbellata (Adamson) Lammers

Status: **VU** D2

W.G. Welman & J.E. Victor

e**Distribution:** WC. Lambert's Bay.

Habitat: Coastal sands.

Rationale: Known from one location and potentially threatened by housing developments and potato cultivation.

CANELLACEAE

Warburgia Engl.

Warburgia salutaris (G.Bertol.) Chiov.

Status: **EN** A2acd

V.L. Williams, C.J. Geldenhuys, C.R. Scott-Shaw & J.E. Victor

Distribution: KZN LM MP. Northeastern KwaZulu-Natal, Mpumalanga and Limpopo Province. Also occurs in Swaziland, Mozambique, Zimbabwe and Malawi.

Habitat: Variable, including coastal, riverine, dune and montane forest as well as open woodland and thickets.

Rationale: There was been at least a 50% decline in the South African population because of excessive harvesting of bark for traditional medicine, especially in KwaZulu-Natal. While some healthy subpopulations exist in Mpumalanga and Limpopo, most subpopulations in the country have been targeted by bark harvesters. Extinctions and very low subpopulation numbers of less than 20 trees have been documented.

CAPPARACEAE

Cleome L.

Cleome conrathii Burtt Davy

Status: **NT** D2

M.F. Pfab, J.E. Victor, A. de Castro & P.J.D. Winter

e**Distribution:** G NC NW. Kuruman to Pretoria.

Habitat: Stony quartzite slopes, usually in red sandy soil, grassland or deciduous woodland, all aspects.

Rationale: Known from eight locations and potentially threatened by urban expansion, invasive alien plants, a deleterious fire regime, overgrazing, trampling and erosion.

Cleome schlechteri Briq.

Status: **DD**D

J.E. Victor & M. Lötter

e**Distribution:** KZN MP. Komatipoort and Mkuze.

Habitat: Heavy clay soils.

Rationale: Distribution is poorly known. It has been recorded only at Komatipoort and Mkuze, but is likely to occur in Swaziland and Mozambique. Until there are more collections, it cannot be adequately assessed.

CARYOPHYLLACEAE

Herniaria L.

F **Herniaria grimmii** Herm.

Status: **DD**D

D. Raimondo

e**Distribution:** EC. Witteberge near Barkly East.

Habitat: Unknown.

Rationale: Known from one old herbarium specimen collected in 1904. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

CELASTRACEAE

Elaeodendron Jacq.

Elaeodendron croceum (Thunb.) DC.

Status: **Declining**

C.J. Geldenhuys & J.E. Victor

Distribution: EC KZN LM MP. From Knysna through the Eastern Cape and KwaZulu-Natal northwards along the Mpumalanga and Limpopo Drakensberg Escarpment. Also in Zimbabwe.

Habitat: Margins of coastal and montane forests.

Rationale: Although widespread (EOO 852 000 km^2) and known from more than 150 sites, it is heavily targeted for the medicinal plant trade and continues to decline, especially in the Eastern Cape and KwaZulu-Natal.

F **Elaeodendron transvaalense** (Burtt Davy) R.H.Archer

Status: **NT** A4ad

V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya

Distribution: KZN LM MP NW. Widespread in southern Africa, including Angola, Namibia, Botswana, Zambia, Zimbabwe, Swaziland and Mozambique. In South Africa it is restricted to eastern, summer-rainfall areas from the KwaZulu-Natal coast northwards through eastern Mpumalanga into Limpopo and North West Provinces.

Habitat: Savanna or bushveld, from open woodland to thickets, often on termite mounds.

Rationale: A very popular species on the muthi markets and heavy exploitation and subpopulation declines have been observed. Over-exploitation would probably continue and the species is further threatened by poor wound recovery after bark-stripping. It is likely to experience a 20% decline over a moving window of 180 years (110 years in the past and 70 years into the future) (generation length suspected to be a minimum of 60 years).

Empleuridium Sond.

[F] **Empleuridium juniperinum** Sond.

Status: **VU** D2

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Villiersdorp to Babilonstoring Mountains.

Habitat: Steep, peaty, southwest-facing slopes, 900 m.

Rationale: Known from three locations and potentially threatened by invasive alien plants.

Gymnosporia (Wight & Arn.) Hook.f.

Gymnosporia bachmannii Loes.

Status: **VU** D2

L. von Staden & A.T.D. Abbott

[e]**Distribution:** EC KZN. Oribi Gorge to Mkweni River.

Habitat: Pondoland scarp forest on sandstone, rocky banks of streams and rivers, often on islands in larger rivers.

Rationale: A range-restricted endemic to the Pondoland region, rare and found in a highly restricted habitat along streambanks (AOO < 20 km^2). Potentially threatened by invading alien plants.

Gymnosporia devenishii Jordaan **Plate 52**

Status: **Rare**

J.E. Victor & A.E. van Wyk

[e]**Distribution:** EC KZN MP. Wakkerstroom, Utrecht, Greytown, Kranskop, Underberg and Mount Frere.

Habitat: Montane and mistbelt forest understorey.

Rationale: Known from seven widely scattered sites. Naturally rare, occurring in subpopulations with few individuals.

[F] **Gymnosporia elliptica** (Thunb.) Schönland

Status: **VU** B1ab(ii,iii,iv,v)

D. Raimondo & R.C. Turner

[e]**Distribution:** EC. Humansdorp to Port Elizabeth.

Habitat: Coastal plains.

Rationale: EOO 2 300 km^2. Known from fewer than 10 locations. Declining as a result of agriculture, commercial forestry plantations and urban expansion.

Gymnosporia oxycarpa (N.Robson) Jordaan

Status: **Rare**

P.A. Manyama

Distribution: LM. Northern Kruger National Park, southern Zimbabwe and possibly eastern Mozambique.

Habitat: Sandveld.

Rationale: Known from fewer than five subpopulations in South Africa, where it is restricted to occurring on the border of Mozambique and Zimbabwe (national EOO < 200 km^2).

Gymnosporia vanwykii (R.H.Archer) M.Jordaan

Status: **NT** A2c; B1ab(iii)+2ab(iii)

L. von Staden

[e]**Distribution:** EC KZN. Pondoland endemic, Umtamvuna River to Magwa Falls.

Habitat: Pondoland Coastal Grasslands, Msikaba Formation Sandstone.

Rationale: EOO 495 km^2. It has 8–15 locations. This species has lost 20–30% of its habitat over the last 100 years, representing one or two generations of this long-lived resprouter, mainly because of commercial and subsistence crop cultivation, overgrazing and too frequent fires. Decline is continuing.

[F] **Gymnosporia woodii** Szyszyl.

Status: **EN** B1ab(iii,v)+2ab(iii,v); C2a(i)

D. Styles & L. von Staden

[e]**Distribution:** KZN. Inanda district near Durban.

Habitat: Sandstone grasslands.

Rationale: EOO 122 km^2. Known from five severely fragmented subpopulations. There is severe, ongoing degradation of remaining habitat fragments as a result of overgrazing, invasion by alien plants and expanding human settlements. Skewed sex ratios in small isolated subpopulations and a deleterious fire regime are preventing successful reproduction. Less than 300 mature individuals remain; subpopulation sizes vary between one and 150 plants.

Lydenburgia N.Robson

Lydenburgia abbottii (A.E.van Wyk & M.Prins) Steenkamp, A.E.van Wyk & M.Prins **Plate 52**

Status: **EN** D

L. von Staden & A.T.D. Abbott

[e]**Distribution:** EC KZN. Restricted to two adjacent river gorges on the KwaZulu-Natal–Eastern Cape border.

Habitat: Scarp forest on sandstone, in deep river gorges, along rocky streambanks and drainage lines.

Rationale: This is one of the rarest trees in South Africa, known from two river gorges < 10 km apart. There are four subpopulations, each with less than 50 mature individuals. The total population is therefore estimated as less than 200 mature individuals. There are no serious threats to the population at present.

Lydenburgia cassinoides N.Robson

Status: **NT** B1ab(ii,iii,v)

S.J. Siebert, I.J. van der Merwe, T. Stehle & J.E. Victor

[e]**Distribution:** LM MP. Roossenekal to Strydpoort Mountains.

Habitat: Exposed norite bedrock and dolomite.

Rationale: EOO < 2 500 km^2. Declining because of habitat degradation and harvesting. However, there are still more than 10 locations and subpopulations are not severely fragmented.

Maytenus Molina

Maytenus abbottii A.E.van Wyk **Plate 52**

Status: **EN** B1ab(iii,v); C2a(i)

A.T.D. Abbott, J.E. Victor & L. von Staden

[e]**Distribution:** EC KZN. Oribi Gorge to Port St Johns.

Habitat: Pondoland scarp forest, along streambanks on sandstone, 300–400 m.

Rationale: Formerly widespread in KwaZulu-Natal and the Pondoland region but now very rare, with only eight small, isolated subpopulations known in Pondoland forests. There is a continuing decline in the number of mature individuals and habitat quality at two known subpopulations in southern KwaZulu-Natal as a result of firewood harvesting. The current EOO is 2 200 km^2. There are 6–10 known locations, and subpopulations (consisting of ± 10 mature individuals each) are severely fragmented. The total population is estimated to be less than 1 000 mature individuals.

Maytenus oleosa A.E.van Wyk & R.H.Archer **Plate 52**

Status: **Rare**

L. von Staden & A.T.D. Abbott

[e]**Distribution:** EC KZN. Umtamvuna River to Msikaba River.

Habitat: Pondoland scarp forest, restricted to Msikaba Formation Sandstone, on rocky riverbanks, always overhanging water, 200–500 m.
Rationale: A range-restricted habitat specialist, locally common in a few river gorges. It has no serious threats because of the inaccessibility of its habitat.

Pseudosalacia Codd

Pseudosalacia streyi Codd

Status: **EN** B1ab(iii,v); C2a(i)
L. von Staden & A.T.D. Abbott

[e]**Distribution:** EC KZN. Pondoland, Izotsha River to Mtentu River.
Habitat: Scarp forest on sandstone along rocky streambanks in river gorges, sometimes extending to forest margins, 50–200 m.
Rationale: A rare tree found in only a small area within Pondoland (EOO 500 km^2), where it occurs in isolated clumps within a highly specialised habitat. Known from nine subpopulations, but a few more may exist in unexplored river gorges. Subpopulations are small, consisting of no more than 60 mature individuals, and are severely fragmented. The total population is estimated to be 540–1 000 mature individuals. There is a continuing decline in at least two subpopulations as a result of harvesting of wood for fuel and building materials and a deleterious fire regime. It is likely that other subpopulations are also declining, especially those that extend to forest margins. A lack of recruitment is of concern.

Pterocelastrus Meisn.

[F] **Pterocelastrus rostratus** (Thunb.) Walp.

Status: **Declining**
V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya
Distribution: EC KZN LM MP WC. Cape Peninsula through the Eastern Cape to Limpopo Province and Swaziland.
Habitat: Forest and montane scrub in forest margins and on mountainsides.
Rationale: Some notable declines in Mpumalanga as a result of ring-barking for the medicinal plant trade, but it does not appear to be severely affected in the rest of its South African range.

Putterlickia Endl.

[F] **Putterlickia retrospinosa** A.E.van Wyk & Mostert

Status: **NT** B1ab(iii)
L. von Staden & A.T.D. Abbott

[e]**Distribution:** EC KZN. Oribi Gorge to Ntsubane.
Habitat: Pondoland scarp forest, restricted to rocky areas along upper margins of forests above the deep river gorges.
Rationale: A range-restricted Pondoland endemic (EOO 1 900 km^2), known from more than 10 locations. There is continuing decline in the quality and extent of the habitat outside reserves as a result of the impact of frequent and intense grassland fires on forest margins. Within protected areas the species is common and subpopulations are not severely fragmented.

COMBRETACEAE

Combretum Loefl.

Combretum mkuzense J.D.Carr & Retief

Status: **NT** B1ab(ii,iii,iv,v)
J.E. Victor & A.E. van Wyk

Distribution: KZN. Northern KwaZulu-Natal, Maputaland, eastern foothills of the Lebombo Mountains and Mozambique.
Habitat: Closed woodland savanna and sand forest.
Rationale: EOO within South Africa is 6 700 km^2. It is known from 12 locations. Declining as a result of clearing for subsistence crop cultivation and firewood extraction.

Combretum petrophilum Retief

Status: **Rare**
M. Lötter, D. McMurtry & D. Raimondo

[e]**Distribution:** LM MP. Waterberg, Strydpoort Mountains, Loskop Dam and Mpumalanga Drakensberg Mountains.
Habitat: Rocky outcrops in mountain bushveld.
Rationale: A habitat specialist known from fewer than 10 subpopulations, most of which occur in inaccessible habitats and are not threatened.

CONVOLVULACEAE

Cuscuta L.

[F] **Cuscuta bifurcata** Yunck.

Status: **DD**
D. Raimondo

[e]**Distribution:** EC WC. Kouebokkeveld and Port Elizabeth.
Habitat: Unknown.
Rationale: Last collected in 1909. The only two collections of this species have a very unusual disjunction of over 650 km. This species is too poorly known to be assessed.

[F] **Cuscuta gerrardii** Baker

Status: **DD**
W.G. Welman & J.E. Victor

[e]**Distribution:** EC. KwaZulu-Natal, Umzinto and Entumeni.
Habitat: Unknown.
Rationale: Known from three collections made before 1915 in KwaZulu-Natal, in areas that are either transformed for agriculture or are currently communal areas that have been severely degraded by grazing cattle. The habitat of this species is not known and as a whole it remains too poorly known to allocate a threat status.

Ipomoea L.

[F] **Ipomoea bisavium** A.Meeuse

Status: **Rare**
P.A. Manyama

[e]**Distribution:** LM. Soutpansberg Mountains.
Habitat: Quartzitic soils, growing among shrubs.
Rationale: A range-restricted species (EOO 50 km^2), known from three subpopulations. Not threatened because of the rocky nature of its habitat.

Merremia Dennst.

Merremia malvaefolia Rendle

Status: **DD**
W.G. Welman & J.E. Victor

[e]**Distribution:** EC. Albany, Bathurst and Somerset East.
Habitat: Unknown.
Rationale: Known from old herbarium collections and not collected for the past 70 years. Its habitat is unknown and the species can therefore not be assigned a threat status.

Plate 52



A.T.D. Abbott

Eugenia umtamvunensis EN



A.T.D. Abbott

Lydenburgia abbottii EN



A.T.D. Abbott

Maytenus oleosa Rare



A.T.D. Abbott

Eugenia erythrophylla NT



A.T.D. Abbott

Eugenia verdoorniae NT



A.T.D. Abbott

Dahlgrenodendron natalense EN



A.T.D. Abbott

Maytenus abbottii EN



A.T.D. Abbott

Gymnosporia devenishii Rare

Plate 53



J.H. Vlok

Cotyledon tomentosa subsp. *ladismithiensis* VU



E. van Jaarsveld

Adromischus cristatus var. *zeyheri* DD



I. Ebrahim

Cotyledon adscendens EN



E. van Jaarsveld

Cotyledon eliseae Rare



E. van Jaarsveld

Adromischus cristatus var. *schonlandii* Rare



E. van Jaarsveld

Cotyledon tomentosa subsp. *tometosa* VU



E. van Jaarsveld

Adromischus phillipsiae Rare

Plate 54



E. van Jaarsveld

Crassula socialis Rare



E. van Jaarsveld

Crassula rupestris subsp. *marnierana* Rare



E. van Jaarsveld

Crassula namaquensis subsp. *comptonii* Rare



N.A. Helme

Crassula vestita Rare



D. Raimondo

Crassula susannae VU



E. van Jaarsveld

Crassula cymbiformis Critically Rare



E. van Jaarsveld

Crassula brachystachya Rare

Plate 55



E. van Jaarsveld

Tylecodon cordiformis Critically Rare



E. van Jaarsveld

Tylecodon fragilis EN



E. van Jaarsveld

Tylecodon leucothrix Rare



E. van Jaarsveld

Tylecodon viridiflorus Rare



E. van Jaarsveld

Tylecodon buchholzianus subsp. *fasciculatus* Rare



N.A. Helme

Tylecodon nolteei VU

CORNACEAE

Curtisia Aiton

[F] **Curtisia dentata** (Burm.f.) C.A.Sm.

Status: **NT** A2d

V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya

Distribution: EC FS KZN LM MP. Cape Peninsula to the Zimbabwe/Mozambique highlands.

Habitat: Evergreen forest from coast to 1 800 m.

Rationale: The species has been exploited over most of its South African range as a result of timber extraction and bark harvesting for the traditional medicine trade. The decline to the population over the last 120 years is estimated to exceed 20% (generation length estimated to be 40 years). Further declines are anticipated in the future because of the popularity of the species in the traditional medicine trade. Recent trends show that bark collectors have shifted their harvesting activities to Mpumalanga because of its scarcity in KwaZulu-Natal.

CRASSULACEAE

Adromischus Lem.

Adromischus bicolor Hutchison

Status: **Rare**

E.J. van Jaarsveld, N.A. Helme & L. Potter

[e]**Distribution:** EC. Steytlerville district.

Habitat: Exposed rock crevices.

Rationale: Known from fewer than five sites. Not threatened because of the inaccessibility of its habitat.

[F] **Adromischus cristatus** (Haw.) Lem. var. **mzimvubuensis** Van Jaarsv.

Status: **Rare**

P. Bruyns & D. Raimondo

[e]**Distribution:** EC KZN. Southern KwaZulu-Natal and Eastern Cape, between Umtamvuna and Mzimvubu Rivers.

Habitat: Red shale or sandstone cliffs above rivers, sheer Ecca shale cliffs.

Rationale: Known from a few disjunct subpopulations in the Pondoland area. Its cliff habitat is too inaccessible for this taxon to be threatened.

[F] **Adromischus cristatus** (Haw.) Lem. var. **schonlandii** (E.Phillips) Toelken **Plate 53**

Status: **Rare**

N.A. Helme

[e]**Distribution:** EC. Lower Baviaanskloof and Langkloof west of Humansdorp.

Habitat: Growing in sheltered and shaded rock outcrops.

Rationale: A rare habitat specialist known from fewer than five subpopulations. Not threatened because of the inaccessibility of its habitat.

Adromischus cristatus (Haw.) Lem. var. **zeyheri** (Harv.) Toelken **Plate 53**

Status: **DDD**

D. Raimondo

[e]**Distribution:** WC. Riversdale.

Habitat: Shady cliffs.

Rationale: Known only from the type locality near Riversdale collected by Zeyher in the late 1800s. Not enough is known about the current distribution, specific habitat or population status of this taxon to determine its status. It is likely to be threatened by crop cultivation and invasive aliens.

Adromischus diabolicus Toelken

Status: **Rare**

J.E. Victor, N.A. Helme, P.G. Desmet, E.J. van Jaarsveld & P.M. Burgoyne

Distribution: NC. Vioolsdrif to Pofadder.

Habitat: Quartzite inselbergs on south-facing aspects or steep, inaccessible cliff faces.

Rationale: Known from fewer than five sites in the mountains of the Richtersveld. A rare, habitat specialist that has no recorded threats.

Adromischus fallax Toelken

Status: **Rare**

P. Bruyns & D. Raimondo

[e]**Distribution:** EC. Graaff-Reinet district.

Habitat: Rock faces at high altitude.

Rationale: Known from two sites, likely to occur at a few more. A rare, range-restricted habitat specialist (EOO < 20 km^2) that is not threatened.

Adromischus humilis (Marloth) Poelln.

Status: **Rare**

J.E. Victor & N.A. Helme

[e]**Distribution:** WC. Nuweveld Mountains near Beaufort West, north of Laingsburg at Klipfontein, and at Oukloof Pass near Fraserburg.

Habitat: Rock crevices.

Rationale: Restricted to rock crevices in mountains in the central Karoo, known from four sites, but it is likely that undiscovered populations exist.

[F] **Adromischus liebenbergii** Hutchison subsp. **orientalis** Van Jaarsv.

Status: **Rare**

L. von Staden

[e]**Distribution:** EC. Lower reaches of the Mbashe River.

Habitat: Rock crevices on north-facing, exposed Ecca shale cliffs. Surrounding vegetation consists of a mosaic of thicket and subtropical shrub forest, below 300 m.

Rationale: EOO 80–290 km^2. Locally abundant. Occurs on sheer cliff faces where it is safe from threat.

Adromischus mammillaris (L.f.) Lem.

Status: **EN** B1ab(iii)

D. Raimondo & J.H. Vlok

[e]**Distribution:** WC. Calitzdorp to Montagu.

Habitat: Grows on lower gravelly slopes.

Rationale: EOO 500 km^2. Known from only two locations, this species has not been recorded in the Calitzdorp area, the type locality, for some time and may be extinct here because of severe degradation of its habitat by ostriches.

Adromischus marianiae (Marloth) A.Berger var. **hallii** (Hutchison) Toelken

Status: **Rare**

D. Raimondo

Distribution: NC. Mountains north and south of the Orange River.

Habitat: Sandy pockets in rocks, associated with quartz, near the coast.

Rationale: A habitat specialist, currently recorded from three sites and not threatened.

[F] **Adromischus maximus** Hutchison

Status: **Rare**
N.A. Helme & J.E. Victor
[e]**Distribution:** WC. Gifberg to Klawer and Doringbos.
Habitat: Dry rocky sandstone cliffs.
Rationale: A habitat specialist known from fewer than 10 subpopulations and not threatened.

Adromischus phillipsiae (Marloth) Poelln. Plate 53

Status: **Rare**
J.E. Victor, P.G. Desmet, P. Bruyns & P.M. Burgoyne
[e]**Distribution:** NC WC. Roggeveld Mountains to Kamiesberg.
Habitat: Sheltered rock crevices in loam soil.
Rationale: Previously considered to be a Roggeveld endemic. A subpopulation was recently found in the Kamiesberg. It is never common and occurs as small subpopulations. No known threats.

[F] **Adromischus umbraticola** C.A.Sm. subsp. **umbraticola**

Status: **NT** B1ab(ii,iii,v)
N.A. Helme & D. Raimondo
[e]**Distribution:** G NW. Potchefstroom and Zeerust to Cullinan.
Habitat: South-facing rock crevices on ridges, restricted to Gold Reef Mountain Bushveld in the northern parts of its range, and Andesite Mountain Bushveld in the south.
Rationale: EOO 14 600 km^2. Known from 14 locations. The rocky ridges where this taxon grows are increasingly under threat from urban expansion within Gauteng.

Cotyledon L.

[F] **Cotyledon adscendens** R.A.Dyer Plate 53

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)
D. Raimondo
[e]**Distribution:** EC. Port Elizabeth to Coega.
Habitat: Thicket vegetation behind coastal dunes within 1 km of the sea.
Rationale: EOO and AOO < 35 km^2. Three remaining locations continue to decline because of ongoing habitat loss and degradation as a result of coastal development and invasion by alien plants. Most of its remaining habitat has been zoned for housing development and is likely to be lost over the next 10 years.

[F] **Cotyledon eliseae** Van Jaarsv. Plate 53

Status: **Rare**
P. Bruyns & D. Raimondo
[e]**Distribution:** WC. Gourits River.
Habitat: Sandstone cliffs.
Rationale: Known from a very restricted range along the Gourits River (EOO < 100 km^2) where it is locally common in suitable habitat. This species is found on cliffs and is therefore not threatened.

Cotyledon orbiculata L. var. **flanaganii** (Schönland & Baker f.) Toelken

Status: **NT** D2
J.E. Victor & A.P. Dold
[e]**Distribution:** EC. Kei River Pass, Butterworth and Umzimvubu.
Habitat: Gravelly slopes in scrub vegetation.
Rationale: A poorly known taxon likely to occur at fewer than 10 locations. Potentially threatened by overgrazing and trampling by livestock.

Cotyledon tomentosa Harv. subsp. **ladismithiensis** (Poelln.) Toelken Plate 53

Status: **VU** C1
J.H. Vlok & D. Raimondo
[e]**Distribution:** WC. Laingsburg to Muiskraal and Ladismith.
Habitat: Rock outcrops.
Rationale: This taxon grows in localised subpopulations, usually in association with rock outcrops. Known from seven subpopulations but a few more are likely to occur. Subpopulations are small (never more than 50 plants) and the total population of this taxon is therefore conservatively estimated to be less than 10 000 mature individuals. It has experienced a 10% decline over the past 90 years (generation length is estimated to be 30 years). Declines are due to trampling by livestock, sheep and ostriches, and illegal collecting for the specialist succulent horticultural trade.

[F] **Cotyledon tomentosa** Harv. subsp. **tomentosa** Plate 53

Status: **VU** D1+2
J.H. Vlok & D. Raimondo
[e]**Distribution:** EC WC. Ladismith to Steytlerville.
Habitat: Arid thicket, on lower, gravelly slopes in sheltered ravines.
Rationale: This taxon is known from five very localised subpopulations. All subpopulations are small, with less than 30 plants. It is potentially threatened by trampling by livestock.

Crassula L.

Crassula alcicornis Schönland

Status: **VU** D1+2
M.R. Opel & P.G. Desmet
[e]**Distribution:** WC. Citrusdal.
Habitat: Dark clay soil, wet from seeps, on steep inclines in rocky, shaded areas.
Rationale: Known from one site in one ravine, where there are a few hundred plants. Potentially threatened by invading alien plants, collecting for the specialist succulent horticultural trade and a deleterious fire regime.

Crassula alpestris Thunb. subsp. **massonii** (Britten & Baker f.) Toelken

Status: **Rare**
D. Raimondo & N.A. Helme
[e]**Distribution:** WC. Clanwilliam and Laingsburg.
Habitat: Grows on sandy or gravelly slopes.
Rationale: Known from three disjunct sites and not threatened.

[F] **Crassula ammophila** Toelken

Status: **NT** B1ab(ii,iii)
N.A. Helme
[e]**Distribution:** WC. Holgat River to Saldanha.
Habitat: Alkaline, coastal sands.
Rationale: Occurs in a thin band along the coast (EOO < 4 000 km^2), known from two collections but many more are likely (± 15 locations suspected) as this is a small, cryptic species. There is continuing decline of its habitat because of heavy-mineral sand mining and coastal development.

Crassula arborescens (Mill.) Willd. subsp. **undulatifolia** Toelken

Status: **Critically Rare**

E.J. van Jaarsveld, J.E. Victor & N.A. Helme

eDistribution: EC. Klein Winterhoek Mountains.

Habitat: Lower rocky slopes in sheltered ravines.

Rationale: Known from one kloof in the southern parts of the Klein Winterhoek Mountains. Not threatened.

F **Crassula badspoortense** Van Jaarsv.

Status: **Rare**

D. Raimondo & F. Cholo

eDistribution: WC. Badspoort, south of Calitzdorp.

Habitat: Quartzitic sandstone cliffs, 300–500 m.

Rationale: A range-restricted species (EOO 10 km^2) not threatened because of its habitat being inaccessible to livestock.

F **Crassula bergioides** Harv.

Status: **NT** B1ab(ii,iii,iv,v)

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

eDistribution: WC. Ceres to De Hoop.

Habitat: Open space on gravelly slopes.

Rationale: A lowland species mostly occurring in the Upper Breede River Valley (EOO < 5 000 km^2). Its habitat is experiencing ongoing conversion to vineyards. It is an annual that is likely to occur in more places than the four herbarium records suggest. We suspect that there are ± 20 locations.

Crassula brachystachya Toelken **Plate 54**

Status: **Rare**

N.A. Helme

eDistribution: WC. Witteberg and Swartberg Mountains.

Habitat: Moist, shaded crevices on rock faces in ravines.

Rationale: A range-restricted habitat specialist (EOO < 500 km^2) that has no threats.

Crassula brevifolia Harv. subsp. **psammophila** Toelken

Status: **VU** D2

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

eDistribution: NC. Grootmis to the Orange River.

Habitat: Rocky soils close to the coast.

Rationale: This taxon is known from fewer than five locations in the northern Namaqualand coastal belt. Potentially threatened by mining.

F **Crassula capensis** (L.) Baill. var. **promontorii** (Schönland & Baker f.) Toelken

Status: **Rare**

P.A. Manyama, D. Raimondo & D.A. Kamundi†

eDistribution: WC. Northern part of the Cape Peninsula.

Habitat: Moist places in sheltered ravines or in the shade of overhanging rocks, 700–1 000 m.

Rationale: A range-restricted taxon (EOO 8 km^2) that is not threatened as both the two known subpopulations fall within the Table Mountain National Park.

F **Crassula columella** Marloth & Schönland

Status: **Rare**

D. Raimondo, P.A. Manyama & D.A. Kamundi†

eDistribution: NC. Grootmis and Lekkersing.

Habitat: Upper slopes, usually in crevices in quartzite outcrops, typically on the southwestern aspect of low hills.

Rationale: A northern Namaqualand endemic that occurs in specialised rocky habitats and has no significant threats. Currently known from five subpopulations, but we suspect that more are likely to exist in unexplored areas of its range.

F **Crassula cremnophila** Van Jaarsv. & A.E.van Wyk

Status: **Rare**

D. Raimondo, P.A. Manyama & D.A. Kamundi†

eDistribution: EC. Baviaanskloof and Kouga River.

Habitat: Shade in crevices of vertical cliff faces, usually on eastern and southern aspects, 100–700 m.

Rationale: A range-restricted species (EOO < 500 km^2), known from two subpopulations. Not threatened because of the inaccessibility of its habitat to livestock.

F **Crassula cymbiformis** Toelken **Plate 54**

Status: **Critically Rare**

J.E. Victor

eDistribution: LM. Waterberg east of Thabazimbi.

Habitat: Savanna, found in shallow soils among rocks.

Rationale: Known from two collections at one site in the southern Waterberg where most of its habitat is protected in the Marakele National Park and surrounding private game reserves.

Crassula decidua Schönland

Status: **NT** D2

D. Raimondo

eDistribution: EC. Cookhouse, Somerset East and Cradock.

Habitat: Low karroid vegetation or amongst succulent *Euphorbia* shrubs close to a river.

Rationale: Known from four locations but a few more are likely as this is a very inconspicuous species (± 10 locations suspected). Two of the known subpopulations are from vegetation close to a river, a habitat potentially threatened by agriculture.

Crassula decumbens Thunb. var. **brachyphylla** (Adamson) Toelken

Status: **NT** B1ab(ii,iii,iv,v)

N.A. Helme

eDistribution: WC. Clanwilliam to near Bredasdorp.

Habitat: Saline salt marshes, usually along the coast.

Rationale: EOO < 20 000 km^2. Suspected to occur at 15–20 locations. Threatened by drainage of its salt marsh habitat for coastal development.

Crassula elsieae Toelken

Status: **Critically Rare**

N.A. Helme, E.J. van Jaarsveld & L. Potter

eDistribution: WC. Northern Cederberg.

Habitat: Shaded places under rocks or in rock basins.

Rationale: Known from the type locality on Krakadou Peak. Not threatened because of the inaccessibility of its habitat.

Crassula exilis Harv. subsp. **exilis**

Status: **Rare**

N.A. Helme

eDistribution: NC. Steinkopf.

Habitat: Sheltered rock crevices, often under overhanging rocks, usually on southern or southwestern aspect of mountains.

Rationale: Known from fewer than 10 sites in northern Namaqualand (EOO < 200 km^2). The habitat of this taxon is inaccessible to livestock and it is not threatened.

[F] **Crassula foveata** Van Jaarsv.

Status: **Rare**

D. Raimondo & F. Cholo

[e]**Distribution:** EC. Eastern Cape, Butterworth.

Habitat: Cliffs and steep outcrops, mainly on exposed, northern and western aspects of Beaufort shale, 300–400 m.

Rationale: A range-restricted species (EOO 10 km^2), known from one subpopulation. No recorded threats.

Crassula fusca Herre

Status: **Rare**

N.A. Helme & J.E. Victor

Distribution: NC. Mouth of the Orange River.

Habitat: Rock outcrops, usually in sheltered ravines or south-facing slopes.

Rationale: A northern Richtersveld endemic (EOO < 200 km^2) known from fewer than 10 sites. It occurs mostly in sheltered ravines where it is protected from grazing and trampling by livestock.

[F] **Crassula lasiantha** Drège ex Harv.

Status: **Rare**

N.A. Helme

[e]**Distribution:** WC. Southern Cederberg to Groot Winterhoek Peak.

Habitat: Shaded rock ledges at high altitudes.

Rationale: A range-restricted species, EOO < 400 km^2. Known from fewer than 10 sites, not threatened.

Crassula multiceps Harv.

Status: **Rare**

E.J. van Jaarsveld & L. Potter

[e]**Distribution:** WC. Between Vredendal and Bitterfontein.

Habitat: Crevices on horizontal rocks, often partly covered with gravel.

Rationale: Known from four subpopulations in a restricted range (EOO < 400 km^2). A few more undiscovered subpopulations are likely to exist. This species is not declining.

Crassula namaquensis Schönland & Baker f. subsp. **comptonii** (Hutchinson & Pillans) Toelken **Plate 54**

Status: **Rare**

E.J. van Jaarsveld, L. Potter & N.A. Helme

[e]**Distribution:** NC. Bokkeveld Escarpment.

Habitat: Shallow soil on sandstone pavements.

Rationale: A range-restricted taxon (EOO < 50 km^2). Not threatened because of the inaccessibility of its habitat.

Crassula obovata Haw. var. **dregeana** (Harv.) Toelken

Status: **VU** D2

J.E. Victor

[e]**Distribution:** EC KZN. Southern KwaZulu-Natal and Pondoland.

Habitat: Sandstone rock gardens on sandstone outcrops in coastal hills, 300–500 m.

Rationale: Known from three locations and potentially threatened by a deleterious fire regime and by grazing and trampling by livestock.

[F] **Crassula peculiaris** (Toelken) Toelken & Wickens

Status: **Rare**

J.E. Victor & N.A. Helme

[e]**Distribution:** WC. Swartberg Mountains.

Habitat: Grows in moist places in the shade of rocks at an altitude above 1 500 m.

Rationale: A high-altitude, range-restricted endemic (EOO < 200 km^2) that grows under rocks and is not threatened.

Crassula pellucida L. subsp. **spongiosa** Toelken

Status: **Rare**

J.E. Victor & P.M. Burgoyne

[e]**Distribution:** NC. Nieuwoudtville to Calvinia.

Habitat: Sandy soil in sheltered kloofs.

Rationale: A Bokkeveld Escarpment endemic (EOO < 500 km^2) known from six sites. A few more undiscovered sites within its range are likely to exist. Occurs in sheltered kloofs and is therefore presumably not threatened by rooibos tea cultivation.

Crassula plegmatoides Friedrich

Status: **VU** D2

D. Raimondo

Distribution: NC. Northern Richtersveld to southern Namibia.

Habitat: Quartzite gravels towards the top of hills.

Rationale: Endemic to the coastal quartzitic strip in the northern Richtersveld and the Sperrgebiet. Known from three locations in South Africa where it is potentially threatened by mining.

Crassula roggeveldii Schönland

Status: **Rare**

J.E. Victor, P.M. Burgoyne & N.A. Helme

[e]**Distribution:** NC. Sutherland.

Habitat: Moist places, usually associated with rocks and often under overhanging rocks.

Rationale: Roggeveld endemic (EOO < 300 km^2) known from fewer than 10 sites. Not threatened.

Crassula rupestris Thunb. subsp. **commutata** (Friedrich) Toelken

Status: **Rare**

E.J. van Jaarsveld & L. Potter

Distribution: NC. Western slopes of mountains near the mouth of the Orange River.

Habitat: Rocky slopes or among boulders in kloofs and usually on the south-facing aspect of slopes.

Rationale: Restricted to the mountains near the Orange River (EOO < 500 km^2). Occurs in rocky habitats that are not threatened.

Crassula rupestris Thunb. subsp. **marnierana** (H.E.Huber & H.Jacobsen) Toelken **Plate 54**

Status: **Rare**

D. Raimondo

[e]**Distribution:** WC. Anysberg, Rooiberg and Klein Swartberg Mountains.

Habitat: In shallow soil pockets on large rocks in arid mountains.

Rationale: Known from fewer than 10 sites, found in localised patches in rock crevices. No threats are likely to affect this taxon.

[F] **Crassula sarmentosa** Harv. var. **integrifolia** Toelken

Status: **Rare**

D. Styles, C.R. Scott-Shaw & L. von Staden

[e]**Distribution:** KZN. Southern and central KwaZulu-Natal.

Habitat: Kloofs or ravines near forest margins on Natal Group Sandstone.
Rationale: A habitat specialist known from a few subpopulations. Its habitat of rocky cliffs is not threatened.

F **Crassula sediflora** (Eckl. & Zeyh.) Endl. & Walp. var. **amatolica** (Schönland) Toelken

Status: **DD**D
P.F. Matlamela & D.A. Kamundi†
e**Distribution:** EC. Amathole Mountains.
Habitat: In grassland on rocks near swampy streams.
Rationale: Known from the type collection at Cata Ridge in the Amathole Mountains, collected in 1925. Much of this area has been converted to pine plantations. Not enough is known about the distribution and the current population status of this taxon to determine its status.

Crassula sericea Schönland var. **velutina** (Friedrich) Toelken

Status: **Rare**
D. Raimondo
Distribution: NC. Western mountains on both sides of the Orange River.
Habitat: Rock crevices on quartzite outcrops, mainly on the southern or southwestern aspect on high peaks.
Rationale: Known from five subpopulations. A few more are likely in unexplored, inaccessible mountains within the range of this taxon. Restricted to high-altitude rock crevices, therefore unlikely to be threatened.

F **Crassula setulosa** Harv. var. **deminuta** (Diels) Toelken

Status: **VU** D2
J.E. Burrows, M. Lötter & J.E. Victor
e**Distribution:** LM MP. Steenkampsberg in the Lydenburg district.
Habitat: Stony/rocky, well-drained sandstone soils in full sun, 2 110 m.
Rationale: Known from only one location where it is potentially threatened by mining activities, invading alien plants and the development of golf estates.

F **Crassula simulans** Schönland

Status: **VU** D2
D. Raimondo & N.A. Helme
e**Distribution:** WC. Robertson to Montagu.
Habitat: Shaded, moist, south-facing slopes.
Rationale: Known from fewer than five locations and potentially threatened by invasive alien plants, crop cultivation and urban expansion.

Crassula sladenii Schönland

Status: **NT** B1ab(v)
D. Raimondo & P.M. Burgoyne
Distribution: NC. Western slopes of mountains near the mouth of the Orange River.
Habitat: Dolomite outcrops, in sheltered sites in crevices on rock faces or among boulders.
Rationale: Northern Richtersveld and Sperrgebiet endemic (EOO < 400 km^2) and suspected to occur at 15 locations. P.M. Burgoyne has observed drought-related mortality, most probably a result of climate change, which is very likely to continue in the future. Past loss from dolomite quarrying has also affected this species.

Crassula socialis Schönland **Plate 54**

Status: **Rare**
D. Raimondo
e**Distribution:** EC. King William's Town and Kommadagga.
Habitat: In rock crevices on cliffs, which are usually south- or southeast-facing.
Rationale: Known from four subpopulations, but a few more are likely as this species occurs in inaccessible habitats and is likely to be under-collected. It has no threats.

Crassula streyi Toelken

Status: **Rare**
C.R. Scott-Shaw, A.T.D. Abbott, L. von Staden, D. Styles, J.E. Victor & N.A. Helme
e**Distribution:** EC KZN. Oribi Gorge to Mkambati.
Habitat: Msikaba Formation and sandstone cliffs in scarp forest, 200–600 m.
Rationale: Known from fewer than five sites, restricted to a specific and inaccessible habitat in Pondoland, not threatened.

Crassula subacaulis Schönland & Baker f. subsp. **subacaulis**

Status: **VU** D2
J.E. Victor & P.M. Burgoyne
e**Distribution:** NC. Lekkersing to Steinkopf.
Habitat: Lower gravel slopes.
Rationale: This taxon is a range-restricted Namaqualand endemic (EOO < 20 km^2) known from one location and is potentially threatened by mining and grazing and trampling by livestock.

Crassula subulata L. var. **hispida** Toelken

Status: **EX**
J.E. Victor & P.M. Burgoyne
e**Distribution:** WC. Montagu.
Habitat: Unknown.
Rationale: Known from the type collection by Bolus in 1892, recorded as 'Cape, near Montagu baths'. It has not been recorded for over 115 years and because there has been urban and agricultural expansion in this area, this taxon is considered extinct.

Crassula susannae Rauh & Friedrich **Plate 54**

Status: **VU** D2
D. Raimondo, J.E. Victor & P.M. Burgoyne
e**Distribution:** NC. Namaqualand, Karoohoogte.
Habitat: On slopes among quartzite gravel.
Rationale: Known from one location. It has lost habitat to quarrying in the past. Quarrying and collecting for the specialist succulent horticultural trade remain potential threats.

Crassula thunbergiana Schult. subsp. **minutiflora** (Schönland & Baker f.) Toelken

Status: **Rare**
J.E. Victor & D. Raimondo
Distribution: NC. Aus in Namibia and Springbok in the Northern Cape.
Habitat: Sandy soil.
Rationale: Known from three subpopulations. No recorded threats.

Crassula vestita Thunb. Plate 54

Status: **Rare**

N.A. Helme, E.J. van Jaarsveld & L. Potter

e**Distribution:** NC. Roggeveld Mountains.

Habitat: Amongst low shrublets, associated with rock outcrops.

Rationale: Roggeveld endemic (EOO < 200 km^2) known from three sites. Never common and occurs as scattered plants amongst rock outcrops.

Kalanchoe Adans.

Kalanchoe alticola Compton

Status: **DDD**

P.M. Burgoyne, J.E. Burrows, M. Lötter & L. von Staden

Distribution: MP. Barberton to northeastern Swaziland.

Habitat: Shallow peaty soils on granite rock, or in rock crevices, 900–1 800 m.

Rationale: There are no precise sites for this species in South Africa and collections are generally old. In Swaziland it occurs in an area heavily transformed by sugarcane. Surveys are needed to determine the status of this species.

Kalanchoe crundallii I.Verd.

Status: **Rare**

L. von Staden, P.M. Burgoyne & J.E. Victor

e**Distribution:** LM. Restricted to mistbelt areas in the western Soutpansberg Mountains west of Wyllie's Poort.

Habitat: Mistbelt, grows among large boulders in open woodland or on forest margins.

Rationale: EOO 52 km^2, AOO estimated < 1 km^2. Only four or five known sites. Subpopulations are small and isolated and therefore considered severely fragmented. There is a slight potential threat of harvesting for horticultural purposes, but harvesting appears not to be causing declines and is unlikely to cause extinction in the near future.

Tylecodon Toelken

Tylecodon albiflorus Bruyns

Status: **Rare**

P. Bruyns & D. Raimondo

e**Distribution:** WC. Montagu.

Habitat: Renosterveld on south-facing slopes on shale.

Rationale: A range-restricted species (EOO < 200 km^2), known from three subpopulations. Not threatened.

Tylecodon atropurpureus Bruyns

Status: **Rare**

P. Bruyns & D. Raimondo

e**Distribution:** NC. Springbok to Steinkopf.

Habitat: Namaqualand Shale Shrubland, in renosterveld in shade of bushes.

Rationale: A range-restricted species (EOO < 100 km^2), known from two subpopulations. Not threatened.

Tylecodon boddleyi Van Jaarsv.

Status: **Rare**

E.J. van Jaarsveld & D. Raimondo

e**Distribution:** NC. Augrabies Mountains.

Habitat: Quartz-rich sandstone crevices, upper south-facing slopes.

Rationale: Known from one subpopulation from a restricted range in a very specific habitat (sandstone crevices). Not threatened.

F **Tylecodon buchholzianus** (Schuldt & P.Stephan) Toelken subsp. **fasciculatus** G.Will. Plate 55

Status: **Rare**

D. Raimondo & F. Cholo

e**Distribution:** NC. Southwest Richtersveld, east of Port Nolloth.

Habitat: Eastern aspect of steep mountain slopes, 300–480 m.

Rationale: A Richtersveld endemic (EOO 20 km^2) known from two subpopulations. No recorded threats.

F **Tylecodon cordiformis** G.Will. Plate 55

Status: **Critically Rare**

E.J. van Jaarsveld & D. Raimondo

e**Distribution:** NC. Port Nolloth district, southern end of the Harrasberg.

Habitat: Namaqualand Klipkoppe Shrubland, quartzitic rock cracks, 500 m.

Rationale: Known from only one subpopulation. No recorded threats.

Tylecodon decipiens Toelken

Status: **Rare**

E.J. van Jaarsveld, D. Raimondo & P.G. Desmet

e**Distribution:** NC. Kleinsee.

Habitat: Grows in shaded rock crevices, not far from the coast.

Rationale: A range-restricted species (EOO < 3 km^2), known from two sites. Not threatened.

Tylecodon ellaphieae Van Jaarsv.

Status: **Rare**

P.M. Burgoyne, E.J. van Jaarsveld & J.E. Victor

e**Distribution:** NC. Richtersveld.

Habitat: Sheer, quartzite sandstone cliff faces.

Rationale: A range-restricted endemic to the northern Richtersveld (EOO < 100 km^2), known from three sites. Not threatened because of the inaccessibility of its habitat.

F **Tylecodon faucium** (Poelln.) Toelken

Status: **Rare**

D. Raimondo, P.A. Manyama & D.A. Kamundi†

e**Distribution:** NC. Mountains south of Sutherland.

Habitat: Shaded rock crevices, often on south-facing slopes, 1 100–1 400 m.

Rationale: A range-restricted species (EOO < 100 km^2), known from one subpopulation. No recorded threats.

Tylecodon fragilis (R.A.Dyer) Toelken Plate 55

Status: **EN** B1ab(i,ii,iii,iv,v)

P.G. Desmet, E.J. van Jaarsveld & D. Raimondo

e**Distribution:** WC. Strandfontein and Brand-se-baai.

Habitat: Rock outcrops, usually in the shelter of other vegetation.

Rationale: EOO 150 km^2. Known from three locations. Declining as a result of coastal development and heavy-mineral sand mining.

Tylecodon hirtifolius (W.F.Barker) Toelken

Status: **Rare**

E.J. van Jaarsveld & L. Potter

e**Distribution:** NC. Komaggas and Spektakel Pass.

Habitat: Rocky sandstone slopes, usually in shade.

Rationale: A range-restricted Namaqualand endemic (EOO < 250 km^2) known from three collecting records. Not threatened.

Tylecodon kritzingeri Van Jaarsv.

Status: **Rare**

P. Bruyns, E.J. van Jaarsveld & L. Potter

e**Distribution:** NC. Richtersveld.

Habitat: Steep slopes amongst shrubs.

Rationale: A range-restricted species (EOO < 100 km^2), known from fewer than five sites. Not threatened.

F **Tylecodon leucothrix** (C.A.Sm.) Toelken **Plate 55**

Status: **Rare**

P. Bruyns & D. Raimondo

e**Distribution:** WC. Ladismith to Van Wyksdorp.

Habitat: Shaded places, usually on south-facing aspects and often associated with rock outcrops.

Rationale: A habitat specialist known from five subpopulations. Not threatened.

F **Tylecodon longipes** Van Jaarsv. & G.Will.

Status: **Critically Rare**

E.J. van Jaarsveld & D. Raimondo

e**Distribution:** NC. Richtersveld.

Habitat: Sheer, south-facing quartzitic sandstone slopes.

Rationale: A range-restricted Richtersveld endemic known from one site. Not threatened because of the inaccessibility of its habitat.

F **Tylecodon nigricaulis** G.Will. & Van Jaarsv.

Status: **Rare**

E.J. van Jaarsveld & D. Raimondo

e**Distribution:** NC. Bitterfontein.

Habitat: Shallow, soil-filled pockets on large granite inselbergs.

Rationale: A range-restricted Namaqualand endemic (EOO < 10 km^2), known from two sites. Not threatened because of the inaccessibility of its habitat.

F **Tylecodon nolteei** Lavranos **Plate 55**

Status: **VU** D2

E.J. van Jaarsveld, D. Raimondo & P.G. Desmet

e**Distribution:** WC. Nuwerus.

Habitat: Rock crevices in sandstone, quartzite or shale.

Rationale: Known from two locations. Potentially threatened by infrastructure development and harvesting for the specialist succulent horticultural trade.

F **Tylecodon peculiaris** Van Jaarsv.

Status: **Critically Rare**

E.J. van Jaarsveld & D. Raimondo

e**Distribution:** WC. Knersvlakte.

Habitat: Quartz flats.

Rationale: Known from one site. Not known to be threatened.

F **Tylecodon scandens** Van Jaarsv.

Status: **Rare**

E.J. van Jaarsveld & D. Raimondo

e**Distribution:** WC. Knersvlakte.

Habitat: Quartz flats.

Rationale: A range-restricted Knersvlakte endemic (EOO 20 km^2), known from three sites. No recorded threats.

F **Tylecodon stenocaulis** Bruyns

Status: **Rare**

E.J. van Jaarsveld & D. Raimondo

e**Distribution:** WC. Tanqua Karoo.

Habitat: Shale on hills and stony outcrops.

Rationale: A range-restricted species (EOO < 200 km^2), known from five sites. Not threatened.

Tylecodon suffultus Bruyns ex Toelken

Status: **Critically Rare**

E.J. van Jaarsveld & D. Raimondo

e**Distribution:** WC. Knersvlakte, near Vanrhynsdorp.

Habitat: Lower slopes on shale in Vanrhynsdorp Gannabosveld.

Rationale: Known from one site. Not threatened.

F **Tylecodon sulphureus** (Toelken) Toelken var. **armianus** Van Jaarsv.

Status: **Rare**

P.F. Matlamela, D. Raimondo & D.A. Kamundi†

e**Distribution:** NC. Orange River Valley in northern Bushmanland, Dabenoris to Pellaberg Mountains.

Habitat: Steep, often sheer, north-facing quartz cliffs, shaded for most of the day, 700–1 100 m.

Rationale: A range-restricted taxon (EOO 230 km^2) known from two subpopulations. No recorded threats.

Tylecodon tenuis (Toelken) Bruyns

Status: **Rare**

E.J. van Jaarsveld & D. Raimondo

e**Distribution:** WC. Knersvlakte.

Habitat: Quartz gravel flats.

Rationale: A habitat specialist. No known threats.

Tylecodon torulosus Toelken

Status: **VU** D2

E.J. van Jaarsveld & D. Raimondo

e**Distribution:** NC. Richtersveld.

Habitat: Shaded quartzite rock crevices.

Rationale: Known from one location where it is potentially threatened by diamond quartz mining.

F **Tylecodon tuberosus** Toelken

Status: **Rare**

D. Raimondo, P.A. Manyama & D.A. Kamundi†

e**Distribution:** NC. Steinkopf.

Habitat: Shaded rock crevices, 900–1 100 m.

Rationale: Known from one site (EOO < 10 km^2). No recorded threats.

F **Tylecodon viridiflorus** (Toelken) Toelken **Plate 55**

Status: **Rare**

D. Raimondo, P.A. Manyama & D.A. Kamundi†

e**Distribution:** NC. Richtersveld, near Modderfontein and Helskloof.

Habitat: Shaded rock crevices, 600–900 m.

Rationale: A range-restricted species (EOO < 100 km^2), known from two subpopulations. No known threats as its habitat is inaccessible to livestock.

CUCURBITACEAE

Acanthosicyos Welw. ex Hook.f.

Acanthosicyos horridus Welw. ex Hook.f.

Status: **CR** PE

D. Raimondo

Distribution: NC. Angola to Namaqualand.

Habitat: Dry sand dunes.

Rationale: Known from two collections in South Africa, from Namaqualand and the Richtersveld, both made

before 1925. It has not been recollected in the Northern Cape and may be lost here, but further searches are required to confirm this. The species is still widespread in Namibia and Angola despite the utilisation of its fruits for food.

Cucumis L.

Cucumis humifructus Stent

Status: **VU** B1ab(ii,v)
J.E. Victor & M.F. Pfab
Distribution: G LM. Eastern and southern tropical Africa, and from Kenya to northern Namibia.
Habitat: Woodland and grassland, deep sand, 1 350–1 500 m.
Rationale: A range-restricted species within South Africa (EOO 8 300 km^2), but widespread elsewhere in Africa. Known from 6–10 old herbarium records, none of which are from reserves. It is entirely dependent on aardvarks for dispersal and recruitment, and is probably declining because of local extinctions of aardvarks outside reserves in South Africa. Historical locations within Gauteng cannot be relocated and it is presumed to be locally extinct.

Gerrardanthus Harv. ex Hook.f.

Gerrardanthus tomentosus Hook.f.

Status: **VU** D1+2
D. Styles, C.R. Scott-Shaw, D. Raimondo & L. von Staden
[e]**Distribution:** KZN. Durban.
Habitat: Among boulders and screes in steep, wooded sandstone ravines, 100–400 m.
Rationale: The distribution of this rare species is entirely confined within the Greater Durban Metropolitan Area, one of the fastest developing urban regions in South Africa. It has, however, survived extensive urban expansion and land degradation by virtue of its inaccessible habitat which is unsuitable for either development or agriculture. It is known from five sites and is potentially threatened by invading alien plants, habitat degradation as a result of firewood harvesting and harvesting for medicinal purposes. We estimate that there are less than 1 000 mature individuals.

CYTINACEAE

Cytinus L.

[F] **Cytinus capensis** Marloth

Status: **CR** PE
A.G. Rebelo, P.M. Burgoyne & D. Raimondo
[e]**Distribution:** WC. Cape Peninsula.
Habitat: Deep sands, parasitic, mainly on *Metalasia muricata*.
Rationale: Known from seven locations in the past but not collected since 1965. Concerted efforts in recent years have failed to relocate it. It is probably extinct because of urban expansion and dense infestations of invasive alien plants.

DIPSACACEAE

Cephalaria Schrad.

[F] **Cephalaria armerioides** Szabó

Status: **DD**D
P.A. Manyama
[e]**Distribution:** LM MP. Groblersdal to Roossenekal.
Habitat: Open woodland, in rocky habitats above 1 300 m.
Rationale: Known from an early collection near Roossenekal by Young in 1933 and two collections made by Acocks in 1959. One of the latter sites has been lost to urban expansion and the other is severely threatened by habitat degradation caused by overgrazing. Not enough is known about the current population status of this species to determine its threat status.

[F] **Cephalaria decurrens** (Thunb.) Roem. & Schult.

Status: **Rare**
N.A. Helme & D. Raimondo
[e]**Distribution:** NC WC. Koebee and Bokkeveld Escarpments.
Habitat: Thin shale bands on sandstone slopes.
Rationale: Currently recorded from two subpopulations. A few more subpopulations are likely. No significant threats exist where this species occurs.

[F] **Cephalaria foliosa** Compton

Status: **VU** D2
W.G. Welman & J.E. Victor
Distribution: KZN. Eastern Swaziland and Vryheid district in northern KwaZulu-Natal.
Habitat: Moist montane grassland, in wetlands and near streams, 1 000–1 500 m.
Rationale: Known from fewer than five locations and potentially threatened by afforestation, agriculture, overgrazing, urban expansion and invasion by alien plants.

[F] **Cephalaria galpiniana** Szabó subsp. **galpiniana**

Status: **VU** D2
J.E. Victor
Distribution: EC KZN. KwaZulu-Natal Drakensberg Mountains and Lesotho.
Habitat: Montane grassland, short, sloping subalpine and alpine grasslands and gravel beds on summits, 2 400–3 000 m.
Rationale: Known from three locations and potentially threatened by overgrazing and trampling and associated soil erosion.

[F] **Cephalaria wilmsiana** Szabó

Status: **DD**D
D.A. Kamundi† & D. Raimondo
[e]**Distribution:** Unknown.
Habitat: Unknown.
Rationale: Known from one collection made by Wilms in 1894 that has a vague locality description. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

EBENACEAE

Euclea Murray

Euclea dewinteri Retief

Status: **Critically Rare**
J.E. Victor & A.E. van Wyk
[e]**Distribution:** MP. Pilgrim's Rest.
Habitat: Quartzite hill slopes, often rooted in crevices between boulders, in grasslands.
Rationale: Known from one site. The only subpopulation occurs entirely within a formally protected provincial nature reserve. No threats.

ERICACEAE

Erica L.

Erica abbottii E.G.H.Oliv.

Status: **VU** D2
R.C. Turner, A.T.D. Abbott & J.E. Victor
[e]**Distribution:** EC KZN. Umtamvuna to Mkambati.

Habitat: Grassland, marshes, moist seepage areas or along streambanks in permanently waterlogged black turf soil on rocky upper and summit slopes, 800–1 000 m.
Rationale: Known from three locations that are potentially threatened by agriculture.

Erica abelii E.G.H.Oliv.

Status: **VU** D1
R.C. Turner
e**Distribution:** EC. Groendal Wilderness Area, near Uitenhage.
Habitat: Ledges and crevices on high cliffs on quartzitic outcrops.
Rationale: EOO and AOO < 1 km^2. Known from one subpopulation where there are less than 1 000 mature individuals.

Erica abietina L. subsp. **diabolis** E.G.H.Oliv. & I.M.Oliv. **Plate 57**

Status: **CR** B1ab(iii)+2ab(iii)
R.C. Turner, E.G.H. Oliver & D. Raimondo
e**Distribution:** WC. Table Mountain National Park.
Habitat: Rocky upper and summit slopes, mostly 100–800 m, but also at lower altitudes.
Rationale: An extremely localised taxon restricted to the Devil's Peak/Table Mountain saddle and the southern slopes and summit of Devil's Peak (EOO 1 km^2, AOO < 0.1 km^2). This is one of the most heavily trampled and oft-frequented slopes on the entire Table Mountain massif, with multiple eroded pathways on the southern slopes and summit ridge. Frequent fires on the northern slopes of Table Mountain also threaten this single-stemmed reseeder.

F **Erica abietina** L. subsp. **perfoliosa** E.G.H.Oliv. & I.M.Oliv.

Status: **CR** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)
R.C. Turner & E.G.H. Oliver
e**Distribution:** WC. Stellenbosch.
Habitat: Lower, granitic, loamy slopes.
Rationale: A recently described taxon, known from one location (EOO and AOO 5 km^2). The entire population falls within a pine plantation and subpopulations are highly fragmented. Several subpopulations occur in roadside cuttings and are being degraded by erosion.

F **Erica abietina** L. subsp. **petraea** E.G.H.Oliv. & I.M.Oliv.

Status: **EN** D
R.C. Turner
e**Distribution:** WC. Groot Winterhoek Mountains near Porterville.
Habitat: Rock crevices on rocky outcrops.
Rationale: EOO 10 km^2, AOO 0.5 km^2. This is an extremely localised taxon, known from less than 250 mature individuals and potentially threatened by invasive alien pines and frequent fires.

F **Erica accommodata** Klotzsch ex Benth. var. **subviscidula** Bolus

Status: **Rare**
R.C. Turner
e**Distribution:** WC. The upper slopes of the Riviersonderend Mountains, the Hex River and Kammanassie Mountains.
Habitat: Steep, upper, south-facing slopes and summit ridges on damp, peaty rock ledges.
Rationale: A habitat specialist with a naturally disjunct distribution. Most subpopulations occur on the Riviersonderend Mountains but there are outliers from the Hex River and Kammanassie Mountains. No significant threats.

F **Erica affinis** Benth.

Status: **NT** D2
R.C. Turner & D. Raimondo
e**Distribution:** EC WC. Uniondale to Uitenhage.
Habitat: Rocky/sandy mountain slopes and plateaus, as well as hills and streambeds at lower altitudes.
Rationale: EOO 4 500 km^2. Known from nine locations. A slow-growing reseeder potentially threatened by short fire return intervals.

Erica agglutinans E.G.H.Oliv.

Status: **EN** B1ab(iii,v)
E.G.H. Oliver & R.C. Turner
e**Distribution:** WC. Napier to Bredasdorp and Geelrug.
Habitat: Seasonal seepage areas and drier slopes on sandy, quartzitic flats or limestone.
Rationale: EOO < 500 km^2. Known from three historical locations. The Napier location has been lost to crop cultivation and infestations of invasive alien plants. The remaining two locations are severely threatened by invasive alien plants and grazing by livestock.

Erica aghillana Guthrie & Bolus var. **aghillana**

Status: **EN** B1ab(ii,iii,v)
E.G.H. Oliver & R.C. Turner
e**Distribution:** WC. Cape Agulhas to Pearly Beach.
Habitat: Sandy coastal flats and grey, loamy soils (inland areas).
Rationale: EOO < 200 km^2. Known from three locations. This taxon is severely threatened by encroachment from invasive alien acacias and by golf course and housing developments.

F **Erica albospicata** Hilliard & B.L.Burtt

Status: **Rare**
R.C. Turner & D. Raimondo
e**Distribution:** KZN. Drakensberg mountain range.
Habitat: Steep, grassy slopes.
Rationale: Known from only three sites. No recorded threats.

Erica alexandri Guthrie & Bolus subsp. **acockii** (Compton) E.G.H.Oliv.

Status: **EX**
E.G.H. Oliver & D. Pillay
e**Distribution:** WC. Kraaifontein.
Habitat: Sandy flats.
Rationale: This taxon has only ever been collected in the Kraaifontein area where all its habitat has been converted for urban and industrial development. Not collected since 1940 and therefore considered extinct.

Erica alexandri Guthrie & Bolus subsp. **alexandri**

Status: **CR** B1ab(i,ii,iii,iv,v)+B2ab(i,ii,iii,iv,v)
R.C. Turner
e**Distribution:** WC. Wemmershoek Mountains.
Habitat: Wetlands on sandy flats at foot of mountains.
Rationale: EOO < 10 km^2, AOO 2 km^2. There are two fragmented extant subpopulations and both are severely threatened by forestry, sand mining and invasion by alien plants.

Erica alfredii Guthrie & Bolus

Status: **VU** D1+2

E.G.H. Oliver & R.C. Turner

eDistribution: WC. Riviersonderend Mountains, Pilaarkop.

Habitat: High-altitude, rocky, north-facing slopes.

Rationale: Known from one location (EOO < 20 km^2), with low population numbers (less than 500 mature individuals in total). Scattered pines occur within its habitat on Pilaarkop and pose a potential threat to this species.

F **Erica altiphila** E.G.H.Oliv.

Status: **Rare**

R.C. Turner

eDistribution: WC. Hex River Mountains, Jonaskop, Stettynsberg and Du Toit's Kloof Mountains.

Habitat: Rocky or sandy mountain summits.

Rationale: A poorly known, high-altitude habitat specialist with tiny, wind-pollinated flowers. Not threatened.

F **Erica amalophylla** E.G.H.Oliv. & I.M.Oliv.

Status: **DD**D

R.C. Turner & D.A. Kamundi†

eDistribution: WC. Porterville.

Habitat: Shaded, sandy floor of overhanging rock shelter.

Rationale: Known only from the type, collected in the 1940s. Not enough is known about the distribution or current population status of this species to determine its status.

F **Erica amicorum** E.G.H.Oliv.

Status: **Rare**

R.C. Turner

eDistribution: WC. Langeberg Mountains.

Habitat: Amongst restios in seepage areas or in wetlands, mostly between 300–600 m.

Rationale: This localised Langeberg endemic (EOO < 40 km^2) occurs at four sites and is restricted to its specialised wetland habitat. Not currently threatened.

Erica amoena J.C.Wendl. **Plate 58**

Status: **Rare**

E.G.H. Oliver & R.C. Turner

eDistribution: WC. Constantiaberg to Clovelly, Red Hill Plateau and the Cape Point section of the Table Mountain National Park.

Habitat: Mountain streams and marshes.

Rationale: A range-restricted species (EOO < 125 km^2), known from 5–10 subpopulations. Typically encountered as dense, localised stands of several hundred to thousands of plants. Not threatened as it occurs within the boundaries of the Table Mountain National Park.

F **Erica amphigena** Guthrie & Bolus

Status: **VU** D2

R.C. Turner & D.A. Kamundi†

eDistribution: WC. Houwhoek.

Habitat: Lower mountain slopes.

Rationale: Known from one location. Part of the population has been lost to road construction. This species is potentially threatened by afforestation, invasion by alien plants and a deleterious fire regime.

Erica aneimena Dulfer

Status: **VU** D2

R.C. Turner

eDistribution: WC. George, Outeniqua Mountains.

Habitat: Cool, moist, south-facing shale slopes.

Rationale: Known from three locations and potentially threatened by encroachment from invasive alien pines as extensive pine plantations cover the lower slopes of the these mountains to the north of George.

F **Erica annalis** E.G.H. & I.M.Oliv.

Status: **Critically Rare**

R.C. Turner & E.G.H. Oliver

eDistribution: WC. Kammanassie Mountains.

Habitat: Low altitude on quartzitic rock faces, in crevices. Surrounding vegetation is arid scrub with no fynbos elements.

Rationale: Known from one subpopulation. No known direct threats.

Erica annectens Guthrie & Bolus

Status: **VU** D2

E.G.H. Oliver & R.C. Turner

eDistribution: WC. Cape Peninsula.

Habitat: Steep, moist slopes, on peaty rock ledges and cliff faces.

Rationale: EOO < 100 km^2. Known from three locations and subpopulations. Potentially threatened by frequent fires and invasive alien plant infestation. No plants have been collected from Noordhoek Peak and the Swartkopberge for over 25 years and the status of these subpopulations is unknown. The plants occur in very inaccessible places and are not often visited by collectors.

Erica anomala Hilliard & B.L.Burtt

Status: **Rare**

R.C. Turner & E.G.H. Oliver

eDistribution: KZN. KwaZulu-Natal Drakensberg Mountains, from Giant's Castle to Garden Castle and Impendle and Underberg districts.

Habitat: Montane grassland. Damp cliffs, rubble banks above stream gullies, sometimes in rock crevices near damp overhangs, 1 900–2 150 m.

Rationale: Known from five sites in the Drakensberg. A habitat specialist restricted to damp cliffs at very high altitudes. Not threatened.

F **Erica arenaria** L.Bolus

Status: **NT** B1ab(iii,v)

E.G.H. Oliver & R.C. Turner

eDistribution: WC. Cape Infanta to Still Bay.

Habitat: South-facing limestone ridges.

Rationale: EOO < 350 km^2. Known from less than 15 locations. Occurs as large stands in the Still Bay area. It is severely threatened by dense acacia infestations throughout its range and is declining as a result.

Erica aristifolia Benth.

Status: **VU** D2

N.A. Helme, D. Raimondo & R.C. Turner

eDistribution: WC. Gifberg/Matsikamma Mountains.

Habitat: Flat or gently sloping rocky or sandy, mostly nonperennial seepage areas.

Rationale: EOO < 100 km^2. Known from three locations. There was a past threat from wetland infilling and crop cultivation and these activities remain potential future threats.

F **Erica aspalathifolia** Bolus var. **aspalathifolia**

Status: **Declining**

C.R. Scott-Shaw & R.C. Turner

eDistribution: EC KZN. Pondoland to Pietermaritzburg.

Habitat: Damp slopes and ledges.

Rationale: A widespread grassland taxon with a range of ± 30 000 km². As this is a low-altitude taxon, it has lost habitat to agriculture, afforestation and urban development but has not yet declined sufficiently to qualify for NT or VU.

Erica aspalathoides Guthrie & Bolus

Status: **VU** D2

E.G.H. Oliver & R.C. Turner

e**Distribution:** WC. Clanwilliam to Gydo Pass.

Habitat: Variety of aspects, mostly east to northeast, under damp, peaty overhangs and ledges.

Rationale: Known from three locations and potentially threatened by too frequent fires as it is a slow-growing reseeder.

F **Erica astroites** Guthrie & Bolus var. **astroites** Plate 59

Status: **Rare**

R.C. Turner

e**Distribution:** WC. Oudtshoorn district, Meiringspoort.

Habitat: Cliff faces or waterfalls.

Rationale: Extremely localised in Meiringspoort (EOO < 50 km²). Several small stands of this taxon are known. No recorded threats.

F **Erica atherstonei** Diels ex Guthrie & Bolus

Status: **NT** D2

M. Lötter, J.E. Burrows & L. von Staden

e**Distribution:** MP. Pilgrim's Rest to Buffelskloof.

Habitat: Rocky areas (quartzite) in montane grassland at edge of escarpment or on steep slopes, occasionally in moist areas, 1 500–2 500 m.

Rationale: It has specialised habitat requirements and occurs within a restricted range. Known from 7–10 locations. It is potentially threatened by mining, afforestation, a deleterious fire regime and invasion by alien plants.

F **Erica atromontana** E.G.H.Oliv.

Status: **Rare**

R.C. Turner & J.E. Victor

e**Distribution:** WC. Klein and Groot Swartberg Mountains.

Habitat: Seepage areas, low sandstone slopes.

Rationale: A range-restricted species (EOO 500 km²) that is fairly common within in its specific habitat on the southern side of the Swartberg Mountains. Not threatened.

Erica atrovinosa E.G.H.Oliv.

Status: **EN** D

E.G.H. Oliver & R.C. Turner

e**Distribution:** WC. Hex River Mountains.

Habitat: Short restioid vegetation on shale bands on rocky, north-facing slopes.

Rationale: EOO < 75 km². Three subpopulations. At Milner Ridge Peak/Vlakte there are 20–30 individuals and we suspect that the other two subpopulations have similarly low numbers. The total population is therefore likely to be less than 250 plants. This species faces the potential threat of too frequent fires.

Erica bakeri T.M.Salter

Status: **CR** B1ab(iii)+2ab(iii)

R.C. Turner, E.G.H. Oliver & D. Pillay

e**Distribution:** WC. Wemmershoek Mountains.

Habitat: Wetland areas on sandy flats.

Rationale: Known from one location (EOO and AOO 0.2 km²). This species occurs within a commercial forestry plantation. Its habitat is being constantly degraded as a result of invasion by alien plants and a deleterious fire regime.

Erica banksii Andrews subsp. **comptonii** (T.M.Salter) E.G.H.Oliv. & I.M.Oliv. Plate 56

Status: **EN** D

R.C. Turner

e**Distribution:** WC. Kogelberg Biosphere Reserve.

Habitat: Rocky mountain summits.

Rationale: Known from two small subpopulations totalling less than 250 mature individuals. This taxon is potentially threatened by trampling by hikers on the Hangklip Mountain.

Erica barrydalensis L.Bolus

Status: **Rare**

E.G.H. Oliver, R.C. Turner & D. Pillay

e**Distribution:** WC. Langeberg Mountains.

Habitat: Rocky slopes at high altitudes.

Rationale: A rare, range-restricted, high-altitude species known from two sites (EOO 96 km²). Not threatened.

Erica baueri Andrews subsp. **baueri** Plate 56

Status: **CR** B2ab(i,ii,iii,iv,v)

D. Raimondo, A.L. Schutte-Vlok & R.C. Turner

e**Distribution:** WC. Still Bay to Riversdale.

Habitat: Quartzitic and neutral sandy flats on perched wetlands on limestone ridges.

Rationale: EOO < 500 km², AOO < 10 km². Currently extant at fewer than five severely fragmented subpopulations. This taxon has lost 60% of its habitat over the past 40 years to crop cultivation, invasive alien plant infestations, overgrazing by livestock, too frequent fires and flower-picking. It is a slow-growing reseeder with a generation length suspected to be 15 years. All the listed threats are ongoing, causing further declines.

F **Erica baueri** Andrews subsp. **gouriquae** E.G.H.Oliv. & I.M.Oliv.

Status: **CR** B1ab(iii)

E.G.H. Oliver, A.L. Schutte-Vlok & R.C. Turner

e**Distribution:** WC. Ystervarkpunt.

Habitat: Neutral sand over limestone.

Rationale: A small population of less than 500 plants at one known location (EOO < 20 km²) continues to decline because of ongoing habitat degradation caused by invading alien acacias.

Erica berzelioides Guthrie & Bolus Plate 56

Status: **CR** B1ab(ii,iii,v)+2ab(ii,iii,v); D

E.G.H. Oliver, R.C. Turner & D. Raimondo

e**Distribution:** WC. Bredasdorp.

Habitat: Neutral sand over limestone.

Rationale: EOO < 10 km². Known from one location. Extensive recent searches yielded 10 mature individuals. The habitat is severely threatened and affected by grazing livestock, a deleterious fire regime and invasive alien acacias.

[F] **Erica blaerioides** E.G.H.Oliv. subsp. **blaerioides**

Status: **Rare**

R.C. Turner

[e]**Distribution:** WC. Groot Swartberg Mountains.

Habitat: High altitude on cool slopes.

Rationale: A range-restricted endemic to the Groot Swartberg Mountains (EOO 10 km^2) occurring mainly on the Kariegasberg. No recorded threats.

[F] **Erica blaerioides** E.G.H.Oliv. subsp. **hirsuta** E.G.H.Oliv.

Status: **Rare**

R.C. Turner

[e]**Distribution:** WC. Klein Swartberg Mountains, Seweweekspoort.

Habitat: Seasonally moist areas on high mountain slopes.

Rationale: An extremely localised, high-altitude taxon (EOO 7 km^2). No known threats.

Erica bolusiae Salter var. **bolusiae**

Status: **CR** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v); C2a(ii)

R.C. Turner & D. Raimondo

[e]**Distribution:** WC. Yzerfontein to Kraaifontein.

Habitat: Seasonal wetlands and seepage areas on sandy coastal plains.

Rationale: Urban expansion, crop cultivation, grazing and alien acacia infestations have decimated the range of this taxon. Only one known extant locality remains. This taxon now has a diminished EOO of less than 1 km^2 and an AOO of less than 200 m^2. Less than 250 mature individuals are extant. Decline as a result of grazing by livestock and invasive alien plants is ongoing.

[F] **Erica bolusiae** Salter var. **cyathiformis** H.A.Baker

Status: **EW**

R.C. Turner & D. Raimondo

[e]**Distribution:** WC. Formerly occurred near Kraaifontein on the Cape Flats.

Habitat: Acid sand plain fynbos, seepage areas on sandy flats.

Rationale: Urban expansion, agriculture, grazing and invading alien acacias have led to the complete loss of the habitat of this taxon. It is now extinct in the wild. Plants are cultivated at Kirstenbosch National Botanical Garden.

[F] **Erica boucheri** E.G.H.Oliv.

Status: **Rare**

R.C. Turner

[e]**Distribution:** WC. Worcester, Ouhangsberg.

Habitat: Sandy slopes in fynbos.

Rationale: A range-restricted species (EOO < 40 km^2), known from one population. No known threats.

[F] **Erica brachialis** Salisb.

Status: **EN** B1ab(ii,iii,iv,v); C2a(i)

R.C. Turner & D.A. Kamundi†

[e]**Distribution:** WC. Camps Bay to Cape Point, and Rooiels to Pringle Bay.

Habitat: Rocky coastal outcrops, slopes, and low coastal mountains, on granitic and sandstone substrates.

Rationale: EOO 144 km^2. Known from six small, severely fragmented subpopulations. Extinct at historical locations on the northern Cape Peninsula as a result of urban expansion. Remaining subpopulations on the Peninsula are threatened by frequent fires. The Rooiels/Pringle Bay subpopulation has been severely affected and is still currently threatened by coastal housing development. It has very low total population numbers—less than 500 mature individuals, and no subpopulation has more than 250 plants.

Erica brachysepala Guthrie & Bolus

Status: **EN** B1ab(i,ii,iii,v)

R.C. Turner

[e]**Distribution:** WC. Bot River and Theewaterskloof to Elim and Soetanysberg.

Habitat: Lowland fynbos, usually in slightly loamy quartzitic sand over laterite.

Rationale: Formerly more abundant and widespread in the lowlands, now confined to seven small, severely fragmented subpopulations and an area of 1 275 km^2. All locations are being severely degraded by agriculture, invasion by alien plants, a deleterious fire regime and infrastructure development (power lines, roads etc.).

[F] **Erica brevicaulis** Guthrie & Bolus

Status: **Rare**

R.C. Turner

[e]**Distribution:** WC. Hex River Mountains on the peaks surrounding the Matroosberg.

Habitat: Rock crevices at high altitudes.

Rationale: A range-restricted species (EOO < 100 km^2), fewer than five subpopulations are known. The species occurs in a habitat that is protected from too frequent fires and is not threatened.

[F] **Erica burchelliana** E.G.H.Oliv.

Status: **CR** D

E.G.H. Oliver & R.C. Turner

[e]**Distribution:** WC. Garcia's Pass.

Habitat: Fynbos, dry, sandy, stony north-facing slopes.

Rationale: A naturally rare, localised resprouter, known from one site. The population consists of less than 50 plants, which are old resprouting individuals, and recruitment appears to be unsuccessful. Potentially threatened by grazing by livestock and too frequent fires.

[F] **Erica cabernetea** E.G.H.Oliv.

Status: **CR** B1ab(ii,iii,v)+2ab(ii,iii,v)

R.C. Turner, E.G.H. Oliver & D. Pillay

[e]**Distribution:** WC. Elgin.

Habitat: Sandy flats in fynbos.

Rationale: An extremely localised endemic (EOO < 11.25 km^2, AOO < 1 km^2), known from one location. Declining because of dam construction, fruit orchards, invasive alien plants and forestry (pine) plantations.

Erica calcareophila E.G.H.Oliv. **Plate 56**

Status: **VU** D2

R.C. Turner

[e]**Distribution:** WC. Pearly Beach.

Habitat: Limestone boulders, cliff faces and ridge tops.

Rationale: EOO 6 km^2, AOO < 3 km^2. Known from one location. It faces the potential threat of a nuclear power station being constructed (the only known location where it occurs is owned by ESKOM) as well as infestation by *Acacia cyclops*.

Erica calcicola (E.G.H.Oliv.) E.G.H.Oliv.

Status: **EN** B1ab(iii,v)+2ab(iii,v)

E.G.H. Oliver, R.C. Turner & D. Raimondo

[e]**Distribution:** WC. Pearly Beach and Still Bay.

Habitat: Moderate to steep, southwest- to southeast-facing slopes on limestone ridges.

Rationale: EOO < 1 000 km². Known from two locations. Declining as a result of invasion by alien plants. Potentially threatened by a deleterious fire regime.

Erica caledonica A.Spreng.

Status: **EN** D
R.C. Turner

e**Distribution:** WC. Riviersonderend Mountains.
Habitat: Fynbos, rocky mountain summits, ridges and slopes.
Rationale: EOO < 22 km², AOO < 0.1 km². One known subpopulation of less than 200 mature individuals is potentially threatened by invading alien pines and too frequent fires.

Erica capensis Salter

Status: **Rare**
E.G.H. Oliver, R.C. Turner & D. Pillay

e**Distribution:** WC. Cape Peninsula.
Habitat: Wetlands and adjacent seepage areas.
Rationale: Endemic to marshy areas in the Cape Point section of the Table Mountain National Park (EOO 78 km²), known from one large, continuous population. No known threats.

F Erica capillaris Bartl. var. capillaris

Status: **CR** B1ab(i,ii,iii,iv,v)
R.C. Turner

e**Distribution:** WC. Cape Peninsula to Stanford.
Habitat: Lowland acid sands or low slopes in fynbos.
Rationale: This taxon has been exterminated throughout most of its historical range (EOO was 3 600 km², now ± 73 km²). It is also severely fragmented. Extinct at all Cape Flats/Cape Town southern suburbs locations as a result of urban development, crop cultivation and encroachment from invasive alien vegetation, and threatened at Hermanus because of expansion of a golf course. Only the Kommetjieberg (Cape of Good Hope Nature Reserve) location is conserved.

Erica capitata L. Plate 59

Status: **VU** B1ab(iii,iv,v)
R.C. Turner

e**Distribution:** WC. Cape Peninsula and Groot Hagelkraal to Mamre.
Habitat: Fynbos, near seepage areas or streams on sandy, lowland plains and more rarely sandy, quartzitic mountain plateaus.
Rationale: EOO 6 250 km². Found mostly on lowlands but a few subpopulations known from mountain plateaus. Over 80% of the lowland habitat of this species has been transformed for agriculture and urban development over the past 80 years. Nine of 15 subpopulations are extant, most of which are severely fragmented, occurring on small, isolated habitat remnants. Habitat loss to urban expansion and invasion by alien plants is ongoing.

Erica caprina E.G.H.Oliv.

Status: **VU** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)
E.G.H. Oliver & R.C. Turner

e**Distribution:** WC. Ceres to Citrusdal.
Habitat: Fynbos, sandy, quartzitic plateaus between mountain ranges, 900–1 500 m.
Rationale: EOO < 1 750 km². Known from fewer than 10 locations. Subpopulations in the Kouebokkeveld Valley are declining as a result of ongoing agricultural expansion (mostly orchards, vineyards and onion fields).

Erica caterviflora Salisb. var. caterviflora Plate 58

Status: **EN** B1ab(iii)+2ab(iii); C2a(i); D
R.C. Turner & A.N. Hitchcock

e**Distribution:** WC. Table Mountain National Park.
Habitat: Damp, peaty rock ledges and cliff faces, 600–1 000 m.
Rationale: EOO < 35 km², AOO 1.2 km². This taxon was thought to be extinct, but was rediscovered above the Woodhead Dam in 2006. Stands have now also been atlassed on Valken Buttress, Valley of the Red Gods/Ark Valley, head of the Disa Gorge, and Isolation Ridge (four locations). There is a total of 255 plants known. This taxon is threatened by trampling at all locations except the Disa Gorge cliffs.

F Erica caterviflora Salisb. var. glabrata Benth.

Status: **CR** B1ab(iii)+2ab(iii); D
R.C. Turner, E.G.H. Oliver & A.N. Hitchcock

e**Distribution:** WC. Table Mountain.
Habitat: Damp, peaty rock ledges and cliff faces, 600–1 000 m.
Rationale: Only seven plants are known, from three locations within 1 km² of one another. Threatened by trampling at all locations.

F Erica cavartica E.G.H. & I.M.Oliv.

Status: **DD**D
R.C. Turner, D.A. Kamundi† & D. Raimondo

e**Distribution:** WC. Cederberg Wilderness Area, near Crystal Pool.
Habitat: Rock crevices and on floor of a sandy cave.
Rationale: Recently described from material collected in 1932. Despite several searches it has not been relocated and is therefore too poorly known to be assessed.

F Erica ceraria E.G.H.Oliv. & I.M.Oliv.

Status: **Critically Rare**
P.A. Manyama

e**Distribution:** WC. Kogelberg Peak to the mountains above Betty's Bay.
Habitat: Rocky peaks and ridges in fynbos.
Rationale: Known from one site within the Kogelberg Biosphere Reserve. Not threatened.

F Erica cereris (Compton) E.G.H.Oliv. Plate 58

Status: **Rare**
R.C. Turner

e**Distribution:** WC. Northern slopes of the Hex River Mountains.
Habitat: Sandy lower slopes in fynbos.
Rationale: A range-restricted species (EOO less than 70 km²) with fewer than five known subpopulations. Locally common and not threatened.

F Erica chionodes E.G.H.Oliv.

Status: **Rare**
R.C. Turner

e**Distribution:** WC. Swartberg Mountains.
Habitat: Montane seepage areas, in restionaceous fynbos.
Rationale: A range-restricted species (EOO ± 100 km²), known from two sites, where it is locally abundant. Not threatened.

[F] **Erica chiroptera** E.G.H.Oliv.
Status: **Rare**
R.C. Turner
[e]**Distribution:** WC. Kogelberg.
Habitat: Fynbos, in sandy quartzitic soils.
Rationale: A range-restricted species (EOO < 100 km^2), known from one population which is protected in the Kogelberg Biosphere Reserve.

Erica chlorosepala Benth.
Status: **VU** D2
R.C. Turner & E.G.H. Oliver
[e]**Distribution:** WC. Swellendam to Riversdale.
Habitat: Fynbos, on rocky or sandy, north-facing mountain slopes.
Rationale: A range-restricted species from the central Langeberg (EOO 200 km^2), infrequently encountered. Most collections are from the Goedgeloof Peak area. Although it occurs within provincial reserves, invasive alien pines remain a potential threat in parts of its range.

Erica chrysocodon Guthrie & Bolus
Status: **CR** B1ab(iii)
R.C. Turner & E.G.H. Oliver
[e]**Distribution:** WC. Franschhoek to Villiersdorp.
Habitat: Peaty seepage areas on lower mountain slopes.
Rationale: EOO 2 km^2. Known from ± 1 000 plants at a single location that is not conserved. Alien plant infestations are causing a continuing degradation of the marshy habitat of this species.

Erica clavisepala Guthrie & Bolus
Status: **Rare**
E.G.H. Oliver & R.C. Turner
[e]**Distribution:** WC. Southern Cape Peninsula.
Habitat: Marshy flats.
Rationale: A range-restricted species (EOO 45 km^2), locally common, with at least 20 000 plants known. This species is protected within the Cape Point section of the Table Mountain National Park and is not threatened.

[F] **Erica columnaris** E.G.H.Oliv.
Status: **VU** D2
E.G.H. Oliver & R.C. Turner
[e]**Distribution:** WC. Riviersonderend Mountains.
Habitat: South-facing, damp, peaty hollows and steep upper slopes.
Rationale: An extremely localised species, known from the type locality. Although there are at least 2 000 plants, it occurs only within an area of 1 km^2. Potentially threatened by encroachment from invasive alien pines on the middle and lower slopes of Pilaarkop.

[F] **Erica comata** Guthrie & Bolus
Status: **DD**D
R.C. Turner
[e]**Distribution:** WC. Langeberg, Craggy Peak.
Habitat: Rocky slopes in fynbos.
Rationale: Known only from the type, collected in 1815. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

[F] **Erica conspicua** Sol. subsp. **roseoflora** E.G.H.Oliv. & I.M.Oliv.
Status: **Rare**
P.A. Manyama
[e]**Distribution:** WC. Keeromsberg and Langeberg Mountains.
Habitat: Fynbos, in marshes and along streambanks.
Rationale: Known from two small areas (EOO < 500 km^2). Not threatened.

[F] **Erica constantia** Nois. ex Benth.
Status: **Rare**
R.C. Turner & E.G.H. Oliver
[e]**Distribution:** WC. Hex River Mountains to Klein Swartberg Mountains.
Habitat: Summit ridges and rocky, south-facing slopes.
Rationale: Occasional on summit ridges along the drier inland mountain ranges. Not threatened.

[F] **Erica cooperi** Bolus var. **cooperi**
Status: **Rare**
R.C. Turner & E.G.H. Oliver
[e]**Distribution:** EC KZN. Southern Drakensberg Mountains.
Habitat: Seepage areas on grassy mountain slopes.
Rationale: Habitat specialist, EOO 3 000 km^2. Not threatened.

[F] **Erica coruscans** L.Bolus
Status: **DD**D
E.G.H. Oliver & R.C. Turner
[e]**Distribution:** WC. Kleinrivier Mountains.
Habitat: Fynbos, among rocks on ridges and summits.
Rationale: A high-altitude species last collected in 1940. Specific habitat and population status not known.

[F] **Erica costatisepala** H.A.Baker
Status: **Rare**
R.C. Turner
[e]**Distribution:** WC. Klein Swartberg and the Kammanassie Mountains.
Habitat: Rocky clefts and crevices.
Rationale: EOO 350 km^2. Known from three subpopulations. A high-altitude species growing in fire-protected habitats. No known threats.

Erica cremea Dulfer
Status: **VU** D1+2
R.C. Turner & E.G.H. Oliver
[e]**Distribution:** WC. Wellington Sneeukop.
Habitat: Shale bands at high altitudes.
Rationale: EOO < 25 km^2, AOO < 2 km^2. Known from less than 1 000 plants. Sneeukop is severely infested by hakeas, which could potentially threaten this species.

[F] **Erica crenata** E.Mey. ex Benth.
Status: **Rare**
R.C. Turner
[e]**Distribution:** WC. Cape Peninsula.
Habitat: Sandstone fynbos, on mountain plateaus and slopes.
Rationale: Although locally extinct at Camps Bay, it is well represented and conserved in other parts of the Table Mountain National Park and is not currently declining. EOO 230 km^2, AOO < 25 km^2. Closely allied morphologically to *E. ferrea*, although *E. ferrea* is always a resprouter whereas *E. crenata* is always a reseeder.

[F] **Erica croceovirens** E.G.H.Oliv. & I.M.Oliv.
Status: **Critically Rare**
P.A. Manyama
[e]**Distribution:** WC. Outeniqua Mountains.

Habitat: Fynbos, on sandy dry flats or rocky north-facing slopes.
Rationale: Confined to the Doring River Wilderness Area (EOO < 10 km²) on the northern slopes of the Outeniqua Mountains. Not threatened.

Erica cryptanthera Guthrie & Bolus

Status: **DD**D
R.C. Turner

[e]**Distribution:** WC. Franschhoek Pass, Hottentots Holland Mountains, and from Kogelberg to the Riviersonderend Mountains.
Habitat: Shaded areas under rocky overhangs.
Rationale: Very poorly known but with a relatively wide distribution (EOO ± 3 000 km²), with too few recent collections to assess it accurately. All subpopulations have to be relocated and assessed.

[F] Erica cubitans E.G.H.Oliv.

Status: **Rare**
R.C. Turner

[e]**Distribution:** WC. Langeberg, Lemoenshoek Peak.
Habitat: Rocky slopes or plateaus in fynbos, 1 300–1 500 m.
Rationale: Endemic to Lemoenshoek Peak (EOO and AOO < 3.2 km²), known from one subpopulation. No known threats.

[F] Erica cunoniensis E.G.H.Oliv.

Status: **EN** D
R.C. Turner & E.G.H. Oliver

[e]**Distribution:** WC. Buffelstalberg, Kogelberg Biosphere Reserve.
Habitat: Steep, moist, south-facing slopes in fynbos.
Rationale: EOO and AOO < 1.5 km². The total population consists of less than 200 individuals. Potentially threatened by too frequent fires—the area has burnt twice with over the past 17 years.

[F] Erica cygnea Salter

Status: **Rare**
R.C. Turner

[e]**Distribution:** WC. Platberg, Kogelberg Biosphere Reserve.
Habitat: Among rocks and rocky outcrops in fynbos, 200–300 m.
Rationale: A range-restricted species (EOO 10 km²). The population is conserved in the Kogelberg Biosphere Reserve.

[F] Erica cymosa E.Mey. ex Benth. subsp. cymosa

Status: **Rare**
R.C. Turner & D.A. Kamundi†

[e]**Distribution:** WC. Wellington to Franschhoek.
Habitat: Moist, shaded cliff faces and damp ledges.
Rationale: EOO 600 km². Known from nine subpopulations. A habitat specialist that is well protected against area threats such as encroachment from invasive alien pines and species of *Hakea* and too frequent fires.

[F] Erica cymosa E.Mey. ex Benth. subsp. grandiflora E.G.H. & I.M.Oliv.

Status: **Rare**
R.C. Turner, D.A. Kamundi† & A.N. Hitchcock

[e]**Distribution:** WC. Worcester to De Doorns.
Habitat: Damp, shaded, south-facing cliff faces.
Rationale: A range-restricted taxon (EOO < 280 km²), known from four subpopulations. No known threats as it occurs in very inaccessible habitats on steep cliffs and mountain summits.

Erica cyrilliflora Salisb.

Status: **EN** A2ce; B1ab(ii,iii,iv)+2(ii,iii,iv)
R.C. Turner & E.G.H. Oliver

[e]**Distribution:** WC. Cape Peninsula.
Habitat: Sandy, quartzitic, nonperennial streambeds and peaty seepage areas on streambanks.
Rationale: An extremely localised and threatened Cape Peninsula endemic. Two of its four known subpopulations have been destroyed over the last 37 years as a result of dam construction (generation length ± 15 years). Declining as a result of urban expansion, crop cultivation and invasion by alien plants. Potentially threatened by a deleterious fire regime and future dam construction.

[F] Erica diosmifolia Salisb.

Status: **Rare**
R.C. Turner & D.A. Kamundi†

[e]**Distribution:** WC. Cape Peninsula, Table Mountain and Constantiaberg.
Habitat: Fynbos, in rocky places at higher altitudes above 600 m.
Rationale: EOO 33 km². At least 10 subpopulations are known. Potentially threatened by too infrequent fires.

Erica diotiflora Salisb.

Status: **EN** B2ab(iii); C2a(i); D
R.C. Turner

[e]**Distribution:** WC. Riviersonderend Mountains.
Habitat: Fynbos, on lower, south-facing mountain slopes.
Rationale: EOO < 43 km². Only two locations and less than 250 mature individuals are known. Declining because of ongoing degradation of the habitat by frequent fires and encroachment from dense stands of alien *Acacia mearnsii* and pines.

[F] Erica dispar (N.E.Br.) E.G.H.Oliv.

Status: **VU** B1ab(i,ii,iii,iv,v)
R.C. Turner & D. Raimondo

[e]**Distribution:** WC. Heidelberg to Mossel Bay.
Habitat: Open sandy areas in lowland fynbos.
Rationale: EOO 2 570 km², AOO < 100 km². Nine locations are known. Crop cultivation, thatch harvesting, urban expansion and invasion by alien plants are causing a continuing decline of habitat and number of subpopulations throughout the range.

[F] Erica dolfiana E.G.H.Oliv. & I.M.Oliv.

Status: **Rare**
R.C. Turner

[e]**Distribution:** WC. Groot Swartberg Mountains.
Habitat: Rocky, stony, high-altitude slopes, in low alpine fynbos.
Rationale: EOO ± 40 km². Known from two naturally disjunct subpopulations. The population is large, consisting of at least 3 000 plants, and is not declining.

[F] Erica doliiformis Salisb.

Status: **Rare**
R.C. Turner

[e]**Distribution:** WC. Elandskloof Mountains to Franschhoek.
Habitat: Mountain slopes in sandstone fynbos.
Rationale: A rare montane species. Subpopulations are small, seldom consisting of more than a few plants. Not threatened.

[F] **Erica dregei** E.G.H.Oliv.

Status: **CR** B2ab(ii,iii,v)

R.C. Turner, D.A. Kamundi† & D. Raimondo

[e]**Distribution:** WC. Aurora to Leipoldtville.

Habitat: Sand plain fynbos.

Rationale: EOO < 160 km^2, AOO < 2 km^2. Only one or possibly two severely fragmented subpopulations remain. This is a very rare lowland species that has been collected only three times, in 1880, 1839 and 1982. Crop cultivation has caused extensive habitat loss in the past and is an ongoing threat.

Erica dysantha Benth.

Status: **VU** D2

R.C. Turner

[e]**Distribution:** WC. Langeberg Mountains.

Habitat: Rocky summit slopes in fynbos.

Rationale: An extremely localised endemic (EOO 3.25 km^2) occurring in two subpopulations only 6.5 km apart. A habitat specialist that inhabits small areas on summit ridges. Both subpopulations were recently burnt by the same fire—too frequent fires are a potential threat to this species.

[F] **Erica ebracteata** Bolus

Status: **Rare**

C.R. Scott-Shaw, D. Pillay & R.C. Turner

[e]**Distribution:** KZN. KwaZulu-Natal Drakensberg Mountains, Witsieshoek to Champagne Castle.

Habitat: Grassy slopes and river valleys.

Rationale: A robust shrub, occurring in dense, localised stands. Subpopulations are protected in the Ukhahlamba Drakensberg National Park and are not declining.

Erica eburnea Salter

Status: **Rare**

R.C. Turner & E.G.H. Oliver

[e]**Distribution:** WC. Cape Peninsula.

Habitat: Wetlands and adjacent seepage areas.

Rationale: A range-restricted species (EOO 55 km^2), occurring only in the Cape of Good Hope section of the Table Mountain National Park. Not threatened.

[F] **Erica ecklonii** E.G.H.Oliv.

Status: **EN** B1ab(iii,v)

R.C. Turner & E.G.H. Oliver

[e]**Distribution:** WC. Onrus River, Kleinrivier and Babilonstoring Mountains.

Habitat: Fynbos, on cool, moist, south-facing slopes on coastal mountains.

Rationale: EOO < 80 km^2, AOO < 1 km^2. Known from three locations. Habitat and numbers of mature individuals are declining as a result of severe encroachment from invasive alien hakeas and pines.

[F] **Erica eglandulosa** (Klotzsch) E.G.H.Oliv.

Status: **DD**D

E.G.H. Oliver & R.C. Turner

[e]**Distribution:** WC. Riviersonderend Mountains and Caledon Swartberg.

Habitat: Fynbos slopes.

Rationale: Not recorded for over 100 years. The habitat and altitudinal range are not known. If it occurred on lower slopes, it is likely to be extinct as these areas have been extensively transformed, mainly by invasive alien plants. This is an inconspicuous, tiny-flowered, wind-pollinated species and it may be present at slightly higher altitudes where it has remained overlooked.

[F] **Erica elsieana** (E.G.H.Oliv.) E.G.H.Oliv.

Status: **EN** D

R.C. Turner, J.H. Vlok & A.L. Schutte-Vlok

[e]**Distribution:** WC. Swellendam to Oudtshoorn.

Habitat: Fynbos, on moist rock ledges on mountain summits.

Rationale: AOO < 1 km^2. Known from three subpopulations with less than 250 plants in total. Subpopulations are naturally disjunct, with only ± 30–50 plants in each. Not declining.

[F] **Erica erina** (Klotzsch ex Benth.) E.G.H.Oliv.

Status: **EN** B1ab(ii,iii,v)

R.C. Turner

[e]**Distribution:** WC. Bot River to Baardskeerdersbos.

Habitat: Fynbos, on rocky or sandy quartzitic hill and mountain slopes, often near seepage areas.

Rationale: EOO < 710 km^2. Known from five locations. There is a severe, continuing decline in habitat and number of mature individuals as a result of encroachment from invasive alien species, especially hakeas and pine, as well as agricultural expansion in the southern Overberg.

Erica eriophoros Guthrie & Bolus

Status: **VU** D2

E.G.H. Oliver & R.C. Turner

[e]**Distribution:** WC. Ceres to Clanwilliam.

Habitat: Fynbos, sandy, quartzitic plateaus on mountain summits.

Rationale: An extremely localised, high-altitude species, known from one location. Potentially threatened by frequent fires as it is a relatively slow-growing reseeder.

[F] **Erica euryphylla** R.C.Turner

Status: **VU** D1+2

R.C. Turner

[e]**Distribution:** WC. Swellendam to Barrydale.

Habitat: Fynbos, in shady rock crevices on upper, north-facing slopes below summits.

Rationale: This habitat specialist is known from two sites (EOO < 20 km^2, AOO < 1 km^2), with less than 1 000 plants in total. Potentially threatened by encroachment from invasive alien species of *Hakea*, in particular on Suurbraak Mountain, and by scattered pines throughout its range. A slight threat from frequent fires also exists.

[F] **Erica extrusa** Compton

Status: **CR** B1ab(ii,iii,v)+2ab(ii,iii,v); C2a(ii)

E.G.H. Oliver & R.C. Turner

[e]**Distribution:** WC. Elgin.

Habitat: Fynbos, sandy flats and stony, rocky areas with quartzitic gravels.

Rationale: An extremely localised species, known from one location (EOO and AOO < 7.5 km^2) and less than 250 mature individuals. It has lost habitat to dam construction and agriculture and is still declining as a result of agriculture and invasion by alien plants.

Erica fairii Bolus **Plate 56**

Status: **VU** D2

E.G.H. Oliver & R.C. Turner

[e]**Distribution:** WC. Simon's Town.

Habitat: Fynbos, rocky, sandy ridges and shallow quartzitic sand over rock or quartzitic sand between low rocky ridges.

Rationale: EOO < 5 km², AOO < 2 km². One subpopulation of ± 1 500 plants known. Potentially threatened by frequent fires, dam construction and illegal grazing. Threatened by pine and acacia infestations in the past but aliens have been cleared. Scattered pine and acacia seedlings are still present, and renewed infestations remain a potential threat.

[F] **Erica feminarum** E.G.H.Oliv.

Status: **CR** D

R.C. Turner & E.G.H. Oliver

[e]**Distribution:** WC. Stettynsberg.

Habitat: Marshy seeps and moist gullies at high altitudes.

Rationale: One subpopulation of ± 30 plants known. The population is not protected and is potentially threatened by invasive species of *Hakea* and *Pinus* as well as frequent fires.

Erica ferrea P.J.Bergius

Status: **EN** B1ab(i,ii,iii,iv,v)

E.G.H. Oliver, R.C. Turner & D. Pillay

[e]**Distribution:** WC. Malmesbury to the Cape Flats.

Habitat: Sandy flats in remnant fynbos patches.

Rationale: Most of its habitat has been severely fragmented and affected by crop cultivation, invasion by alien plants and urban development. It currently has an EOO < 5 000 km², with seven severely fragmented subpopulations remaining. There is continuing decline as a result of urban and agricultural expansion, grazing by livestock and invading alien plants.

[F] **Erica filamentosa** Andrews

Status: **VU** D1+2

E.G.H. Oliver & R.C. Turner

[e]**Distribution:** WC. Endemic to Bontebok National Park, Swellendam.

Habitat: Gravelly flats.

Rationale: Less than 1 000 plants are known. Potentially threatened by inappropriate fire management.

[F] **Erica filialis** E.G.H.Oliv.

Status: **VU** D1+2

R.C. Turner

[e]**Distribution:** WC. Hex River Mountains.

Habitat: Stony slopes and rocky outcrops in fynbos.

Rationale: EOO 0.5 km², AOO < 0.5 km². Known from less than 1 000 plants. It is extremely localised, occurring only on the highest mountain summits. Potentially threatened by too frequent fires.

[F] **Erica filiformis** Salisb. var. **filiformis**

Status: **EN** B1ab(iii,v)

R.C. Turner

[e]**Distribution:** WC. Paarl to Elgin.

Habitat: Shale and ferricrete soil on flats, as well as rocky/loamy lower mountain slopes.

Rationale: EOO 777 km². Three known locations. It is locally extinct at most known sites and most of the habitat has been destroyed by orchards, vineyards, forestry plantations and urban expansion on the Paarl and Stellenbosch flats and lower slopes. Two of the three known remaining locations are fragmented and habitat quality and number of individuals are declining because of invasive alien infestation.

[F] **Erica filipendula** Benth. subsp. **filipendula**

Status: **Rare**

R.C. Turner

[e]**Distribution:** WC. Southern Agulhas Plain.

Habitat: Sandy quartzitic hills in fynbos.

Rationale: Extremely localised in the southwestern portion of the southern Agulhas Plain (EOO 152 km²). Some habitat has been lost to agriculture as well as alien plant infestations, especially in the Viljoenshof area. However, loss is not ongoing and it is currently well conserved. There are several thousand plants protected in the Waterford Bosluis Private Nature Reserve.

Erica flexistyla E.G.H.Oliv.

Status: **CR** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

R.C. Turner & E.G.H. Oliver

[e]**Distribution:** WC. Southern Agulhas Plain.

Habitat: Fynbos, lateritic clay soil.

Rationale: EOO < 26 km², AOO < 5 km². Known from three small, severely fragmented subpopulations and less than 500 plants. Population decline is continuing as a result of agriculture, grazing, road construction and invasion by alien plants. The largest location was burnt ± two years ago and is currently being grazed by cattle.

[F] **Erica flocciflora** Benth.

Status: **NT** B1ab(ii,iii,v)

R.C. Turner & J.H. Vlok

[e]**Distribution:** EC. Langkloof, Joubertina.

Habitat: Fynbos, in rocky outcrops on mountain slopes.

Rationale: EOO 200 km². Less than 15 locations known. The more eastern Onder-Kouga subpopulations have declined as a result of agriculture and grazing, invasion by alien plants and frequent fires. Subpopulations northeast of Uniondale are still healthy and not declining.

[F] **Erica foliacea** Andrews subsp. **foliacea** **Plate 57**

Status: **EN** B1ab(iii)+2ab(iii)

R.C. Turner & E.G.H. Oliver

[e]**Distribution:** WC. Kogelberg Biosphere Reserve.

Habitat: Fynbos, rocky outcrops and ridges on mountain slopes.

Rationale: Naturally confined to one mountain range (EOO < 20 km²) and known from two locations. Threatened by invasive alien pines at Honingklip. Some habitat was transformed to pine plantations at Highlands Forest Reserve, but plantations are not currently expanding. However, unmanaged escaped pine seedlings are a threat to the remaining habitat.

[F] **Erica foliacea** Andrews subsp. **fulgens** (Klotzsch) E.G.H.Oliv. & I.M.Oliv.

Status: **EX**

R.C. Turner & E.G.H. Oliver

[e]**Distribution:** WC. Formerly occurred on Sir Lowry's Pass.

Habitat: Fynbos, on rocky outcrops and ridges on mountain slopes.

Rationale: Last collected in 1895 and is now presumed to be extinct as its habitat has been transformed by the construction of the Steenbras Dam, urban expansion, grazing by livestock, afforestation, invasion by alien plants and a deleterious fire regime.

Erica fontana L.Bolus

Status: **Rare**
R.C. Turner

[e]**Distribution:** WC. Cape Peninsula.
Habitat: Wetlands and adjacent seepage areas.
Rationale: A range-restricted species known from a small area of 21 km^2, where there are more than 17 000 plants. It regenerates vigorously after fire. This species is well conserved in the Cape of Good Hope section of the Table Mountain National Park.

Erica galgebergensis H.A.Baker **Plate 59**

Status: **VU** D1+2
R.C. Turner & N.A. Helme

[e]**Distribution:** WC. Riviersonderend Mountains.
Habitat: Fynbos, in rock crevices at high altitudes.
Rationale: EOO < 10 km^2. Less than 1 000 plants. Potentially threatened by encroachment from invasive alien pines.

[F] **Erica galpinii** T.M.Salter

Status: **EN** B1ab(iii,iv)+2ab(iii,iv); C1+2a(i)
R.C. Turner

[e]**Distribution:** WC. Hermanus, Kleinrivier Mountains.
Habitat: Cool, moist upper slopes, north- or south-facing.
Rationale: EOO 7 km^2, AOO 0.5 km^2. Two locations representing two locations are known. This is a long-lived reseeder that is adversely affected by frequent fires. The subpopulation on Galpin Kop/Aasvoëlkop has declined as a result of a deleterious fire regime from around 700 plants before 1980 to less than 200 plants in 2001 and the decline is continuing. The other subpopulation is likely to be stable at around 250 individuals. From this we inferred a 40% decline in the population over the past 20 years (generation length suspected to be 15 years).

[F] **Erica garciae** E.G.H.Oliv.

Status: **VU** D2
E.G.H. Oliver, R.C. Turner & D. Raimondo

[e]**Distribution:** WC. Garcia's Pass, near Riversdale.
Habitat: Dry, stony/clay soils on southeast-facing slopes or yellow-brown, loamy, sandy/stony soil on north-facing slopes.
Rationale: Known from two subpopulations on the same mountain ridge. The area in which this species occurs burnt twice within eight years—frequent fires are a potential threat, as are invading alien pines.

[F] **Erica gerhardii** E.G.H. & I.M.Oliv. **Plate 57**

Status: **CR** B1ab(iii)
R.C. Turner

[e]**Distribution:** WC. Stanford.
Habitat: Fynbos, on steep, south-facing, rocky/peaty slopes.
Rationale: Known from one subpopulation of ± 400 seedlings, in an area of ± 300 m^2 in the Kleinrivier Mountains. Declining because of invasive alien pines and hakeas.

[F] **Erica gigantea** Klotzsch ex Benth.

Status: **Rare**
R.C. Turner

[e]**Distribution:** WC. Northern Langeberg, Plattekloof to Cloete's Pass.
Habitat: Sandstone slopes in fynbos.
Rationale: A range-restricted species (EOO < 50 km^2), four subpopulations known. No known threats.

[F] **Erica gillii** Benth. **Plate 59**

Status: **VU** D2
A.L. Schutte-Vlok & D. Raimondo

[e]**Distribution:** WC. Swartberg Mountains.
Habitat: Fynbos, on high-altitude sandstone slopes.
Rationale: EOO < 10 km^2. Two locations known. Some habitat has been transformed to forestry plantations in the past and the species remains potentially threatened by invading alien plants and further afforestation.

Erica glandulipila Compton

Status: **Rare**
R.C. Turner & E.G.H. Oliver

[e]**Distribution:** WC. Anysberg to Swartberg Mountains at Waboomsberg, Meiringspoort, Montagu and Garcia's Pass.
Habitat: Rocky or sandy slopes in fynbos.
Rationale: Occurs as naturally disjunct subpopulations over a large range (17 625 km^2), known from four sites. It is a resprouter with small subpopulations.

[F] **Erica glandulosa** Thunb. subsp. **breviflora** (Bolus) E.G.H.Oliv. & I.M.Oliv.

Status: **EN** B1ab(iii)
R.C. Turner & P.A. Manyama

[e]**Distribution:** EC. Humansdorp.
Habitat: Sandy flats in fynbos.
Rationale: A range-restricted taxon (EOO < 160 km^2), with one recent collection (made in 1990), but there are likely to be one or two more undiscovered subpopulations in unexplored lowland fragments around Humansdorp. This taxon has lost > 50% of its habitat to crop and pasture cultivation in the past, and decline is continuing because of ongoing habitat loss to further pasture cultivation and degradation due to overgrazing and lack of fire as a result of fragmentation.

[F] **Erica glandulosa** Thunb. subsp. **fourcadei** (L.Bolus) E.G.H.Oliv. & I.M.Oliv.

Status: **VU** B1ab(ii,iii,iv,v)
J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Mossel Bay to Storms River.
Habitat: Coastal fynbos.
Rationale: Restricted to a narrow strip along the coastal belt (EOO 1 600 km^2). Fewer than 10 locations are known. Most of the habitat has been transformed as a result of urban development, invasion by alien plants, afforestation and an altered fire regime and these threats are causing a continuing decline.

[F] **Erica glumiflora** Klotzsch ex Benth.

Status: **VU** B1ab(i,ii,iii,iv,v)
R.C. Turner

[e]**Distribution:** EC WC. Wilderness to East London.
Habitat: Stabilised sand dunes, often on calcrete.
Rationale: EOO < 6 740 km^2. Known from six locations. Although it is conserved in four nature reserves, these are all within the western portion of the range. In the eastern part of the range, coastal development and invasion by alien plants are causing continuing declines to subpopulations.

Erica gossypioides E.G.H.Oliv.

Status: **EN** D
E.G.H. Oliver, R.C. Turner & D. Raimondo

[e]**Distribution:** WC. Klein Swartberg and Groot Swartberg Mountains.

Plate 56


J.H. Vlok

Erica nematophylla VU


C. Paterson-Jones

Erica recurvata CR


R.C. Turner

Erica fairii VU


R.C. Turner

Erica banksii subsp. *comptonii* EN


C. Paterson-Jones

Erica berzelioides CR


J.H. Vlok

Erica oblongiflora CR


C. Paterson-Jones

Erica baueri subsp. *baueri* CR


C. Paterson-Jones

Erica calcareophila VU

Plate 57



R.C. Turner

Erica junonia var. *junonia* VU



R.C. Turner

Erica gerhardii CR



R.C. Turner

Erica patersonii EN



R.C. Turner

Erica heleogena CR



C. Paterson-Jones

Erica foliacea subsp. *foliacea* EN



C. Paterson-Jones

Erica abietina subsp. *diabolis* CR

Plate 58


R.C. Turner

Erica turneri VU


R.C. Turner

Erica ribisaria CR


R.C. Turner

Erica caterviflora var. *caterviflora* EN


R.C. Turner

Erica hermani CR


C. Paterson-Jones

Erica haematocodon Rare


R.C. Turner

Erica cereris Rare


R.C. Turner

Erica rhodopis CR


C. Paterson-Jones

Erica amoena Rare


R.C. Turner

Erica williamsiorum VU

Plate 59



R.C. Turner

Erica xeranthemifolia CR



C. Paterson-Jones

Erica galgebergensis VU



C. Paterson-Jones

Erica marifolia VU



C. Paterson-Jones

Erica capitata VU



C. Paterson-Jones

Erica jacksoniana Rare



C. Paterson-Jones

Erica sociorum CR



A.L. Schutte-Vlok

Erica gillii VU



J.H. Vlok

Erica astroites var. *astroites* Rare



C. Paterson-Jones

Erica magnisylvae VU

Habitat: Rocky, grassy, high-altitude, south-facing slopes.
Rationale: A rare, high-altitude species, known from two subpopulations ± 75 km apart, with very low total population numbers (less than 100 plants are known). There is a potential threat from frequent fires and drought-related mortality events.

Erica gracilipes Guthrie & Bolus

Status: **CR** B2ab(iii,v)
R.C. Turner, E.G.H. Oliver & D. Pillay
[e]**Distribution:** WC. Southern Agulhas Plain.
Habitat: Limestone pavements and depressions on limestone ridges.
Rationale: EOO < 210 km², AOO < 10 km². Known from three severely fragmented subpopulations, all of which are severely threatened by invasive alien *Acacia cyclops* encroachment.

Erica granulatifolia H.A.Baker

Status: **VU** D2
R.C. Turner & E.G.H. Oliver
[e]**Distribution:** WC. Langeberg Mountains.
Habitat: Sandstone slopes in fynbos.
Rationale: A rare species, known from two locations, with an EOO < 40 km². Potentially threatened by invading alien plants, frequent fires and drought-related mortality events.

[F] Erica grata Guthrie & Bolus

Status: **Rare**
R.C. Turner
[e]**Distribution:** WC. Langeberg Mountains, Swellendam to Garcia's Pass.
Habitat: Montane fynbos on sandstone slopes.
Rationale: A range-restricted species (EOO < 500 km²). No known threats.

Erica greyi Guthrie & Bolus

Status: **DD**D
R.C. Turner & E.G.H. Oliver
[e]**Distribution:** WC. Kouebokkeveld.
Habitat: Sandy, quartzitic, montane plateaus in fynbos.
Rationale: Not recorded since 1897. The type locality has been searched at least five times. Intact habitat remains, therefore this species is presumed to be extant but possibly very cryptic.

[F] Erica haematocodon T.M.Salter Plate 58

Status: **Rare**
R.C. Turner & D.A. Kamundi†
[e]**Distribution:** WC. Table Mountain National Park.
Habitat: Permanently moist, peaty ledges, often on inaccessible vertical cliffs.
Rationale: A range-restricted species (EOO 65 km²) occurring in localised and sometimes dense stands.

[F] Erica hanekomii E.G.H.Oliv.

Status: **VU** D1+2
E.G.H. Oliver & R.C. Turner
[e]**Distribution:** WC. Citrusdal.
Habitat: Rocky mountain ridges in fynbos.
Rationale: An extremely localised, high-altitude species (EOO and AOO < 1 km²), known from less than 500 plants. Potentially threatened by too frequent fires.

[F] Erica hansfordii E.G.H.Oliv.

Status: **CR** B1ab(i,ii,iii,v)+2ab(i,ii,iii,v)
E.G.H. Oliver & R.C. Turner
[e]**Distribution:** WC. Worcester, Slanghoek Valley.
Habitat: Fynbos, in wetlands or in peaty soil with quartzitic gravel and sand on lower mountain slopes and valleys.
Rationale: EOO and AOO < 2 km². This is an extremely localised, cryptic, wetland-dwelling species severely threatened by expansion of vineyards and draining of wetlands.

[F] Erica hebdomadalis E.G.H. & I.M.Oliv.

Status: **Rare**
R.C. Turner
[e]**Distribution:** WC. Klein Swartberg Mountains.
Habitat: Drier northern slopes and rocky plateaus.
Rationale: Restricted to the highest parts at the eastern end of the Klein Swartberg Mountains (EOO < 10 km²). No known threats.

Erica heleogena T.M.Salter Plate 57

Status: **CR** B1ab(ii,iii,v)+2ab(ii,iii,v)
R.C. Turner, E.G.H. Oliver & D. Pillay
[e]**Distribution:** WC. Simon's Town.
Habitat: Wetlands.
Rationale: Occurs at one location, has an EOO < 1 km² and is declining because of invasive alien *Acacia saligna*.

Erica hendricksei H.A.Baker var. hendricksei

Status: **VU** D2
E.G.H. Oliver & R.C. Turner
[e]**Distribution:** WC. Kleinrivier Mountains between Hermanus and Stanford.
Habitat: Seepage areas and streambanks in coastal mountains.
Rationale: EOO < 26 km². Only two subpopulations are known. Potentially threatened by encroachment from invasive alien pines and *Hakea drupacea*.

[F] Erica hermani E.G.H.Oliv. Plate 58

Status: **CR** B1ab(ii,iii)+2ab(ii,iii)
R.C. Turner, E.G.H. Oliver & D. Pillay
[e]**Distribution:** WC. Hermanus.
Habitat: Fynbos, on sandy flats, lower mountain slopes and plateaus in coastal mountains.
Rationale: Much of the habitat has been lost to urban development and dense stands of invasive alien vegetation. It persists at one location, in an area of 2.5 km², where plants occur in a firebreak below electricity pylons on the margin of the residential area/reserve boundary. Regular brush cutting of the firebreak is detrimental to this delicate, single-stemmed species.

[F] Erica hexensis E.G.H.Oliv.

Status: **Rare**
R.C. Turner
[e]**Distribution:** WC. Hex River Mountains.
Habitat: Fynbos, on southwest- to southeast-facing sandstone slopes that are cool and moist.
Rationale: A high-altitude montane species (EOO 55 km²), known from one population. No known threats.

Erica hibbertii Andrews

Status: **CR** B1ab(iii,v)+2ab(iii,v); C2a(i); D
R.C. Turner, E.G.H. Oliver & E. Marinus

[e]**Distribution:** WC. Franschhoek Pass and Stettynsberg.
Habitat: Fynbos, occurs on rocks, in crevices and small pockets of soil.
Rationale: EOO 30 km^2. Known from two small, severely fragmented subpopulations and a total of less than 30 remaining mature individuals. Declining as a result of invasion by alien plants. In addition, there was a 30% decline in the Franschhoek Pass subpopulation as a result of road expansion over the past 20 years.

Erica hillburttii (E.G.H.Oliv.) E.G.H.Oliv.

Status: **CR** B1ab(ii,iii,v)+2ab(ii,iii,v)
E.G.H. Oliver, R.C. Turner & D. Pillay

[e]**Distribution:** EC. Southern Drakensberg Mountains, between Elliot and Maclear.
Habitat: Southeast-facing slopes below summit rock faces.
Rationale: One known population, with an EOO < 20 km^2 and AOO < 1 km^2. Declining as a result of frequent fires and overgrazing by cattle.

Erica hippurus Compton

Status: **EN** B1ab(i,ii,iii)+2ab(i,ii,iii)
E.G.H. Oliver & R.C. Turner

[e]**Distribution:** WC. Paardeberg.
Habitat: Streambanks and seepage areas on south-facing slopes in fynbos.
Rationale: EOO 6 km^2. Four known locations. Declining as a result of the extraction of water, invading alien plants and expansion of vineyards.

[F] **Erica hottentotica** E.G.H.Oliv.

Status: **Rare**
R.C. Turner

[e]**Distribution:** WC. Hottentots Holland Mountains, Landdroskop and Somerset Sneeukop.
Habitat: Moist, southeast-facing slopes in fynbos.
Rationale: A range-restricted species (EOO < 100 km^2). No known threats.

Erica humansdorpensis Compton

Status: **CR** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)
R.C. Turner & D. Raimondo

[e]**Distribution:** EC. Humansdorp.
Habitat: Coastal flats in fynbos.
Rationale: EOO < 50 km^2. One known location. Severely threatened by agriculture (pasture cultivation), grazing by livestock and urban expansion on the Humansdorp plain.

[F] **Erica humidicola** E.G.H.Oliv.

Status: **CR** D
E.G.H. Oliver & R.C. Turner

[e]**Distribution:** WC. Kogelberg Biosphere Reserve.
Habitat: Marshy seeps and seepage areas adjacent to a nonperennial mountain streams, on southwest-facing slopes.
Rationale: EOO and AOO < 0.5 km^2. One subpopulation of ± 30 mature individuals known. Declined in the past because of construction of a jeep track through the population, and there is a potential threat from erosion.

[F] **Erica ignita** E.G.H.Oliv.

Status: **VU** D2
E.G.H. Oliver & R.C. Turner

[e]**Distribution:** WC. Riviersonderend Mountains.
Habitat: Cool, moist, upper south-facing slopes in fynbos.
Rationale: EOO and AOO < 3 km^2. One location known. Potentially threatened by encroachment from invasive alien pines on lower slopes.

Erica inamoena Dulfer

Status: **Rare**
E.G.H. Oliver & R.C. Turner

[e]**Distribution:** WC. Klein Swartberg and Groot Swartberg Mountains.
Habitat: Fynbos, on rocky ridges and summit slopes at high altitude, in peaty accumulate over rock.
Rationale: A high-altitude habitat specialist known from three sites. Not declining.

[F] **Erica inconstans** Zahlbr.

Status: **VU** B1ab(ii,iii,v)
J.H. Vlok, D. Raimondo & R.C. Turner

[e]**Distribution:** EC WC. Outeniqua Mountains, Tsitsikamma Mountains and Cockscomb Mountain.
Habitat: Mountain slopes, 500–1 000 m.
Rationale: EOO 4 000 km^2. Six known locations. Principally in the southern Cape coastal mountains, with a disjunction on Cockscomb in the Eastern Cape. Invasive alien pine encroachment and forestry have an impact and are causing a continuing decline at all locations.

[F] **Erica inflaticalyx** E.G.H.Oliv.

Status: **Rare**
R.C. Turner

[e]**Distribution:** WC. Outeniqua Mountains.
Habitat: Fynbos, on rocky ridges at high altitudes.
Rationale: Known from two subpopulations on the northern side of the Outeniqua Mountains (EOO 200 km^2), no known threats.

[F] **Erica ingeana** E.G.H.Oliv.

Status: **Rare**
R.C. Turner & D. Raimondo

[e]**Distribution:** EC WC. Groot Swartberg, Anthoniesberg and Kouga Mountains.
Habitat: Seasonally wet seepage areas.
Rationale: EOO 135 km^2. Locally abundant with no known threats.

[F] **Erica innovans** E.G.H.Oliv.

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)
R.C. Turner

[e]**Distribution:** WC. Gansbaai to Quoin Point.
Habitat: Sandy coastal flats, neutral to acid soils.
Rationale: EOO < 145 km^2. Extant at four locations. Some 20% of its total habitat has been destroyed by dense invasive alien acacia infestations, from Duinefontein to Pearly Beach. Potentially threatened by habitat loss for the establishment of protea orchards at Heidehof. Two subpopulations are conserved in Waterford and Groot Hagelkraal Private Nature Reserves, but population decline outside these reserves is continuing.

Erica inordinata H.A.Baker

Status: **Rare**
R.C. Turner & E.G.H. Oliver

[e]**Distribution:** WC. Uniondale.
Habitat: Fynbos, on rocky slopes at high altitudes.
Rationale: EOO 50 km^2. Not declining.

Erica insignis E.G.H.Oliv.

Status: **Rare**
R.C. Turner & E.G.H. Oliver

e**Distribution:** WC. Anysberg, Prins se Kloof and Groot Swartberg Mountains.
Habitat: Rock faces and among large boulders and cracks on rocks.
Rationale: Localised habitat specialist, known from four large, naturally disjunct subpopulations. Not declining.

Erica insolitanthera H.A.Baker

Status: **VU** D2
R.C. Turner & E.G.H. Oliver

e**Distribution:** WC. Riviersonderend Mountains.
Habitat: Rocky, peaty slopes in fynbos, 1 000–1 500 m.
Rationale: One location (EOO 9 km^2), with less than 10 000 plants known. Potentially threatened by invading alien plants.

F **Erica intermedia** Klotzsch ex Benth. subsp. **albiflora** E.G.H.Oliv. & I.M.Oliv.

Status: **Rare**
R.C. Turner

e**Distribution:** WC. Outeniqua Mountains near George.
Habitat: Mountain slopes in fynbos.
Rationale: A range-restricted taxon (EOO 150 km^2). Forestry plantations in the Robinson Pass area undoubtedly had an impact on the habitat of this taxon in the past, but it is no longer declining and subpopulations are conserved in the Ruitersbos Nature Reserve.

F **Erica interrupta** (N.E.Br.) E.G.H.Oliv.

Status: **CR** B1ab(i,ii,iii,v)+2ab(i,ii,iii,v)
E.G.H. Oliver & R.C. Turner

e**Distribution:** WC. Southern Agulhas Plain.
Habitat: Sandy, quartzitic and neutral soils between limestone ridges and on seaward flats.
Rationale: Known from three severely fragmented subpopulations within an EOO of 10 km^2. Destruction of its habitat is ongoing, caused by coastal development, invasion by alien plants and cultivation of proteas.

Erica intricata H.A.Baker

Status: **VU** D2
E.G.H. Oliver & R.C. Turner

e**Distribution:** WC. Du Toit's Kloof and Hex River Mountains.
Habitat: Fynbos, seepage areas on shale bands in mountains.
Rationale: EOO 195 km^2. Restricted to a habitat that is generally easily invaded by alien species of *Hakea*, but the particular areas where this species grows have not yet been invaded. Potentially threatened by alien invasion and a deleterious fire regime.

F **Erica involvens** Benth.

Status: **DD**D
R.C. Turner

e**Distribution:** WC. Caledon district and Worcester district.
Habitat: Unknown.
Rationale: Known from only two herbarium records with imprecise locality details, last collected in 1943. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

F **Erica irregularis** Benth.

Status: **EN** B1ab(iii,v)+2ab(iii,v)
R.C. Turner

e**Distribution:** WC. Stanford to Gansbaai.
Habitat: Neutral coastal sands in fynbos.
Rationale: An extremely localised species (EOO < 70 km^2), known from three locations. It is harvested in large amounts for the cut flower industry and because of over-picking, it has been registered as a threatened plant under new regulations of the National Environmental Management: Biodiversity Act, No. 10 of 2004. It has also been severely affected by encroachment of invasive alien *Acacia cyclops*, a trend that is likely to continue. Potentially threatened by a deleterious fire regime.

Erica ixanthera Benth.

Status: **VU** D1+2
R.C. Turner & E.G.H. Oliver

e**Distribution:** WC. Around Corente River Dam on the lower slopes of the Langeberg Mountains near Riversdale.
Habitat: Wet, peaty rock faces near waterfalls.
Rationale: Localised species (EOO and AOO < 1 km^2) and known from less than 1 000 mature individuals. Potentially threatened by invading alien plants and a deleterious fire regime.

F **Erica jacksoniana** H.A.Baker **Plate 59**

Status: **Rare**
R.C. Turner & D.A. Kamundi†

e**Distribution:** WC. Hottentots Holland Mountains.
Habitat: Seepage areas in seasonally wet fynbos.
Rationale: EOO 4 km^2. The part of the Hottentots Holland Reserve in which it occurs is not directly threatened by encroachment from invasive alien pines, as are other sections of the reserve. Not threatened.

F **Erica jananthus** E.G.H.Oliv. & I.M.Oliv.

Status: **VU** D1
J.H. Vlok & R.C. Turner

e**Distribution:** WC. Snyberg peaks in the eastern part of the Groot Swartberg range.
Habitat: Fynbos, in rock crevices on south-facing, small, rocky ridges and outcrops that are shaded for most of the day.
Rationale: Known from one site and less than 500 plants. Not threatened.

Erica jasminiflora Salisb.

Status: **CR** A2ac; B1ab(iii,v)+2ab(iii,v); C2a(ii)b; D
E.G.H. Oliver, R.C. Turner & D. Raimondo

e**Distribution:** WC. Caledon district.
Habitat: Fynbos, in loamy, gravelly, ferricrete soils on lowland hill slopes.
Rationale: A single location remains, where only six plants survive in a 1 ha patch of fynbos surrounded by invasive alien plants and wheat fields. It is on the verge of extinction in the wild. There has been an observed decline of 80–90% in number of mature individuals over the past three generations (30 years).

F **Erica jonasiana** E.G.H.Oliv.

Status: **Rare**
R.C. Turner

e**Distribution:** WC. Western Riviersonderend Mountains.
Habitat: Sandy areas with low ericoid- and restioid-dominated fynbos vegetation.

Rationale: A localised species known from two subpopulations (EOO 41 km^2), occurring in extensive stands of mat-forming plants on Jonaskop northern plateau. No known threats.

[F] **Erica jugicola** E.G.H.Oliv. & I.M.Oliv.

Status: **Rare**

R.C. Turner

[e]**Distribution:** WC. Swartberg near Oudtshoorn.

Habitat: Fire-protected, rocky habitats in fynbos.

Rationale: A range-restricted species (EOO < 500 km^2) with only two known subpopulations. No known threats.

[F] **Erica juniperina** E.G.H.Oliv.

Status: **EN** D

R.C. Turner & E.G.H. Oliver

[e]**Distribution:** WC. Outeniqua Mountains.

Habitat: Fynbos, on cool, moist, south-facing summits and upper slopes.

Rationale: One subpopulation of less than 100 plants is known. Invasive alien pines and species of *Hakea* spreading from the Robinson Pass is a potential threat.

Erica junonia Bolus var. **junonia** Plate 57

Status: **VU** D2

R.C. Turner & E.G.H. Oliver

[e]**Distribution:** WC. Skurweberg Mountains.

Habitat: Rocky slopes and summit ridges on rocky or sandy plateaus in fynbos.

Rationale: An extremely localised, high-altitude, slow-growing taxon (EOO < 8 km^2, AOO < 1 km^2). Potentially threatened by too frequent fires and drought-related mortality events.

[F] **Erica kammanassieae** E.G.H.Oliv.

Status: **Critically Rare**

R.C. Turner, J.H. Vlok & E.G.H. Oliver

[e]**Distribution:** WC. Mannetjiesberg, in the Kammanassie Mountains.

Habitat: Arid fynbos on north-facing slopes.

Rationale: Only one subpopulation is known, but it is not threatened.

[F] **Erica karwyderi** E.G.H.Oliv.

Status: **CR** A2ac; B1ab(i,iii,iv)+2ab(ii,iii,iv); C2a(ii)

R.C. Turner & E.G.H. Oliver

[e]**Distribution:** WC. Karwyderskraal.

Habitat: Granular, quartzitic sand over ferricrete or shale and ferricrete soils.

Rationale: EOO and AOO < 2 km^2. Only one location with less than 200 mature individuals remain. This lowland species is on the verge of extinction and continues to decline as a result of grazing by livestock, agriculture, invasion by alien plants, road construction and the construction of a sewerage farm in the Karwyderskraal hills. It occurred in the Elgin basin, but is now locally extinct as a result of vineyard and orchard cultivation. We suspect a decline of 80% based on loss of habitat over the past three generations (45 years).

Erica keeromsbergensis H.A.Baker

Status: **Rare**

R.C. Turner & E.G.H. Oliver

[e]**Distribution:** WC. Keeromsberg and Kwadous Mountains.

Habitat: Rocks, boulder stacks and sheet rock at high altitudes.

Rationale: A range-restricted species (EOO < 10 km^2) that grows in fire-protected habitats, therefore not threatened by too frequent fires.

[F] **Erica kogelbergensis** E.G.H.Oliv.

Status: **Critically Rare**

E.G.H. Oliver & R.C. Turner

[e]**Distribution:** WC. Summit of Kogelberg Peak and adjacent summit slopes.

Habitat: Moist, peaty, high-altitude seepage areas.

Rationale: Very localised in the Kogelberg Biosphere Reserve (EOO 8 km^2), but protected and not declining.

[F] **Erica kougabergensis** H.A.Baker var. **kougabergensis**

Status: **Rare**

R.C. Turner

[e]**Distribution:** EC. Uniondale district, Kouga Mountains.

Habitat: South-facing fynbos slopes, 1 000–1 500 m.

Rationale: A range-restricted taxon (EOO 280 km^2) with only three known subpopulations. No known threats.

Erica kraussiana Klotzsch

Status: **CR** PE

E.G.H. Oliver, R.C. Turner & D. Pillay

[e]**Distribution:** WC. Riviersonderend Mountains.

Habitat: Presumably south-facing slopes above Genadendal.

Rationale: Not recorded since the type collection made 100 years ago. Possibly extinct as it is likely to have occurred on the south-facing slopes above Genadendal, an area that has been severely degraded as a result of pine plantations and too frequent fires over the past 30 years. Searches have thus far failed to relocate this species.

Erica lageniformis Salisb.

Status: **EN** D

E.G.H. Oliver & R.C. Turner

[e]**Distribution:** WC. Onrus Mountains.

Habitat: Fynbos, on rocky or sandy south- to southeast-facing slopes, on low coastal mountains.

Rationale: Known from one small population where there are less than 250 mature individuals. Possibly threatened by invasive species of *Hakea* and *Pinus*, which have infested surrounding slopes.

[F] **Erica langebergensis** H.A.Baker

Status: **Rare**

R.C. Turner

[e]**Distribution:** WC. Langeberg Mountains from Montagu to Leeurivierberg.

Habitat: South-facing sandstone slopes in fynbos.

Rationale: A range-restricted species (EOO < 100 km^2). No known threats.

Erica lateriflora E.G.H.Oliv.

Status: **VU** D2

E.G.H. Oliver & R.C. Turner

[e]**Distribution:** WC. Northeastern Kouebokkeveld.

Habitat: Sandy, quartzitic mountain plateaus and valley floors.

Rationale: Three locations are known that are confined to the northern Kouebokkeveld (EOO < 400 km^2). Some habitat has been transformed to fruit orchards and this remains a potential threat.

[F] **Erica latiflora** L.Bolus

Status: **CR** B1ab(iii)+2ab(iii)

R.C. Turner & D.A. Kamundi†

[e]**Distribution:** WC. Elgin Valley.

Habitat: Shale soils.

Rationale: EOO 6 km^2, AOO < 1 km^2. Only one location remains. Threatened by expansion of orchards and vineyards, invasion by alien plants and a lack of fire due to habitat fragmentation by orchards and plantations.

Erica lerouxiae Bolus

Status: **EN** B1ab(i,ii,iii)

R.C. Turner & E.G.H. Oliver

[e]**Distribution:** WC. Jonkershoek and Franschhoek.

Habitat: Granitic middle slopes in fynbos.

Rationale: A range-restricted species (EOO 55 km^2) with two known locations. Threatened by pine plantations, invasion by alien plants, too frequent fires, dam construction and expansion of vineyards.

Erica leucosiphon L.Bolus

Status: **Rare**

R.C. Turner, E.G.H. Oliver & D. Pillay

[e]**Distribution:** WC. Witzenberg Mountains.

Habitat: Fynbos, in rock crevices among large boulders.

Rationale: A rare montane species (EOO 80 km^2) that occurs in a specialised habitat affording it protection from fire and agriculture.

[F] **Erica leucotrachela** H.A.Baker subsp. **monicae** E.G.H. & I.M.Oliv.

Status: **Critically Rare**

P.A. Manyama

[e]**Distribution:** WC. Paardeberg Mountains northeast of Kleinmond.

Habitat: Along streams or in seeps in fynbos.

Rationale: Confined to the upper reaches of the Paardeberg Mountains. Not threatened.

[F] **Erica lignosa** H.A.Baker

Status: **Rare**

R.C. Turner & J.E. Victor

[e]**Distribution:** WC. Groot Swartberg Mountains.

Habitat: Rocky, upper mountain slopes and summits in fynbos.

Rationale: EOO 50 km^2. A habitat specialist of rocky sites at high altitudes. Not threatened.

[F] **Erica limnophila** E.G.H.Oliv.

Status: **Rare**

R.C. Turner

[e]**Distribution:** WC. Du Toit's Kloof and Wemmershoek Mountains.

Habitat: Edges of marshy or swampy areas in montane fynbos.

Rationale: A rare, localised montane species, known from two sites ± 8 km apart. No known threats.

Erica limosa L.Bolus

Status: **VU** D2

R.C. Turner & E.G.H. Oliver

[e]**Distribution:** WC. Cape Peninsula, Constantiaberg to Muizenberg.

Habitat: Peaty accumulate with quartzitic sand in seepage areas and wetlands associated with mountain streams.

Rationale: EOO 7.5 km^2, AOO < 1 km^2. Four known locations. The population has declined owing to dam construction, the construction of gravel jeep tracks and severe encroachment from invasive alien pines, *Acacia saligna* and *A. mearnsii* in drainage lines. It remains potentially threatened by too frequent fires. *E. salteri* is included under *E. limosa* for purposes of this assessment, as the taxonomy will be revised in the near future.

Erica lowryensis Bolus var. **lowryensis**

Status: **Rare**

E.G.H. Oliver & R.C. Turner

[e]**Distribution:** WC. Sir Lowry's Pass to Betty's Bay.

Habitat: Steep slopes in shady, moist kloofs, mostly on seaward side of mountains.

Rationale: A habitat specialist that is rarely seen. EOO 450 km^2. The population is protected in the Kogelberg Biosphere Reserve.

[F] **Erica macowanii** Cufino subsp. **lanceolata** (Bolus) E.G.H.Oliv. & I.M.Oliv.

Status: **Rare**

D. Raimondo & P.A. Manyama

[e]**Distribution:** WC. Kleinrivier Mountains above Hermanus.

Habitat: Rocky sandstone slopes in fynbos.

Rationale: A range-restricted taxon (EOO < 50 km^2) with no known threats.

[F] **Erica macrophylla** Klotzsch ex Benth.

Status: **Rare**

R.C. Turner

[e]**Distribution:** WC. Langeberg Mountains between Swellendam and Riversdale.

Habitat: Wet cliffs and rock ledges, above 900 m.

Rationale: A range-restricted species (EOO 310 km^2) occurring in fire-protected habitats, locally common. No known threats.

[F] **Erica madida** E.G.H.Oliv.

Status: **Rare**

R.C. Turner

[e]**Distribution:** WC. Tradouw Pass and Rooiberg Mountain.

Habitat: Sandstone slopes in fynbos.

Rationale: Known from two disjunct subpopulations (EOO < 450 km^2). Not threatened.

[F] **Erica magnisylvae** E.G.H.Oliv. **Plate 59**

Status: **VU** D2

R.C. Turner, E.G.H. Oliver & D. Pillay

[e]**Distribution:** WC. Grootbos Nature Reserve, Gansbaai.

Habitat: Sandstone fynbos.

Rationale: Localised along one mountain ridge, EOO and AOO 2 km^2. The entire population was burnt in early 2006 during extensive fires in the southern Overberg. Frequent fires and invasion by alien plants pose a potential threat.

[F] **Erica malmesburiensis** E.G.H.Oliv.

Status: **CR** B1ab(iii)+2ab(iii)

E.G.H. Oliver & R.C. Turner

[e]**Distribution:** WC. Malmesbury.

Habitat: Fynbos, sandy, quartzitic flats.

Rationale: EOO 10 km^2, AOO < 250 m^2. Only two severely fragmented subpopulations remain. Severe habitat destruction, mainly as a result of crop cultivation, has occurred over the past 100 years. The population is still declining as a result of invasion by alien plants, grazing by livestock and cultivation of pasture and wheat.

Erica margaritacea Sol.

Status: **CR** A2ac; B1ab(iii)+2ab(iii)
E.G.H. Oliver, R.C. Turner, D. Raimondo & D. Pillay

e**Distribution:** WC. Cape Flats.

Habitat: Fynbos, in wetland areas and seasonally wet depressions.

Rationale: Historically occurred from Fish Hoek to the Cape Flats and Stellenbosch. There has been at least an 80% decline in habitat over the past 90 years (generation length is probably longer than 30 years) as a result of urban expansion throughout its former range. There is a continuing decline of habitat quality as a result of invasion by alien plants and eutrophication at the only remaining subpopulation on Kenilworth Racecourse.

Erica marifolia Sol. Plate 59

Status: **VU** D2
R.C. Turner

e**Distribution:** WC. Cape Peninsula, eastern slopes of Table Mountain and Disa Gorge, at Constantiaberg and the cliffs above Kalk Bay and St James.

Habitat: Damp cliff and rock faces, usually within a mostly shaded habitat.

Rationale: AOO < 20 km^2. Four locations. Occurs along the eastern side of the Cape Peninsula where some subpopulations have been affected by forestry plantations in the past. Potentially threatened by erosion following clearing of invasive alien plants.

F **Erica marlothii** Bolus

Status: **Rare**
R.C. Turner

e**Distribution:** WC. Cederberg, Kouebokkeveld and Hex River Mountains.

Habitat: Large boulder stacks or shaded seepage areas.

Rationale: A cryptic montane habitat specialist that grows in fire-protected habitats, known from five subpopulations. No known threats.

F **Erica melanacme** Guthrie & Bolus

Status: **EN** B2ab(ii,iii,iv,v)
R.C. Turner & D.A. Kamundi†

e**Distribution:** WC. Gansbaai to De Hoop.

Habitat: Sandy flats in seasonally wet areas.

Rationale: AOO < 20 km^2. Fewer than 10 severely fragmented subpopulations remain in isolated remnants after most of the habitat has been lost to agriculture and invaded by alien acacias. It continues to decline owing to ongoing habitat loss throughout its range.

F **Erica melastoma** Andrews subsp. **minor** E.G.H.Oliv. & I.M.Oliv.

Status: **EN** B1ab(iii,v)
R.C. Turner

e**Distribution:** WC. Hermanus to Bredasdorp.

Habitat: Low-altitude sandstone slopes in fynbos.

Rationale: EOO < 1 600 km^2. Four known locations. Fragmentation and destruction of habitat by agriculture as well as extensive encroachment from invasive alien *Hakea drupacea, Acacia cyclops*, *A. mearnsii* and pines are ongoing.

F **Erica micrandra** Guthrie & Bolus

Status: **DD**
R.C. Turner

e**Distribution:** WC. Ceres district.

Habitat: Probably rocky slopes and flats in fynbos.

Rationale: Known from three old herbarium collections made before 1954. It is likely to be threatened by urban and agricultural expansion in the Ceres Valley. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

F **Erica miniscula** E.G.H.Oliv.

Status: **DD**
R.C. Turner, E.G.H. Oliver & D. Pillay

e**Distribution:** WC. Riversdale and Garcia's Pass.

Habitat: Unknown.

Rationale: Collected only once in 1814. No habitat or population information is available.

F **Erica mitchellensis** Dulfer

Status: **Rare**
R.C. Turner

e**Distribution:** WC. Ceres district, Michell's Pass, Michell's Peak and Neethlingsberg and Witzenberg Mountains.

Habitat: Fynbos, in rock crevices, 1 200–1 800 m.

Rationale: A range-restricted species (EOO 190 km^2) with only three known subpopulations. No known threats.

F **Erica modesta** Salisb.

Status: **EN** B1ab(iii,v)+2ab(iii,v); C2a(i)
R.C. Turner, R. Koopman & E.G.H. Oliver

e**Distribution:** WC. Riviersonderend Mountains, from Jonaskop to Galgeberg.

Habitat: South and north-facing rock faces and boulders from 700 m.

Rationale: EOO 170 km^2, AOO < 20 km^2. Four known locations. This is a very slow-growing and long-lived species (generation length 100 years) with less than 400 mature individuals plants known. Subpopulations typically have less than 50 mature individuals. Declining as a result of too frequent fires and infestations of invasive alien pines.

F **Erica montis-hominis** E.G.H.Oliv.

Status: **VU** D1+2
E.G.H. Oliver, R.C. Turner, D. Raimondo & J.H. Vlok

e**Distribution:** WC. Mannetjiesberg in the Kammanassie Mountains, southeast of Oudtshoorn.

Habitat: Rocky, upper mountain slopes and summits in fynbos.

Rationale: Only one location with ± 550 plants is known. Potentially threatened by too frequent fires.

F **Erica multiflexuosa** E.G.H.Oliv.

Status: **VU** A2c; D2
R.C. Turner, D. Raimondo & D.A. Kamundi†

e**Distribution:** WC. Kogelberg.

Habitat: Sandy, stony lower slopes in fynbos.

Rationale: Extremely localised around the Steenbras Dam (EOO and AOO < 3 km^2). At least 50% of the habitat was flooded when the dam was constructed. Remaining habitat has been fragmented by forestry plantations. It is estimated that at least 30% of the total habitat loss has taken place over the past 45 years (less than three generations). The remaining individuals are potentially threatened by too frequent fires.

Erica nana Salisb.

Status: **VU** D2
E.G.H. Oliver & R.C. Turner

e**Distribution:** WC. Hottentots Holland Mountains.

Habitat: Fynbos, among boulders and on rocky summit ridges.
Rationale: A naturally rare species with a restricted distribution (EOO 150 km^2), known from three locations. Potentially threatened by frequent fires. Declined in the past because of the construction of Sir Lowry's Pass and wildflower harvesting, but these activities are not ongoing.

[F] **Erica natalensis** Dulfer

Status: **DD**D
R.C. Turner

[e]**Distribution:** KZN. KwaZulu-Natal Drakensberg Mountains.
Habitat: Unknown.
Rationale: Known only from the type collection, which came from an unspecified locality in the KwaZulu-Natal Drakensberg. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

[F] **Erica navigatoris** E.G.H.Oliv.

Status: **VU** D2
E.G.H. Oliver & R.C. Turner

[e]**Distribution:** WC. Matroosberg and Kouebokkeveld Mountains.
Habitat: Fynbos, in rock outcrops on mountain summits.
Rationale: A high-altitude species known from only two locations. There has been no recorded decline, but this species is potentially threatened by too frequent fires—Matroosberg has burnt twice within the last six years.

Erica nematophylla Guthrie & Bolus **Plate 56**

Status: **VU** D2
R.C. Turner, E.G.H. Oliver & D. Pillay

[e]**Distribution:** WC. Stormsvlei near Riviersonderend and Garcia's Pass near Riversdale.
Habitat: Stony slopes in fynbos.
Rationale: Known only from two disjunct locations, potentially threatened by invading alien plants at both.

[F] **Erica nevillei** L.Bolus

Status: **Rare**
R.C. Turner & D.A. Kamundi†

[e]**Distribution:** WC. Cape Peninsula, Noordhoek Peak, Chapman's Peak, Constantiaberg and the Kalk Bay Mountains.
Habitat: Fynbos, on rocky slopes, often growing against boulders.
Rationale: A range-restricted (EOO < 40 km^2) resprouter stimulated by fire. Not likely to decline as a result of too frequent fires on Table Mountain.

Erica niveniana E.G.H.Oliv.

Status: **VU** D2
R.C. Turner & E.G.H. Oliver

[e]**Distribution:** WC. Hottentots Holland Mountains.
Habitat: Fynbos, stony slopes and mountain summits.
Rationale: Three locations are known. At one location, part of the subpopulation declined as a result of the construction of the N2 Houwhoek Pass road. The other two of have been very frequently burnt over the past decade. Frequent fires are a potential threat to all three locations.

[F] **Erica oakesiorum** E.G.H.Oliv.

Status: **EN** B1ab(iii,v)+2ab(iii,v); C2a(i)
R.C. Turner, R. Koopman & E.G.H. Oliver

[e]**Distribution:** WC. Riviersonderend Mountains, from Genadendal to Pilaarkop.
Habitat: Fynbos, on south-facing slopes, 400–1 400 m.
Rationale: A range-restricted species (EOO 82 km^2, AOO < 5 km^2). There are six known locations, but the species is possibly locally extinct at two of them because of too frequent fires. Subpopulations are typically small, consisting of less than 250 plants. We suspect that the total population is less than 2 500 individuals. Invasive alien pines and too frequent fires are causing a continuing decline.

Erica oblongiflora Benth. **Plate 56**

Status: **CR** B1ab(i,ii,iii)+2ab(i,ii,iii)
E.G.H. Oliver & R.C. Turner

[e]**Distribution:** WC. Southern Agulhas Plain.
Habitat: Limestone pavements and depressions on limestone ridges.
Rationale: Occurs at a single location along a limestone ridge, EOO < 8 km^2, AOO < 2 km^2. Declining as a result of dense invasive alien *Acacia cyclops* encroachment as well as brush cutting and grazing by livestock.

Erica occulta E.G.H.Oliv.

Status: **VU** D2
R.C. Turner & E.G.H. Oliver

[e]**Distribution:** WC. Southern Agulhas Plain, Groot Hagelkraal.
Habitat: Southwest- to southeast-facing limestone boulders and cliffs.
Rationale: An extremely localised species (EOO and AOO < 6 km^2) potentially threatened by alien invasive *Acacia cyclops* infestations of the habitat and the construction of a nuclear power plant as a large part of the population is on land owned by Eskom.

Erica oligantha Guthrie & Bolus

Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v)
R.C. Turner, E.G.H. Oliver & D. Pillay

[e]**Distribution:** WC. Van Der Bijlberg and Akkedisberg Mountains.
Habitat: Fynbos, in montane marshes, seepage areas and along streams on steep, south-facing slopes.
Rationale: EOO < 6.5 km^2, AOO < 0.5 km^2. Known from two locations. This species occurs in a sensitive habitat that is vulnerable to disturbance and is currently declining as a result of alien invasive infestation of the habitat at both locations.

[F] **Erica omninoglabra** H.A.Baker

Status: **Rare**
R.C. Turner

[e]**Distribution:** WC. Langeberg Mountains.
Habitat: Fynbos, in seepage areas on moist, south-facing slopes.
Rationale: A range-restricted, cryptic, high-altitude habitat specialist. No known threats.

[F] **Erica onusta** Guthrie & Bolus

Status: **CR** B1ab(iii,v)
J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Knysna.
Habitat: Coastal fynbos patches between forest.
Rationale: Restricted to a small area east of Knysna, EOO 98 km^2. Much of the former habitat has been transformed to forestry plantations. Remaining subpopulations are severely fragmented and occur in isolated remnants among plantations. Habitat quality in fragments is declining because of a lack of fire and alien invasive infestations.

Erica oophylla Benth.

Status: **Critically Rare**
E.G.H. Oliver & R.C. Turner

[e]**Distribution:** WC. Langeberg Mountains.
Habitat: Rocky mountain summits, slopes and ridges in fynbos.
Rationale: This rare, range-restricted (EOO 10 km^2), high-altitude habitat specialist is not likely to be threatened.

[F] **Erica orthiocola** E.G.H.Oliv.

Status: **EN** D
E.G.H. Oliver & R.C. Turner

[e]**Distribution:** WC. Endemic to Pilaarkop, Riviersonderend Mountains.
Habitat: Fynbos, on damp, south-facing rock ledges.
Rationale: An extremely localised (EOO 2.75 km^2), high-altitude habitat specialist. Only one small subpopulation of less than 200 plants is known. Potentially threatened by invading alien pines and too frequent fires.

Erica outeniquae (Compton) E.G.H.Oliv.

Status: **VU** D2
R.C. Turner & E.G.H. Oliver

[e]**Distribution:** WC. Outeniqua and Tsitsikamma Mountains.
Habitat: High-altitude, stony slopes in fynbos.
Rationale: A rare species, only four locations known. Subpopulations are small and not often seen. Potential threats include invasive alien pines and too frequent fires.

Erica oxyandra Guthrie & Bolus

Status: **DD**D
R.C. Turner & E.G.H. Oliver

[e]**Distribution:** WC. Langeberg Mountains.
Habitat: Moist upper slopes in fynbos.
Rationale: Not recorded since 1952, and known from only three collections from unspecified localities in the Langeberg Mountains above Swellendam.

[F] **Erica oxysepala** Guthrie & Bolus

Status: **VU** D2
R.C. Turner & D.A. Kamundi†

[e]**Distribution:** WC. Clanwilliam to Tulbagh.
Habitat: Fynbos, in seepage areas on mountain slopes above 600 m.
Rationale: This species occurs in a rare, specialised habitat and only five locations are known, scattered over a large area (EOO 4 900 km^2). Two of the five locations are potentially threatened by invading alien plants and a deleterious fire regime.

[F] **Erica pageana** L.Bolus

Status: **Rare**
R.C. Turner

[e]**Distribution:** WC. Kogelberg.
Habitat: Sandstone slopes in fynbos.
Rationale: Extremely localised (EOO 40 km^2), but well conserved in the Kogelberg Biosphere Reserve.

Erica paludicola L.Bolus

Status: **VU** A2ac; D2
R.C. Turner & E.G.H. Oliver

[e]**Distribution:** WC. Cape Peninsula, Noordhoek Peak to Silvermine Valley.
Habitat: Peaty soil with quartzitic sand in seepage areas associated with mountain streams, and also on damp, vertical rock faces.
Rationale: Known from two locations. Notes on early collections from Silvermine indicate that the subpopulation there was large, but it is now numbering less than 150 plants. Road construction, invasion by alien species, polluted road runoff and fires in 2000 have caused at least a 30% reduction in the population over the past three generations (30 years). This species remains potentially threatened by infrastructure development, pollution from road runoff and further invasion by alien plants.

[F] **Erica pannosa** Salisb.

Status: **Rare**
R.C. Turner

[e]**Distribution:** WC. Riviersonderend Mountains.
Habitat: Cool, south-facing middle and lower slopes in fynbos.
Rationale: A range-restricted species (EOO < 30 km^2). No known threats.

Erica passerinoides (Bolus) E.G.H.Oliv.

Status: **VU** B1ab(iii)
R.C. Turner, J.E. Victor & A.P. Dold

[e]**Distribution:** EC. Sneeuberg in the Koudeveld Mountains, Katberg Pass and Cata Forest Reserve.
Habitat: Karoo-fynbos ecotone, on south-facing slopes.
Rationale: EOO < 6 250 km^2. Three locations are known from herbarium collections. Recent field surveys indicated that it is locally extinct on the Sneeuberg because of overgrazing and alien invasions. Remaining locations are threatened by expanding forestry plantations and encroachment by invasive aliens.

[F] **Erica patens** Andrews

Status: **EN** D
R.C. Turner & N.A. Helme

[e]**Distribution:** WC. Groenlandberg Mountains above Elgin.
Habitat: Base of vertical, south-facing cliffs on steep, peaty rock ledges.
Rationale: An extremely localised species, recently rediscovered after not being recorded for nearly 200 years. One population of around 250 plants is restricted to an area of 1 500 m^2. A slow-growing, long-lived reseeder potentially threatened by too frequent fires and expanding alien pine and hakea infestations of its habitat.

Erica patersonii Andrews **Plate 57**

Status: **EN** B1ab(i,ii,iii,iv,v)
R.C. Turner & E.G.H. Oliver

[e]**Distribution:** WC. Cape Point to Kleinmond.
Habitat: Fynbos, in wet or marshy, reed-covered flats on coastal plains and mountains.
Rationale: EOO 165 km^2. Four known locations. Less than 15% of the population is protected in the Table Mountain National Park. All other subpopulations are declining as a result of coastal housing development (at Kleinmond, Betty's Bay and Rooiels), as well as by dense *Acacia saligna* and *Leptospermum laevigatum* encroachment (Kleinmond).

[F] **Erica paucifolia** (J.C.Wendl.) E.G.H.Oliv. subsp. **ciliata** (Klotzsch) E.G.H.Oliv.

Status: **EN** B1ab(i,ii,iii,iv,v)
R.C. Turner

[e]**Distribution:** WC. Hemel-en-Aarde Valley.
Habitat: Sandy, quartzitic hill slopes and gentle mountain slopes and plateaus in fynbos.

Rationale: EOO < 50 km². Two known locations. Invasion by alien species of *Hakea*, *Pinus*, *Acacia* and *Eucalyptus* has already led to the degradation of ± 40% of the habitat and alien species continue to spread, causing a continuing decline in habitat and number of mature individuals. A further 10% of the habitat has been transformed to orchards and vineyards.

[F] **Erica paucifolia** (J.C.Wendl.) E.G.H.Oliv. subsp. **paucifolia**

Status: **EN** B1ab(i,ii,iii,iv,v)
R.C. Turner

[e]**Distribution:** WC. Houwhoek and Kleinrivier Mountains.
Habitat: Fynbos, on sandy flats and slight slopes at foot of mountains.
Rationale: EOO 127 km². Seven locations are known through herbarium collections, but this taxon is locally extinct at all but two. Subpopulations at Hermanus and Stanford declined to local extinction because of urban development, and a large portion of the Kleinmond subpopulation has already declined as a result of urban development, and decline is ongoing. One other subpopulation at Honingklip is also likely to be locally extinct owing to dense alien infestation.

[F] **Erica paucifolia** (J.C.Wendl.) E.G.H.Oliv. subsp. **squarrosa** (Benth.) E.G.H.Oliv.

Status: **EN** B1ab(i,ii,iii,v)
R.C. Turner

[e]**Distribution:** WC. Caledon to Riviersonderend.
Habitat: Fynbos, on open rocky or sandy slopes between restioid and ericoid shrublets.
Rationale: EOO 360 km². Four locations are known through herbarium collections, but it is likely to be locally extinct at two. Declining as a result of dense alien invasive infestations of the habitat on Caledon Swartberg.

Erica pauciovulata H.A.Baker

Status: **VU** D1+2
R.C. Turner, E.G.H. Oliver & T. de Villiers

[e]**Distribution:** WC. Southern Overberg.
Habitat: Montane seepage areas and streambanks in fynbos.
Rationale: Localised habitat specialist occurring at only one location (EOO < 10 km²). The total population is less than 1 000 plants. Potentially threatened by too frequent fires and invasive alien infestation of the habitat.

[F] **Erica penduliflora** E.G.H.Oliv.

Status: **EN** B1ab(ii,iii,v)
R.C. Turner & E.G.H. Oliver

[e]**Distribution:** WC. Pearly Beach to Soetanysberg.
Habitat: Sandstone, in laterictic soils.
Rationale: EOO < 300 km²), five small, severely fragmented subpopulations are known. Declined extensively in the past as a result of wildflower harvesting for the cut flower industry, and harvesting is still causing a decline. It is also threatened by invasive alien acacia infestations of the habitat.

[F] **Erica perplexa** E.G.H.Oliv.

Status: **CR** D
R.C. Turner, E.G.H. Oliver & D. Pillay

[e]**Distribution:** WC. Groenlandberg near Grabouw.
Habitat: Seepage areas on southwest-facing slopes in kloofs.
Rationale: Restricted to a single kloof, with a population of ± 20 plants.

[F] **Erica perspicua** J.C.Wendl. subsp. **latifolia** (Benth.) E.G.H.Oliv. & I.M.Oliv.

Status: **VU** D2
D. Raimondo, R.C. Turner & P.A. Manyama

[e]**Distribution:** WC. Onrus River Mountains to Stanford.
Habitat: Fynbos, in seepage areas on low foothills and lowland flats.
Rationale: Declined in the past because of urban expansion of Hermanus and Stanford. Two subpopulations remain that are unlikely to be affected by further urban expansion, but are potentially threatened by invasive alien infestations of the habitat and too frequent fires.

[F] **Erica petricola** E.G.H.Oliv.

Status: **Rare**
R.C. Turner

[e]**Distribution:** WC. Riviersonderend Mountains.
Habitat: Fire-protected cliff faces at middle to high altitude.
Rationale: A range-restricted habitat specialist (EOO < 140 km²). No known threats.

[F] **Erica petrusiana** E.G.H.Oliv. & I.M.Oliv.

Status: **Rare**
R.C. Turner

[e]**Distribution:** WC. Kogelberg, around the Steenbras Dam.
Habitat: Stony shale soil and also on sandstone ridges in fynbos.
Rationale: Locally common, range-restricted endemic (EOO < 10 km²). Protected within the Kogelberg Biosphere Reserve.

[F] **Erica philippioides** Compton

Status: **Rare**
R.C. Turner

[e]**Distribution:** NC WC. Kamiesberg and northern Cederberg Mountains.
Habitat: Moist, shaded rock faces.
Rationale: Rare habitat specialist with only four known subpopulations. No known threats.

Erica physantha Benth.

Status: **CR** B1ab(i,ii,iii,iv)
R.C. Turner & E.G.H. Oliver

[e]**Distribution:** WC. Platkop near Riversdale.
Habitat: Dry, loamy silcrete hills.
Rationale: A single location remains, where ± 3 000 plants occur within a 0.01 km² road verge. Declining as a result of invasive alien infestations, brush cutting, overgrazing and erosion.

[F] **Erica physophylla** Benth.

Status: **Rare**
R.C. Turner

[e]**Distribution:** WC. Riviersonderend Mountains above Greyton and on Pilaarkop.
Habitat: Damp, shady rock faces.
Rationale: A rare, cryptic, dwarf species with an EOO of 30 km². Often growing on fire-protected, inaccessible cliffs. No known threats.

[F] **Erica pilaarkopensis** H.A.Baker

Status: **Rare**
R.C. Turner

[e]**Distribution:** WC. Riviersonderend Mountains, on Pilaarkop.

Habitat: Rocky screes, open slopes and rocky ledges in fynbos.
Rationale: A range-restricted species, EOO < 20 km². Occurs as scattered individuals in fire-protected rocky screes. No known threats.

Erica pillansii Bolus subsp. **fervida** (L.Bolus) E.G.H.Oliv. & I.M.Oliv.

Status: **Rare**
R.C. Turner & E.G.H. Oliver
[e]**Distribution:** WC. Kogelberg Biosphere Reserve.
Habitat: Seepage areas on wetter slopes.
Rationale: The type 'collection' of this range-restricted endemic (EOO 48 km²) came from a flower seller's bucket in Adderley Street, Cape Town, but harvesting of this taxon has ceased and it is now protected within the Kogelberg Biosphere Reserve. The population currently consists of more than 5 000 plants and is not declining.

Erica pillansii Bolus subsp. **pillansii**

Status: **Rare**
R.C. Turner, D. Raimondo & E.G.H. Oliver
[e]**Distribution:** WC. Kogelberg Biosphere Reserve.
Habitat: Streambanks and marshy areas on shale bands on mountain slopes.
Rationale: A habitat specialist known from a few dense, localised subpopulations. It was harvested as a cut flower in the past. The type specimen was 'collected' from a flower seller's bucket in Adderley Street, Cape Town, but harvesting has ceased and this taxon is now protected within the Kogelberg Biosphere Reserve.

Erica pilosiflora E.G.H.Oliv. subsp. **pilosiflora**

Status: **VU** B1ab(i,ii,iii,iv)
R.C. Turner & N.A. Helme
[e]**Distribution:** WC. Grabouw to Villiersdorp.
Habitat: Low altitude quartzite slopes.
Rationale: EOO 2 450 km². Fewer than 10 remaining locations. Subpopulations on lower slopes have declined and are continuing to decline because of wheat and vineyard cultivation, grazing by livestock and invasive alien infestations of the habitat. A few subpopulations at slightly higher altitudes are protected in reserves.

[F] **Erica pilosiflora** E.G.H.Oliv. subsp. **purpurea** E.G.H.Oliv.

Status: **VU** D2
R.C. Turner
[e]**Distribution:** WC. Riviersonderend Mountains in the hills between McGregor and the Breede River near Robertson.
Habitat: Deep, shifting sands.
Rationale: EOO 80 km². Two known locations. Potentially threatened by crop cultivation.

Erica pilulifera L.

Status: **VU** D2
R.C. Turner & E.G.H. Oliver
[e]**Distribution:** WC. Table Mountain.
Habitat: Seepage areas in fynbos.
Rationale: A range-restricted habitat specialist, EOO and AOO < 4 km². Five known locations. Parts of the habitat are frequented by hikers, and one subpopulation near a hikers' hut has declined because of trampling. It is not currently declining, but further trampling remains a potential threat.

[F] **Erica piquetbergensis** (N.E.Br.) E.G.H.Oliv.

Status: **CR** C2a(i)
R.C. Turner & E.G.H. Oliver
[e]**Distribution:** WC. Piketberg and Engelsman se Baken.
Habitat: Sandy montane plateaus in fynbos.
Rationale: Four small, isolated subpopulations, each with less than 50 mature individuals, are declining because of too frequent fires—most of the small range (EOO < 160 km²) has burnt three times in 12 years. The establishment of citrus and protea orchards has also caused habitat loss and they continue to expand. The development of mountain holiday cottages on Engelsman se Baken is likely to have resulted in the extinction of one subpopulation.

[F] **Erica platycalyx** E.G.H.Oliv.

Status: **EN** B1ab(i,ii,iii,iv)
R.C. Turner & E.G.H. Oliver
[e]**Distribution:** WC. Riversdale and Albertinia.
Habitat: Aeolian sand on and between limestone ridges.
Rationale: EOO < 625 km². Four known locations. Declining because of invasive alien *Acacia cyclops* infestation of the habitat, wheat and pasture cultivation, thatch collecting and grazing and trampling by livestock.

[F] **Erica plena** L.Bolus

Status: **Rare**
R.C. Turner
[e]**Distribution:** WC. Akkedisberg near Caledon.
Habitat: Seepage areas on upper south-facing slopes.
Rationale: A range-restricted habitat specialist, EOO 30 km². Localised subpopulations consist of several thousand plants and are protected in the Akkedisberg Conservancy. Invasive alien species of *Hakea* occur at low densities in its habitat but are regularly cleared.

[F] **Erica podophylla** Benth.

Status: **Rare**
R.C. Turner
[e]**Distribution:** WC. Langeberg Mountains.
Habitat: Localised on steep, moist, south-facing slopes and rock ledges.
Rationale: A range-restricted habitat specialist (EOO 425 km²), with only four known subpopulations. Locally common. No known threats.

[F] **Erica procaviana** (E.G.H.Oliv.) E.G.H.Oliv.

Status: **DD**
R.C. Turner & E.G.H. Oliver
[e]**Distribution:** WC. Robertson.
Habitat: Rock crevices.
Rationale: An extremely rare species known only from the type collection, made in 1961. Specific habitat and population data are not available.

[F] **Erica prolata** E.G.H.Oliv. & I.M.Oliv.

Status: **EN** B1ab(ii,iii,v)
R.C. Turner
[e]**Distribution:** WC. Cape Infanta to Still Bay.
Habitat: Limestone-derived soils, ferricrete and sandy gravels.
Rationale: EOO 3 300 km², AOO < 20 km². Five locations are likely to remain. Only one small subpopulation is protected in the Bontebok National Park. Subpopulations at all other locations are declining because of alien invasive *Acacia cyclops* infestation and agricultural expansion.

Erica propendens Andrews

Status: **CR** B1ab(iii,v)
R.C. Turner & D. Raimondo

e**Distribution**: WC. Hottentots Holland to Kleinrivier Mountains.

Habitat: Marshy seeps in fynbos.

Rationale: Five locations are known through herbarium records. Three of them are now locally extinct as a result of habitat degradation by invasive alien species and agriculture. The two remaining subpopulations are small, isolated and severely fragmented and continue to decline because of alien invasion. Current EOO is 27 km^2.

F **Erica psittacina** E.G.H.Oliv. & I.M.Oliv.

Status: **EN** D
R.C. Turner & L. von Staden

e**Distribution**: KZN. Donnybrook, KwaZulu-Natal Midlands.

Habitat: Steep, southeast-facing slopes in long, narrow belts of dense, shrubby vegetation close to the margins of indigenous forest.

Rationale: A single subpopulation of ± 100 plants is known at present. It is potentially threatened by a deleterious fire regime.

F **Erica pulchelliflora** E.G.H.Oliv.

Status: **DD**
R.C. Turner & E.G.H. Oliver

e**Distribution**: WC. Napier.

Habitat: Unknown, possibly lower sandstone slopes.

Rationale: Known only from the type collection, made in 1896 at an unspecified locality near Napier. Specific habitat and population data are not available.

Erica pulvinata Guthrie & Bolus

Status: **CR** B1ab(iii,v)+2ab(iii,v)
R.C. Turner, E.G.H. Oliver & N.A. Helme

e**Distribution**: WC. Soetanysberg.

Habitat: South-facing limestone cliff faces.

Rationale: EOO and AOO < 3 km^2. One location. Declining because of alien *Acacia cyclops* invasion of the habitat. Alien clearing is in progress, but at present alien vegetation is spreading faster than it can be cleared.

Erica purgatoriensis H.A.Baker

Status: **VU** D1+2
R.C. Turner, E.G.H. Oliver & D. Pillay

e**Distribution**: WC. Franschhoek.

Habitat: Marshy wetlands.

Rationale: About 500 plants of this species occur in a single roadside wetland (AOO 100 m^2). It is likely that the population has declined in the past because of road construction. It is currently potentially threatened by too frequent fires.

F **Erica pycnantha** Benth.

Status: **Rare**
R.C. Turner

e**Distribution**: WC. Kogelberg Mountains.

Habitat: Cool, moist, south-facing slopes in fynbos.

Rationale: A range-restricted species (EOO 218 km^2), known from four subpopulations. Protected in the Kogelberg Biosphere Reserve.

Erica pyramidalis Sol. var. **pyramidalis**

Status: **EX**
E.G.H. Oliver & D. Pillay

e**Distribution**: WC. Cape Flats.

Habitat: Peaty hollows and marshes.

Rationale: Formerly occurred on the western side of the Cape Flats, but its entire habitat has been lost to urban development.

Erica quadrisulcata L.Bolus

Status: **Rare**
R.C. Turner

e**Distribution**: WC. Southern Cape Peninsula.

Habitat: Fynbos, on rocky or sandy slopes and in rock crevices.

Rationale: A range-restricted species occurring as one large, continuous population in an area of 12 km^2. No alien species have invaded the area and it is protected in the Table Mountain National Park.

F **Erica radicans** (L.Guthrie) E.G.H.Oliv. subsp. **schlechteri** (N.E.Br.) E.G.H.Oliv.

Status: **EN** B1ab(i,ii,iii,v)
R.C. Turner

e**Distribution**: WC. Stanford to Cape Agulhas.

Habitat: Coastal limestone hills.

Rationale: EOO < 700 km^2. Three known locations, two of which are declining as a result of dense alien acacias invading the habitat. The other is protected in a nature reserve.

F **Erica recurvata** Andrews **Plate 56**

Status: **CR** B1ab(iii)+2ab(iii); D
R.C. Turner

e**Distribution**: WC. Soetmuisberg above Napier.

Habitat: In rock crevices on low, rocky outcrops on mountain tops and plateaus.

Rationale: This species was thought to be a European garden hybrid known only from a drawing published in the early 1800s. It had not been recorded or collected in the wild until rediscovered by Ross Turner on 30 August 2007. This species is now known from one wild population of 28 plants (EOO and AOO 1.26 km^2) and is threatened by invasive alien infestation and too frequent fires.

Erica regia Bartl. subsp. **regia**

Status: **EN** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)
R.C. Turner & E.G.H. Oliver

e**Distribution**: WC. Elim to Viljoenshof.

Habitat: Fynbos, lowland ferricrete areas.

Rationale: EOO and AOO < 320 km^2. Several small, severely fragmented subpopulations are declining as a result of road construction and maintenance, agriculture and alien *Acacia cyclops* and *Eucalyptus cornuta* invasion of the habitat.

F **Erica rehmii** Dulfer

Status: **VU** D2
R.C. Turner

e**Distribution**: WC. Elandskloof.

Habitat: Sandstone fynbos.

Rationale: Extremely localised (EOO < 10 km^2), known from one location. Potentially threatened by invasive species of *Hakea*.

[F] **Erica remota** (N.E.Br.) E.G.H.Oliv.

Status: **CR** B1ab(iii)+2ab(iii); C2a(ii)

R.C. Turner

[e]**Distribution:** WC. Riviersonderend Mountains.

Habitat: Deep alluvial soils on lower slopes below kloofs.

Rationale: Known from one location with less than 250 plants. EOO and AOO < 1 km^2. The particular habitat of this species is densely invaded by alien species of *Acacia*, *Hakea* and *Pinus*, causing a continuing decline in the population.

Erica rhodopis (Bolus) Guthrie & Bolus **Plate 58**

Status: **CR** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

R.C. Turner & E.G.H. Oliver

[e]**Distribution:** WC. Bot River and Perdekloof.

Habitat: Sandy soils over clay.

Rationale: EOO < 100 km^2, AOO < 10 km^2. Only two severely fragmented subpopulations are known, both declining because of vineyard expansion, alien invasions of the habitat and polo field development.

[F] **Erica ribisaria** Guthrie & Bolus **Plate 58**

Status: **CR** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

R.C. Turner & E.G.H. Oliver

[e]**Distribution:** WC. Houwhoek to Kleinmond.

Habitat: Fynbos, in sandy soils on flats.

Rationale: EOO < 100 km^2, AOO < 2 km^2. Three remaining subpopulations are severely fragmented and are declining because of alien invasions of the habitat at two and firebreak and road maintenance at the other.

[F] **Erica richardii** E.G.H.Oliv. & I.M.Oliv.

Status: **Rare**

R.C. Turner & E.G.H. Oliver

[e]**Distribution:** WC. Dry mountain ridges north of the Groot Swartberg mountain range at Klaarstroom.

Habitat: Cliffs and in rocky, fire-protected areas in fynbos.

Rationale: A range-restricted species (EOO 10 km^2), with only 25 plants known. We suspect that there may be a number of undiscovered subpopulations. It has no known threats.

Erica riparia H.A.Baker

Status: **EN** B1ab(ii,iii,v)

R.C. Turner, E.G.H. Oliver, D. Pillay & F. Daniels

[e]**Distribution:** WC. Betty's Bay to Soetanysberg.

Habitat: Marshy seeps and wetlands in fynbos.

Rationale: EOO < 500 km^2. Three known locations. Declining at two locations owing to dense alien invasion of the habitat, the other is potentially threatened by coastal housing development.

Erica rivularis L.E.Davidson

Status: **EN** B1ab(iii)

M. Lötter, L. von Staden & J.E. Victor

[e]**Distribution:** MP. Blyde River Canyon and Graskop.

Habitat: Margins of clear, high-altitude perennial streams over quartzitic rocks.

Rationale: A range-restricted species (EOO 74 km^2), five known locations. The habitat is being degraded at two locations by dense encroachment from invasive alien *Acacia mearnsii* (black wattle).

[F] **Erica roseoloba** E.G.H.Oliv.

Status: **Rare**

R.C. Turner & J.E. Victor

[e]**Distribution:** WC. Klein Swartberg Mountains.

Habitat: Cool, south-facing rock ledges and cliffs in fynbos.

Rationale: A rare, high-altitude habitat specialist. No known threats.

Erica rufescens Klotzsch

Status: **Rare**

R.C. Turner, E.G.H. Oliver & D. Pillay

[e]**Distribution:** WC. Riviersonderend Mountains.

Habitat: Fynbos, on mountain summits.

Rationale: A rare resprouter, with a restricted, high-altitude distribution (EOO 80 km^2) in the Riviersonderend Mountains. Not declining.

[F] **Erica rupicola** Klotzsch

Status: **DD**D

R.C. Turner

[e]**Distribution:** WC. Riviersonderend Mountains, Appelskraal, Stormvallei and Hassaquaskloof.

Habitat: Probably sandstone slopes in fynbos.

Rationale: Not collected in over 100 years. Not enough is known about the specific habitat or population status of this species to determine its status.

[F] **Erica russakiana** E.G.H.Oliv.

Status: **DD**D

R.C. Turner

[e]**Distribution:** WC. Kleinrivier and Caledon Swartberg Mountains.

Habitat: Northern sandstone fynbos slopes.

Rationale: Known from two herbarium collections. Specific habitat and population status not known.

[F] **Erica rusticula** E.G.H.Oliv.

Status: **Rare**

R.C. Turner

[e]**Distribution:** WC. Kouebokkeveld.

Habitat: Rocky ridges in fynbos.

Rationale: Extremely localised, but locally common (EOO 10 km^2), with several thousand plants in the population. No known threats.

Erica sacciflora Salisb.

Status: **CR** PE

R.C. Turner & E.G.H. Oliver

[e]**Distribution:** WC. Franschhoek Mountains.

Habitat: Low-altitude slopes in fynbos.

Rationale: Eight locations are known through herbarium collections. The species is, however, believed to be extinct at all locations after repeated searches have failed to relocate it. It is suspected that the population declined as a result of forestry plantations and subsequent invasion of surrounding fynbos habitat by alien pine seedlings, leading to excessively hot fires. Extremely hot fires may have killed this slow-growing, long-lived resprouter, which may also have suffered from poor recruitment.

[F] **Erica sagittata** Klotzsch ex Benth.

Status: **DD**D

E.G.H. Oliver, R.C. Turner & D. Pillay

[e]**Distribution:** EC. Van Stadens and Elandsrivier Mountains.

Habitat: Unknown.
Rationale: Not collected for 26 years, and is generally poorly known. No habitat or population information exists.

[F] **Erica salicina** E.G.H.Oliv.

Status: **CR** D
R.C. Turner, E.G.H. Oliver, N.A. Helme & D. Pillay
[e]**Distribution:** WC. Hex River Mountains.
Habitat: Fynbos, on moist rock ledges on cliffs.
Rationale: An extremely localised, montane species (EOO < 100 km^2), growing on the margins of a fire refuge. Only 10 plants are known and there is no known decline, but it is potentially vulnerable to frequent fires, as it is a slow-growing, long-lived reseeder.

[F] **Erica schumannii** E.G.H.Oliv.

Status: **EN** D
R.C. Turner & E.G.H. Oliver
[e]**Distribution:** WC. Villiersdorp.
Habitat: Fire-protected habitats on rocky mountain slopes.
Rationale: Only one subpopulation of ± 50 plants is known, but it is suspected that there may be other small subpopulations on the Stettynsberg and therefore the total population is estimated as < 250 plants. Potentially threatened by invasive alien plants.

[F] **Erica setulosa** Benth.

Status: **Rare**
R.C. Turner
[e]**Distribution:** WC. Langeberg, Klein Swartberg and Rooiberg Mountains.
Habitat: Fynbos, on moist rock ledges and slopes at high altitude.
Rationale: A rare, high-altitude habitat specialist, occurring on at least three different mountain ranges, in small, localised subpopulations. No known threats.

[F] **Erica sicifolia** Salisb.

Status: **VU** D2
R.C. Turner
[e]**Distribution:** WC. Riviersonderend Mountains.
Habitat: Fynbos, moist areas at the base of rocky outcrops.
Rationale: A rare, high-altitude habitat specialist, known to occur at only four locations. Potentially threatened by invasive alien pines.

Erica sociorum L.Bolus **Plate 59**

Status: **CR** B1ab(iii); D
R.C. Turner & E.G.H. Oliver
[e]**Distribution:** WC. Cape Peninsula, Noordhoek Peak.
Habitat: Fynbos, on steep, peaty, south-facing rock ledges and cliff faces.
Rationale: The most localised of all Cape Peninsula endemic ericas. About 50 plants occur at a single location (EOO and AOO 0.1 km^2) and numbers are declining as a result of alien pines that invade the habitat.

[F] **Erica sperata** E.G.H.Oliv.

Status: **Rare**
R.C. Turner
[e]**Distribution:** WC. Ridge north of De Hoop.
Habitat: Calcareous ridges in fynbos.
Rationale: A localised, but locally common range-restricted endemic, EOO 80 km^2. Most of the population is protected in De Hoop Nature Reserve and the individuals outside the reserve boundary are not currently threatened.

[F] **Erica squarrosa** Salisb.

Status: **VU** D2
R.C. Turner & D.A. Kamundi†
[e]**Distribution:** WC. Hottentots Holland Mountains and Groenlandberg.
Habitat: Rocks and rock pavement on mountain summits and slopes.
Rationale: A rare species, EOO 500 km^2. With only four known locations. Potentially threatened by invasive alien pines at all locations.

Erica stokoeanthus E.G.H.Oliv.

Status: **VU** D2
R.C. Turner & E.G.H. Oliver
[e]**Distribution:** WC. Somerset Sneeukop, Hottentots Holland Mountains.
Habitat: High-altitude shale bands in montane fynbos.
Rationale: A highly restricted endemic, known from only one location. Potentially threatened by invasive pines.

Erica stylaris Spreng.

Status: **VU** B1ab(iii)+2ab(iii)
R.C. Turner, E.G.H. Oliver & N.A. Helme
[e]**Distribution:** EC WC. Mossel Bay to Humansdorp.
Habitat: Fynbos, on moist slopes.
Rationale: EOO 980 km^2, AOO < 980 km^2. Ten known locations. Declining as a result of habitat degradation caused by invasive alien pines.

Erica subverticillaris Diels ex Guthrie & Bolus

Status: **VU** D2
M. Lötter, L. von Staden & J.E. Victor
[e]**Distribution:** MP. Long Tom Pass.
Habitat: High-altitude, short grassland, among rocky outcrops on mountain summits, 1 900–2 200 m.
Rationale: Between two and five locations remain. This species has declined because of afforestation in the past and it is currently potentially threatened by invasive alien plants.

[F] **Erica tarantulae** E.G.H.Oliv.

Status: **VU** D2
R.C. Turner & A.N. Hitchcock
[e]**Distribution:** WC. Hex River Mountains.
Habitat: Fynbos, in stony areas at high altitudes above 1 200 m.
Rationale: EOO 22 km^2, AOO 0.5 km^2. Two known locations. Potentially threatened by too frequent fires.

[F] **Erica tenuipes** Guthrie & Bolus

Status: **Rare**
R.C. Turner
[e]**Distribution:** WC. Franschhoek and Du Toit's Kloof Mountains.
Habitat: Fynbos, on southern sandstone slopes.
Rationale: A rare, range-restricted high-altitude habitat specialist, known from only three sites, but not recorded for several decades. It is, however, unlikely to be threatened.

[F] **Erica tetrathecoides** Benth.

Status: **VU** D2

R.C. Turner, J.H. Vlok, A.L. Schutte-Vlok & D.A. Kamundi†

[e]**Distribution:** WC. Langeberg Mountains, Garcia's Pass.

Habitat: Fynbos, in seepage areas or along streambanks on south-facing slopes.

Rationale: One large subpopulation from a restricted area around Garcia's Pass (EOO ± 20 km^2) is potentially threatened by expanding forestry plantations and alien pines that invade the habitat at five locations.

[F] **Erica tragomontana** R.C.Turner

Status: **VU** D2

R.C. Turner

[e]**Distribution:** WC. Central Kouebokkeveld, Skurweberg and Bokberg Mountains.

Habitat: Rocky, sandy, quartzitic mountain slopes, often with shale alluvium, on southwest- to southeast-facing slopes, usually in nonperennial seepage areas.

Rationale: Four known locations are potentially threatened by too frequent fires.

Erica trichophylla Benth.

Status: **VU** D2

R.C. Turner & E.G.H. Oliver

[e]**Distribution:** WC. Riviersonderend Mountains.

Habitat: Middle slopes in montane sandstone fynbos.

Rationale: Locally abundant, range-restricted endemic (EOO < 40 km^2), and known from only two locations. Potentially threatened by invading alien pines.

[F] **Erica trichostigma** Salter

Status: **VU** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

D. Raimondo

[e]**Distribution:** WC. Hopefield and Langebaan to Mamre.

Habitat: Coastal sands.

Rationale: EOO and AOO < 900 km^2. Fewer than 10 known locations. Declining as a result of continued expansion of crop cultivation, coastal development and alien plants invading the habitat.

Erica turgida Salisb.

Status: **EW**

E.G.H. Oliver, R.C. Turner & D. Pillay

[e]**Distribution:** WC. Cape Flats.

Habitat: Seasonally wet depressions and streambanks in fynbos.

Rationale: Formerly occurred on the Cape Flats around Rondebosch, Kenilworth and on the Royal Cape Golf Course in the Wynberg area. Extinct at all sites as a result of urban development. It survives as a cultivated species at Kirstenbosch National Botanical Garden.

[F] **Erica turneri** E.G.H.Oliv. **Plate 58**

Status: **VU** D2

R.C. Turner & N.A. Helme

[e]**Distribution:** WC. Suurbraak Mountain near Barrydale.

Habitat: Seepage areas at bases of rocks, on north-facing slopes.

Rationale: A recently discovered species known from only one location. Potentially threatened by alien pine and hakea invasions, which currently occur in low densities within the habitat.

Erica turrisbabylonica H.A.Baker

Status: **VU** D2

R.C. Turner, E.G.H. Oliver & D. Raimondo

[e]**Distribution:** WC. Kleinmond to Caledon.

Habitat: Fynbos, on steep, south-facing summit slopes.

Rationale: EOO 33 km^2. Only two known locations. Potentially threatened by alien pine and *Hakea drupacea* invasions and too frequent fires at one location.

[F] **Erica umbratica** E.G.H. & I.M.Oliv.

Status: **Critically Rare**

R.C. Turner & E.G.H. Oliver

[e]**Distribution:** WC. Meiringspoort, in the Groot Swartberg Mountains.

Habitat: Northeast-facing, dry, shady crevices of sheer cliff faces.

Rationale: Only one site with ± 100 plants is known, but there may be more individuals on unexplored areas of the inaccessible habitat of this species. Although highly range restricted, it is not threatened.

[F] **Erica unicolor** J.C.Wendl. subsp. **georgensis** E.G.H.Oliv. & I.M.Oliv.

Status: **Critically Rare**

P.A. Manyama

[e]**Distribution:** WC. Outeniqua Pass near George.

Habitat: Fynbos, on southern slopes near mountain summits.

Rationale: A high-altitude habitat specialist. No threats.

[F] **Erica unicolor** J.C.Wendl. subsp. **mutica** E.G.H.Oliv. & I.M.Oliv.

Status: **EN** B1ab(ii,iii,v)

P.A. Manyama

[e]**Distribution:** WC. between Mossel Bay, Herbertsdale and George.

Habitat: Lowlands and lower south- and north-facing slopes in fynbos.

Rationale: EOO < 1 000 km^2. Five known locations. Habitat quality is declining because of fragmentation by forestry plantations and alien invasions. Crop cultivation is also causing continuing habitat loss in some areas.

Erica urna-viridis Bolus

Status: **Rare**

R.C. Turner, E.G.H. Oliver & D. Pillay

[e]**Distribution:** WC. Cape Peninsula, Silvermine and Muizenberg Mountain.

Habitat: Rocky summit slopes in fynbos.

Rationale: Locally common, range-restricted endemic, EOO 6 km^2. Not threatened or declining.

Erica ustulescens Guthrie & Bolus

Status: **CR** B1ab(i,ii,iii); C2a(i)

R.C. Turner, E.G.H. Oliver & N.A. Helme

[e]**Distribution:** WC. Bot River.

Habitat: Sandy slopes and sometimes lateritic gravel.

Rationale: EOO 24 km^2. Only four small, severely fragmented subpopulations remain in road verges. The total population numbers less than 150 plants, with no subpopulation having more than 50 mature individuals. The habitat has been extensively transformed by agriculture and the population continues to decline because of road construction and maintenance and invasive alien infestations.

Erica uysii H.A.Baker

Status: **VU** D2

R.C. Turner, E.G.H. Oliver & D. Pillay

[e]**Distribution:** WC. De Hoop Nature Reserve.

Habitat: Limestone rocks and cliff faces.
Rationale: Only one subpopulation of ± 500 plants occur in a part of De Hoop Nature Reserve that is affected by alien *Acacia cyclops* invasions, but it is not declining at present.

Erica valida H.A.Baker

Status: **Rare**
R.C. Turner, E.G.H. Oliver & J.H. Vlok
eDistribution: EC WC. Kammanassie Mountains and Groot Winterhoek Mountains.
Habitat: Upper southern slopes, only in rocky outcrops.
Rationale: A rare, naturally disjunct, high-altitude habitat specialist that can be locally common.

Erica vallis-aranearum E.G.H.Oliv.

Status: **CR** D
R.C. Turner & E.G.H. Oliver
eDistribution: WC. Kogelberg Biosphere Reserve.
Habitat: South-facing sandstone slopes in fynbos.
Rationale: A naturally rare species, well conserved within the Kogelberg Biosphere Reserve, but known from only one subpopulation that has 15 mature individuals.

F Erica vallis-fluminis E.G.H.Oliv.

Status: **Rare**
R.C. Turner & N.A. Helme
eDistribution: WC. Riversdale, Langeberg Mountains between Gysmanshoek Pass and Bergfontein.
Habitat: Fynbos, in seepage areas on moist slopes.
Rationale: A range-restricted (EOO < 100 km^2) habitat specialist. Not threatened.

F Erica vallis-gratiae Guthrie & Bolus

Status: **Rare**
R.C. Turner
eDistribution: WC. Riviersonderend Mountains.
Habitat: Fynbos, on moist slopes in the mistbelt, 1 200–1 800 m.
Rationale: A range-restricted, high-altitude habitat specialist (EOO 20 km^2). No known threats.

Erica velatiflora E.G.H.Oliv.

Status: **VU** D1+2
R.C. Turner & E.G.H. Oliver
eDistribution: WC. Langeberg Mountains.
Habitat: Moist, loamy, south-facing slopes in fynbos.
Rationale: A highly range-restricted endemic, known from two locations, ± 6 km apart. Potentially threatened by forestry plantations and invading alien pines.

F Erica venustiflora E.G.H.Oliv. subsp. glandulosa E.G.H.Oliv.

Status: **VU** D2
R.C. Turner, E.G.H. Oliver & D. Raimondo
eDistribution: WC. Bredasdorp.
Habitat: Quartzitic patches on silcrete hills.
Rationale: Known from three locations. Although this taxon occurs within an area that is highly transformed by wheat cultivation, the actual silcrete outcrops on which it grows are not ploughed as they are too steep and rocky. Grazing and erosion from trampling by livestock are potential threats at all locations.

F Erica venustiflora E.G.H.Oliv. subsp. venustiflora

Status: **EN** B1ab(iii)+2ab(iii); D
R.C. Turner, E.G.H. Oliver & D. Raimondo
eDistribution: WC. Elim.
Habitat: Limestone fynbos on flats.
Rationale: EOO 67 km^2, AOO < 67 km^2. Five known locations. Habitat quality is declining as a result of alien invasions and grazing by livestock.

Erica verticillata P.J.Bergius

Status: **EW**
E.G.H. Oliver, R.C. Turner & D. Pillay
eDistribution: WC. Cape Flats.
Habitat: Lowland fynbos in damp, acid sandy soils.
Rationale: A Cape Flats endemic that went extinct as a result of harvesting for cut flowers and urban development. It has been reintroduced at two sites: Kenilworth Racecourse in 2006 and Rondevlei between 2002 and 2005. Both reintroduced subpopulations have yet to prove to be self-sustaining.

F Erica viridiflora Andrews subsp. redacta E.G.H.Oliv. & I.M.Oliv.

Status: **EN** D
R.C. Turner, E.G.H. Oliver & D. Pillay
eDistribution: WC. Meiringspoort near Oudtshoorn.
Habitat: Quartzitic, sandstone slab rock.
Rationale: A single population of ± 100 plants is known.

F Erica viridimontana E.G.H. & I.M.Oliv. subsp. nivicola E.G.H. & I.M.Oliv.

Status: **DD**D
R.C. Turner
eDistribution: WC. Somerset Sneeukop and Landdroskop in the Hottentots Holland Mountains.
Habitat: Rocky summit slopes in fynbos.
Rationale: Last collected in 1948. Repeated attempts to relocate this taxon have been unsuccessful. The population status is too poorly known to assign a threat category.

F Erica viridimontana E.G.H. & I.M.Oliv. subsp. viridimontana

Status: **CR** B1ab(iii,iv)+2ab(iii,iv); C2a(ii)
R.C. Turner & E.G.H. Oliver
eDistribution: WC. Groenlandberg east of Grabouw.
Habitat: Moist upper slopes in fynbos.
Rationale: Only one population of less than 250 plants and with an EOO and AOO of < 7 km^2 is known. Declining as a result of too frequent fires and potentially threatened by alien pine and hakea invasions.

Erica viscaria L. subsp. gallorum (L.Bolus) E.G.H.Oliv. & I.M.Oliv.

Status: **CR** PE
R.C. Turner, E.G.H. Oliver & D. Raimondo
eDistribution: WC. Hottentots Holland Mountains.
Habitat: Sandstone slopes in fynbos.
Rationale: This taxon has not been recorded for at least 20 years, despite repeated searches. Almost 100% of its habitat is under pine plantations and it is probably extinct.

[F] **Erica viscaria** L. subsp. **pendula** E.G.H.Oliv. & I.M.Oliv.

Status: **VU** D2

R.C. Turner & E.G.H. Oliver

[e]**Distribution:** WC. Kleinmond, Paardeberg range west of Bot River.

Habitat: Sandstone slopes.

Rationale: This taxon is known from one location. It is locally abundant, with no decline, but potentially threatened by scattered invasive alien pines from adjacent forestry plantations.

[F] **Erica viscaria** L. subsp. **pustulata** (H.A.Baker) E.G.H.Oliv. & I.M.Oliv.

Status: **VU** D2

R.C. Turner

[e]**Distribution:** WC. Kleinrivier Mountains, Hermanus.

Habitat: Sandstone slopes in fynbos.

Rationale: An extremely localised taxon (EOO 4 km^2), with only one known location which is protected in the Fernkloof Nature Reserve. Too frequent fires, however, are a potential threat—the site has burnt twice over the past 10 years.

[F] **Erica viscidiflora** Esterh.

Status: **VU** D2

R.C. Turner

[e]**Distribution:** WC. Riviersonderend Mountains, Drakenstein Peak and Pilaarkop.

Habitat: Middle and lower south-facing slopes in fynbos.

Rationale: A range-restricted species (EOO 250 km^2), with two known locations. Potentially threatened by invasive alien pines.

[F] **Erica viscosissima** E.G.H.Oliv.

Status: **VU** B1ab(ii,iii,v)

D. Raimondo, A.L. Schutte-Vlok & N.A. Helme

[e]**Distribution:** WC. Duiwenhoks River to Albertinia.

Habitat: Fynbos, sandy flats.

Rationale: EOO 1 360 km^2. Ten known locations. The habitat is being degraded by thatch harvesting and invasion by alien plants, causing a continuing decline.

[F] **Erica vlokii** E.G.H.Oliv.

Status: **EN** B1ab(iii,v)+2ab(iii,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Herold and George.

Habitat: Arid fynbos slopes.

Rationale: EOO and AOO < 10 km^2. Five known locations. Declining as a result of too frequent fires and alien plants invading the habitat. Some habitat has also been transformed by forestry plantations.

[F] **Erica williamsiorum** E.G.H.Oliv. **Plate 58**

Status: **VU** D2

R.C. Turner

[e]**Distribution:** WC. Southern Overberg from Hermanus to Napier.

Habitat: Cool, moist, peaty, southern slopes, in dense restioid-ericoid vegetation.

Rationale: EOO < 213 km^2, AOO < 10 km^2. A locally common habitat specialist recorded at 10 locations. Potentially threatened by alien hakea and pine invasions at all locations.

[F] **Erica wittebergensis** Dulfer

Status: **Rare**

R.C. Turner

[e]**Distribution:** WC. Du Toit's Kloof Mountains.

Habitat: Fynbos, on moist cliff faces and rock ledges.

Rationale: A habitat specialist that grows in fire-protected sites, mostly in inaccessible areas. No significant threats.

Erica xanthina Guthrie & Bolus

Status: **Rare**

R.C. Turner, E.G.H. Oliver & D. Pillay

[e]**Distribution:** WC. Riviersonderend Mountains, Villiersdorp to Greyton.

Habitat: Seeps and moist hollows on steep, south-facing, upper mountain slopes.

Rationale: A range-restricted habitat specialist (EOO < 200 km^2), with only four known subpopulations. No threats are yet affecting the species, but sites should be monitored for the impact of invasive alien pines.

Erica xeranthemifolia Salisb. **Plate 59**

Status: **CR** B1ab(i,iii,v)+2ab(ii,iii,v)

E.G.H. Oliver, R.C. Turner, D. Raimondo & D. Pillay

[e]**Distribution:** WC. Steenboksberg, Shaw's Pass, Shaw's Mountain and Babilonstoring Mountain.

Habitat: Sandy, gravelly quartzitic plateaus and rocky/sandy slopes.

Rationale: Subpopulations at lower altitudes have declined because of habitat loss to forestry plantations and crop cultivation. Only one location within an EOO and AOO of 3 km^2 remains. Decline continues owing to invasion by alien plants, grazing by livestock and wheat and vineyard expansion.

Erica zebrensis Compton

Status: **EN** B1ab(iii,v)+2ab(iii,v)

J.H. Vlok, R.C. Turner, E.G.H. Oliver & D. Raimondo

[e]**Distribution:** WC. Doring River Wilderness Area and Dysselsdorp.

Habitat: Lower to middle north-facing slopes in fynbos, around 300 m.

Rationale: EOO 22 km^2, AOO < 22 km^2. Only two remaining locations. Declining because of invasion by alien plants at both locations.

Erica zeyheriana (Klotzsch) E.G.H.Oliv.

Status: **VU** A4bc; B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

R.C. Turner & D. Raimondo

[e]**Distribution:** EC. Oyster Bay to Port Elizabeth.

Habitat: Remnant lowland grassy fynbos on sand.

Rationale: A population reduction of at least 30% is estimated based on loss of the lowland habitat of this species as a result of urban and agricultural expansion over the past 30 years (generation length 10–15 years). Decline from these threats is continuing, and invasions by alien plants are causing further habitat degradation throughout the range. EOO and AOO < 900 km^2. Ten remaining locations.

Erica zitzikammensis Dulfer var. **zitzikammensis**

Status: **DD**

R.C. Turner, E.G.H. Oliver & D. Raimondo

[e]**Distribution:** WC. Tsitsikamma Mountains.

Habitat: Fynbos, southern slopes below summits.

Rationale: Only one herbarium collection from 1957 is known. There is no recent information available for this taxon.

Erica zwartbergensis Bolus

Status: **Rare**

R.C. Turner, E.G.H. Oliver & D. Raimondo

e**Distribution:** WC. Swartberg Mountains to Outeniqua Mountains.

Habitat: Seasonal seepage areas in montane fynbos.

Rationale: A habitat specialist known from five sites, but a few more small, isolated subpopulations probably exist.

EUPHORBIACEAE

Acalypha L.

Acalypha entumenica Prain

Status: **EN** A2c

L. von Staden & C.R. Scott-Shaw

e**Distribution:** KZN. Qudeni and Entumeni, central KwaZulu-Natal.

Habitat: Mistbelt and Ngongoni Grassland on dolerite, 850–1 600 m.

Rationale: A long-lived, suffrutescent grassland forb, generation length at least 50 years. Known from two well-separated locations that have been extensively transformed by cultivation and forestry plantations. A population reduction of at least 50% is estimated based on habitat loss at these locations since the first collection was made in 1888 (two or three generations). Probably extinct at one location, and searches of areas of suitable habitat between the two sites have failed to locate other subpopulations.

Euphorbia L.

Euphorbia albertensis N.E.Br.

Status: **Rare**

L. von Staden

e**Distribution:** EC NC WC. Great Karoo between Prince Albert, Willowmore and Britstown.

Habitat: Unknown, *Germishuizen & Retief 20* (PRE) was collected at the edge of a pan.

Rationale: Known from four collections in the last 100 years, scattered over an area of ± 28 000 km^2 in the Great Karoo. Possibly a rare habitat specialist, but may also be merely overlooked.

Euphorbia albipollinifera L.C.Leach

Status: **NT** D2

R.H. Archer & J.E. Victor

e**Distribution:** EC. Springbokvlakte southeast of Steytlerville and Steenbokvlakte west of Kirkwood.

Habitat: Low, dry, stony hill slopes with sparse shrubby Karoo vegetation.

Rationale: EOO estimated 2 900 km^2. With 5–10 locations. Potentially threatened by illegal collecting and degradation of the habitat by overgrazing and trampling in some areas.

F **Euphorbia astrophora** Marx

Status: **VU** D2

R.H. Archer, A.P. Dold, J.E. Victor & L. von Staden

e**Distribution:** EC. Klipplaat.

Habitat: Shade of karroid shrubs on low stony hillsides.

Rationale: Known only from the type locality. Potentially threatened by habitat degradation as a result of overgrazing, trampling and removal of mature individuals for horticultural purposes. According to recent molecular work on the genus (Bruyns *et al.* 2006), *E. astrophora* is probably a synonym of *E. decepta*.

Euphorbia barnardii A.C.White, R.A.Dyer & B.Sloane

Status: **EN** A2ace; B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

P.J.D. Winter, S.J. Siebert, R.H. Archer, J.E. Victor & L. von Staden

e**Distribution:** LM. Sekhukhuneland, from the Strydpoort Mountains southwards along the Leolo Mountains to Steelpoort.

Habitat: Savanna and closed woodland, rocky slopes and summits, mainly norite outcrops, with one subpopulation on banded ironstone. At most sites the habitat has been degraded to a shrubby, succulent-dominated vegetation with low grass and tree cover.

Rationale: EOO 500 km^2, AOO 0.3–1 km^2. Known from 3–5 subpopulations and locations and the total population estimated to be less than 10 000 mature individuals. Threatened by overgrazing, trampling, habitat degradation, erosion, disease and mining. Monitoring over the last 15 years recorded extensive declines in three subpopulations, with two formerly large subpopulations not being relocated and one showing > 80% decline in the number of mature individuals. A 60–70% decline in the total population over last 15 years is estimated (generation length 10–20 years).

Euphorbia bayeri L.C.Leach

Status: **CR** A2c; B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v); C2a(ii)

J.H. Vlok & D. Raimondo

e**Distribution:** WC. Mossel Bay.

Habitat: Grassy fynbos on shallow, sandstone-derived soils.

Rationale: Only two locations are known. One on the outskirts of Mossel Bay was destroyed by an expanding settlement, which resulted in an 80% decline in the total population. The other location contains ± 200 mature individuals within an EOO and AOO of < 10 km^2. Urban expansion and invasive alien plants are causing a continuing decline. Recent molecular work by Bruyns *et al.* (2006) indicates that *E. bayeri* may be a synonym of *E. rhombifolia*.

Euphorbia bruynsii L.C.Leach

Status: **Critically Rare**

J.E. Victor

e**Distribution:** EC. Steytlerville.

Habitat: Nama-Karoo, among small shrubs on low, stony conglomerate hills.

Rationale: Known from the type locality, where it was discovered in 1978. Not threatened.

Euphorbia bupleurifolia Jacq.

Status: **Declining**

J.E. Victor, R.H. Archer & A.P. Dold

e**Distribution:** EC KZN. Grahamstown to Pietermaritzburg.

Habitat: Open grassland, usually in shallow soils with a thin cover of grass.

Rationale: A widespread and relatively common species that is being harvested in large volumes for medicinal use in the western part of its range. There are concerns that the volumes harvested may be unsustainable.

Euphorbia clivicola R.A.Dyer

Status: **CR** A2ace; B2ab(ii,iii,v)

M.F. Pfab, P.F. Matlamela, M. Leroy & L. von Staden

e**Distribution:** LM. Polokwane and near Mokopane.

Habitat: Gentle slopes of quartzite ridges in savanna.

Rationale: A 91% decline was observed in two known subpopulations between 1987 and 2007 as a result of urban expansion, poor fire management, high levels of herbivory and harvesting for horticultural purposes. The two subpopulations are severely fragmented and declining. AOO 0.05 km². A population viability model incorporating four different management scenarios was developed for the subpopulation protected within the nature reserve based on demographic data collected between 1987 and 1996 (Pfab & Witkowski 2000). The model predicted an 88% probability of extinction within 20 years based on the management practices in place at the time. Recommendations were that fire frequency should be increased, herbivores excluded and *ex situ* individuals introduced into the population to bring down the extinction risk to 2% within 100 years. The reserve management, however, conceded only to increase the fire frequency in the reserve, still meaning a 58% probability of extinction within 50 years. By 2008, this subpopulation has declined to fewer than 10 mature individuals because of the ongoing impact of herbivory by native antelope and rodents (R.H. Archer, pers. comm.) and possibly disease (M. Leroy, pers. comm.) The other remaining subpopulation is under severe development pressure and is continually being degraded by human activities as a result of its situation on the urban edge.

Euphorbia colliculina A.C.White, R.A.Dyer & B.Sloane Plate 60

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

J.H. Vlok, A.L. Schutte-Vlok & L. von Staden

[e]**Distribution:** WC. Between Oudtshoorn, Calitzdorp and De Rust.

Habitat: Stony limestone ridges in succulent shrubland.

Rationale: EOO 455 km², AOO < 455 km². Only four known locations remaining. The habitat has been severely degraded by ostrich farming in general; two locations are directly affected by degradation as a result of ostrich farming and one subpopulation is now extinct. Other threats include urban development, gravel quarrying and road construction.

Euphorbia fasciculata Thunb.

Status: **VU** B1ab(v)+2ab(v)

L. von Staden

[e]**Distribution:** WC. Endemic to the Knersvlakte.

Habitat: Succulent karoo, occurs among short bushes on sandy flats and sparsely vegetated quartz-strewn flats.

Rationale: EOO 900 km². With 6–10 locations. A very popular collector's species that has become rare in easily accessible and well-known locations because of removal of mature individuals. One subpopulation of ± 30 plants was destroyed when a dirt road was upgraded to a tarred road. Potentially threatened by mining.

[FS] **Euphorbia franksiae** N.E.Br.

Status: **VU** A2cd

V.L. Williams & D. Raimondo

Distribution: KZN. Port Shepstone to Mahlabatini.

Habitat: Savanna and coastal grassland, 100–800 m.

Rationale: At least a 30% reduction in the population is estimated, based on decline in the area of occupancy and habitat quality and as a result of continued levels of exploitation for traditional medicinal use.

Euphorbia globosa (Haw.) Sims

Status: **EN** B1ab(ii,iii,v)

J.E. Victor & A.P. Dold

[e]**Distribution:** EC. Port Elizabeth to Uitenhage.

Habitat: Low, stony hills not further than 20 km from the coast, in full sun.

Rationale: EOO 1 200 km². Fewer than five remaining locations. Continuing to decline because of coastal development.

Euphorbia grandialata R.A.Dyer

Status: **Rare**

P.J.D. Winter, J.E. Victor & L. von Staden

[e]**Distribution:** LM. Sekhukhuneland, Olifants River and Steelpoort River Valleys.

Habitat: Mixed bushveld, occurs on dolomite and ironstone ridges, 600–700 m.

Rationale: EOO 360 km². Total population estimated as < 5 000 mature individuals, based on surveys of 14 sites in the Olifants and Steelpoort River Valleys. Not affected by mining or grazing, not declining.

Euphorbia groenewaldii R.A.Dyer

Status: **CR** A2ac

L. von Staden

[e]**Distribution:** LM. East of Polokwane.

Habitat: Gentle, northwest-facing slopes of small granite hills and ridges between bands of schist or in gritty red sandy loam soil, 1 100–1 500 m.

Rationale: Population surveys in 1986 and 2007 recorded a 96% reduction in the number of mature individuals as a result of urban development, quarrying, severe overgrazing and harvesting for horticultural purposes.

Euphorbia hallii R.A.Dyer

Status: **Rare**

R.H. Archer & J.E. Victor

[e]**Distribution:** NC. Botterkloof to Biedouw.

Habitat: Lower slopes and flats, on sandy, gravelly clay.

Rationale: Known from five subpopulations in the Biedouw Valley area. The habitat is not cultivated.

Euphorbia louwii L.C.Leach

Status: **Rare**

P.J.D. Winter & J.E. Victor

[e]**Distribution:** LM. Northern margins of the Waterberg range around Merken in the Mokopane district.

Habitat: Wedged among rocks in open woodland on sandstone and conglomerate hills and ridges, 1 000–1 300 m.

Rationale: EOO 300 km². Although there is surrounding habitat degradation by overgrazing and flat sandy areas are cultivated, this species grows in very rocky areas, which are protected from these pressures. Not threatened.

Euphorbia lumbricalis L.C.Leach

Status: **VU** D2

R.H. Archer & J.E. Victor

[e]**Distribution:** WC. Koekenaap.

Habitat: Succulent karoo, grows under and among shrubs in deep, red, sandy soil.

Rationale: Known only from the type locality. Potentially threatened by crop cultivation and habitat degradation as a result of overgrazing.

Euphorbia meloformis Aiton subsp. **meloformis**

Status: **NT** B1ab(i,ii,iii,iv,v)

D. Raimondo, A.P. Dold, W. Berrington, R.H. Archer, J.E. Victor & L. von Staden

[e]**Distribution:** EC. Port Elizabeth to Grahamstown and eastwards to Peddie.

Habitat: Flat areas, including coastal plains and higher lying plateaus, among scattered, broken surface limestone or calcrete in short open grasslands and openings in succulent thicket.

Rationale: EOO 4 030 km². Continuing to decline as a result of urban expansion, removal of mature individuals from the wild by succulent collectors, and habitat degradation caused by overgrazing and poor rangeland management. There are, however, more than 10 remaining locations, most of which occur in the area to the north of Grahamstown. Subpopulations are not severely fragmented.

Euphorbia meloformis Aiton subsp. **valida** (N.E.Br.) G.D.Rowley

Status: **NT** B1ab(v)

R.H. Archer, A.P. Dold, J.E. Victor & L. von Staden

eDistribution: EC. Steytlerville to Somerset East and Bedford and southeast to Carlisle Bridge, northwest of Grahamstown.

Habitat: Sandy soils in grassland and karroid shrubland.

Rationale: EOO 5 500 km². Known from more than 10 locations, but subpopulations are small and isolated and therefore considered severely fragmented. Local declines due to collecting for horticultural purposes were reported in the 1980s, but the population is not declining at present. Removal of mature individuals from the wild for horticultural purposes remains a potential threat.

Euphorbia nesemannii R.A.Dyer

Status: **NT** B1ab(ii,iii,iv,v)

N.A. Helme, E.J. van Jaarsveld & D. Raimondo

eDistribution: WC. Worcester to Robertson and Swellendam.

Habitat: Karroid scrub on low gravel slopes.

Rationale: EOO 2 320 km². Suspected to occur at 20 locations. Declining because of ongoing habitat loss to vineyard expansion.

Euphorbia obesa Hook.f. subsp. **obesa**

Status: **EN** B1ab(iv,v)+2ab(iv,v); C2a(i)

R.H. Archer, A.P. Dold, J.E. Victor & L. von Staden

eDistribution: EC. Graaff-Reinet.

Habitat: Open karroid shrubland, stony slopes and flats, in loose sandy soils under small shrubs, or wedged among stones.

Rationale: EOO 17 km², but it may be as large as 640 km² if, according to a new taxonomy proposed by Bruyns *et al.* (2006), all subspecies are to be combined into a single taxon. There are two locations (three if *E. obesa* subsp. *symmetrica* is included). The total population is estimated to be less than 500 mature individuals, with a number of small subpopulations consisting, on average, of ± 30 mature individuals. Decline is continuing because of the collecting of wild individuals for horticultural purposes.

Euphorbia obesa Hook.f. subsp. **symmetrica** (A.C.White, R.A.Dyer & B.Sloane) G.D.Rowley

Plate 60

Status: **CR** B1ab(i,ii,iv,v)+2ab(i,ii,iii,v)

R.H. Archer, A.P. Dold & J.E. Victor

eDistribution: EC. Willowmore.

Habitat: Low, open karroid shrubland, on very stony substrates, hidden among rocks or under low shrubs.

Rationale: Known only from the type locality, EOO < 1 km². Declining as a result of harvesting for horticultural purposes. Should possibly be included as a synonym under *E. obesa*.

Euphorbia oxystegia Boiss.

Status: **DD**

L. von Staden

eDistribution: NC. Namaqualand, Stinkfontein Mountains to Komaggas.

Habitat: Unknown, this species is known mainly from cultivated material and very old herbarium specimens that do not indicate habitat.

Rationale: A very poorly known species, last collected in 1957. EOO derived from localities on herbarium specimens is 2 500 km². It is quite likely very rare, but not enough is known about the habitat and population structure to place it in a threatened category at present. It occurs in a remote and sparsely populated area of South Africa where there is very little impact from land use on the natural vegetation. Unlikely to be threatened, but surveys are needed to determine this for certain.

Euphorbia pedemontana L.C.Leach

Status: **VU** D2

R.H. Archer & J.E. Victor

eDistribution: WC. Vanrhynsdorp, foot of Matsikamma Mountain.

Habitat: Succulent karoo.

Rationale: Known only from the type locality, EOO ±17 km². Potentially threatened by agriculture and grazing by livestock.

Euphorbia pentops A.C.White, R.A.Dyer & B.Sloane

Status: **Rare**

R.H. Archer & J.E. Victor

eDistribution: NC. Endemic to Namaqualand, occurring between Port Nolloth, Steinkopf, Komaggas and Kamieskroon.

Habitat: Succulent karoo, on gravelly banks, in deep, well-drained, sandy soils on plains, as well as rocky quartzitic ridges.

Rationale: EOO 6 490 km². There are about nine known subpopulations, which tend to be small. A relatively rare species that is potentially threatened by harvesting for horticultural purposes as it has very attractive flowers, but it is too wide ranging and there are too many sites to qualify under VU D2.

Euphorbia perangusta R.A.Dyer

Status: **EN** A2ace; B1ab(iii,v)+2ab(iii,v)

L. von Staden

eDistribution: NW. Marico district north of Zeerust.

Habitat: Woodland and thornveld, wedged among large rocks on the slopes of quartzitic ridges, 1 000–1 200 m.

Rationale: Assessment includes *E. knobellii*, which overlaps in range with *E. perangusta* and is extremely difficult to distinguish from *E. perangusta*, and which should be placed in synonymy under this taxon (R.H. Archer, pers. comm.). A reduction of 60% in the population of *E. perangusta* has been documented over a period of only 13 years (one generation). Detailed monitoring data are not available for *E. knobellii* subpopulations, but drastic declines have been reported. The overall reduction in the combined population is probably > 50%. EOO 437 km². All remaining subpopulations are extremely small (several have fewer than 10 plants), severely fragmented and decline is continuing.

Euphorbia polycephala Marloth

Status: **VU** A2ac

L. von Staden

[e]**Distribution:** EC. Between Pearston, Cradock and Somerset East.

Habitat: Karroid shrublands and thicket, on rocky hills and flats.

Rationale: At least 30% reduction in the population over the last two generations is inferred from severe declines that have been noted within the historical range of this species, with 40–50% of subpopulations recorded as declining or extinct. Monitoring of a subpopulation on a farm near Pearston recorded a 90% decline in 10 years. Reasons for declines include drought, damage by browsing livestock and burrowing ground squirrels. However, a number of relatively large, healthy subpopulations have been discovered recently and they appear to be stable.

Euphorbia pseudoglobosa Marloth **Plate 60**

Status: **VU** B1ab(iii,v)+2ab(iii,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Touwsrivier to Barrydale.

Habitat: Gravelly slopes or flats on shale, often in quartz patches.

Rationale: EOO 500 km^2, AOO < 500 km^2. Fewer than 10 remaining locations. Declining as a result of removal of mature individuals by succulent collectors and invasions by alien plants.

Euphorbia quadrata Nel

Status: **Rare**

L. von Staden

[e]**Distribution:** NC. Richtersveld, Eksteenfontein to Kuboes.

Habitat: Succulent shrubland, among rocks and under bushes on south- to southwest-facing slopes.

Rationale: EOO 213 km^2. Known from only four collections, but quite likely to be overlooked owing to its occurrence in a remote area.

Euphorbia restricta R.A.Dyer

Status: **Rare**

P.J.D. Winter, J.E. Victor & L. von Staden

[e]**Distribution:** LM. East of Mokopane and along the Strydpoort Mountains to the Drakensberg Escarpment and southwards to the Olifants River Valley near Penge.

Habitat: Montane mistbelt grassland, in shallow, humus-rich soils wedged among boulders of dolomite outcrops at around 1 500 m.

Rationale: EOO 1 900 km^2. A habitat specialist restricted to a few mountain peaks. Not threatened.

Euphorbia rowlandii R.A.Dyer

Status: **NT** D2

L. von Staden

Distribution: LM. North of Punda Maria in the Kruger National Park and adjacent areas outside the park, along the Mutale River and also Pesu River gorge in southern Zimbabwe.

Habitat: Mixed woodland, on riverbanks and sandstone ridges, 300–450 m.

Rationale: EOO 418 km^2. Known from six locations in South Africa. Four subpopulations in the Kruger National Park are not threatened. Two locations outside park boundaries are potentially threatened by expanding human settlements and mining. The global range of this species is very small and most of it falls within South Africa. Regional assessment is not downgraded.

Euphorbia schoenlandii Pax **Plate 60**

Status: **VU** B1ab(ii,iii,iv,v)

D. Raimondo

[e]**Distribution:** NC WC. Vanrhynsdorp to Vredendal.

Habitat: Sandveld areas with deep, red aeolian sands, on lower, loamy slopes, where it often occurs in fairly dense vegetation.

Rationale: EOO 1 200 km^2. Known from fewer than 10 locations. Declining as a result of habitat destruction by expanding vineyards.

Euphorbia sekukuniensis R.A.Dyer

Status: **Rare**

P.J.D. Winter, J.E. Victor & L. von Staden

[e]**Distribution:** LM MP. Sekhukhuneland, Steelpoort River Valley and along the summit of the Leolo Mountains as far as the Olifants River Valley.

Habitat: Closed woodland and thicket, in shallow norite soils on rocky outcrops among large boulders, 900–1 300 m.

Rationale: EOO 2 300 km^2. A habitat specialist occurring in small, isolated subpopulations scattered over a wide area that seldom consists of more than 50 mature individuals. Potentially threatened by highly destructive opencast mining of norite substrates, but at present too widespread to qualify under VU D2.

[F]**Euphorbia susannae** Marloth **Plate 60**

Status: **EN** B1ab(iii,v)+2ab(iii,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Northern foothills of Langeberg.

Habitat: Karroid scrub on gentle slopes, often in quartz patches.

Rationale: EOO 290 km^2, AOO < 290 km^2. Four known locations. Declining as a result of removal of mature individuals from the wild by succulent collectors and habitat degradation due to overgrazing and trampling.

Euphorbia umfoloziensis Peckover

Status: **VU** D2

L. von Staden

[e]**Distribution:** KZN. White Umfolozi River Valley.

Habitat: Valley bushveld, on well-drained, sandy, north-facing slopes in river valleys.

Rationale: Two known subpopulations are potentially threatened by habitat degradation as a result of overgrazing and trampling.

Euphorbia versicolores G.Will.

Status: **Critically Rare**

L. von Staden

[e]**Distribution:** NC. Richtersveld.

Habitat: Succulent semidesert shrublands, pebbly, stony loam plains.

Rationale: Known only from the type locality, where there are two small colonies of ± 20 plants. However, the area where it occurs is very poorly explored and there may be other subpopulations. Taxonomic status uncertain. Bruyns *et al.* (2006) consider this taxon a synonym of *E. filiflora*, but Williamson (1995) lists several differences between them.

Euphorbia waterbergensis R.A.Dyer

Status: **Rare**

P.J.D. Winter, J.E. Victor & L. von Staden

[e]**Distribution:** LM. Northern Waterberg between Lephalale, Marongwe and the Lephalala River.

Plate 60



J.H. Vlok

Euphorbia pseudoglobosa VU



C. Paterson-Jones

Euphorbia susannae EN



D. Styles

Euphorbia woodii EN



C. Paterson-Jones

Euphorbia schoenlandii VU



C. Paterson-Jones

Euphorbia obesa subsp. *symmetrica* CR



J.H. Vlok

Euphorbia colliculina EN

Habitat: Quartzite ridges and outcrops, mixed bushveld, 900–1 100 m.

Rationale: EOO 730 km². Until 1978 this species was known from only three subpopulations and it was placed on the list of threatened species of the former Transvaal Province. However, subsequent surveys indicated that although restricted in range, the species is locally very common and there are more than 10 subpopulations. Isolated cases of habitat destruction have affected a few subpopulations in the past, but there is no evidence of continuing decline. Subpopulations appear healthy and are recruiting successfully. However, occasional monitoring is still necessary, because if further declines are detected this species would qualify under NT B.

Euphorbia woodii N.E.Br. Plate 60

Status: **EN** A4cd

V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter, A.M. Ngwenya & A.P. Dold

eDistribution: EC KZN. KwaZulu-Natal south coast to Mazeppa Bay.

Habitat: Coastal grasslands and low dune bush, mainly on sandstones, 40–800 m.

Rationale: There has been a minimum of 40% reduction of the population because of habitat loss and medicinal plant harvesting in the KwaZulu-Natal South Coast region over the past 100 years (generation length 40 years). An additional 10–15% decline is expected over the next 20 years as a result of the N2 road construction through the Wild Coast in the Eastern Cape, which will cause additional habitat loss and allow access for medicinal plant harvesters.

FABACEAE

Acacia Mill.

[F] **Acacia ebutsiniorum** P.J.H.Hurter

Status: **EN** D

M. Lötter, J.E. Burrows, L. von Staden & D. Raimondo

eDistribution: MP. Steynsdorp.

Habitat: Exposed, open grassland, on steep, southeast-facing slopes, apparently on serpentine soils, 1 100 m.

Rationale: Known from a single, stable subpopulation of ± 120 individuals. It may decline in future if the current low pressure of firewood collecting is to increase.

[F] **Acacia erioloba** E.Mey.

Status: **Declining**

L. von Staden & D. Raimondo

Distribution: FS LM NC NW. Widespread in the arid northern provinces of South Africa, also Namibia, Botswana, Zimbabwe, southern Angola and southwestern Zambia.

Habitat: Savanna, semidesert and desert areas with deep, sandy soils and along drainage lines in very arid areas, sometimes in rocky outcrops.

Rationale: Concerns have been raised over the large volumes of *A. erioloba* wood being removed for commercial sale of firewood. Many trees are also killed as a result of bush encroachment control through pesticides. A study conducted in the Northern Cape (Powell 2001) indicated that at present only dead trees are being harvested for firewood and only a very small percentage of the study area (< 2%) was affected by clearing of *A. erioloba*.

[F] **Acacia ormocarpoides** P.J.H.Hurter

Status: **NT** D2

L. von Staden, P.J.D. Winter, D. Raimondo & P.A. Manyama

eDistribution: LM. Northern Leolo Mountains, Sekhukhuneland.

Habitat: Sandy or loamy soils between norite boulders.

Rationale: EOO 300 km². Locally quite common (estimated 5–10 locations). Potentially threatened by harvesting for firewood and habitat degradation as a result of overgrazing and mining, but no continuing decline has been observed or is suspected.

[F] **Acacia sekhukhuniensis** P.J.H.Hurter

Status: **CR** B1ab(ii,iii)

P.A. Manyama

eDistribution: LM. Northeastern boundary of Sekhukhuneland.

Habitat: Open woodlands and wooded grassland on quartzite ridges.

Rationale: EOO < 100 km². One known location. At least 60% of the surrounding habitat has already been transformed and there is ongoing habitat loss as a result of mining, overgrazing, informal settlement expansion, and subsistence farming. It is also potentially threatened by harvesting of firewood.

Albizia Durazz.

Albizia suluensis Gerstner

Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v); C2a(ii)

C.R. Scott-Shaw, J.E. Victor, L. von Staden & A.E. van Wyk

eDistribution: KZN. Hlabisa to Hluhluwe.

Habitat: Scarp forest, riverine thicket and open woodland, often along streams, usually along the upper altitudinal perimeter and on steep slopes.

Rationale: EOO 330–400 km². All the trees in the various forest patches are considered to be a single subpopulation, as these areas are interconnected and gene flow by means of pollination and seed dispersal is possible. There are two locations: the portion of the subpopulation that is protected inside the Hluhluwe-Umfolozi Game Reserve, and the trees in forest patches outside the reserve, which are all affected by harvesting for firewood, building materials and medicine. Population estimated to be 1 000–2 500 mature individuals and is declining.

Amphithalea Eckl. & Zeyh.

Amphithalea alba Granby

Status: **NT** B1ab(ii,iii)

A.L. Schutte-Vlok & D. Raimondo

eDistribution: WC. Agulhas to Still Bay.

Habitat: Lowland fynbos on limestone.

Rationale: EOO 1 550 km². Ten known locations, but suspected to occur at a few more. Its habitat is declining as a result of coastal development and invasions by alien plants.

Amphithalea axillaris Granby

Status: **Rare**

A.L. Schutte-Vlok & D. Raimondo

eDistribution: WC. Langeberg Mountains and Outeniqua Mountains.

Habitat: Montane fynbos, sandy soils, 360–1 200 m.

Rationale: Always occurs as small, isolated subpopulations with fewer than five mature individuals in each. Not threatened.

F **Amphithalea bodkinii** Dummer

Status: **VU** D2

A.L. Schutte-Vlok & D. Raimondo

e**Distribution:** WC. Wemmershoek and Franschhoek Mountains, Grabouw Peak and between Louwshoek Peak and Villiersdorp.

Habitat: Fynbos, on marshy, south-facing slopes above 1 000 m.

Rationale: A high-altitude habitat specialist, known from five locations. Potentially threatened by invading alien plants and too frequent fires. A very rare and possibly cryptic species that has not been collected for 35 years.

Amphithalea bowiei (Benth.) A.L.Schutte

Status: **VU** D2

A.L. Schutte-Vlok & D. Raimondo

e**Distribution:** WC. Houwhoek to Kleinmond.

Habitat: Montane fynbos, 300–600 m.

Rationale: A range-restricted species (EOO 16 320 km^2), with only two known locations. Potentially threatened by invading alien plants.

F **Amphithalea bullata** (Benth.) A.L.Schutte

Status: **DD**D

A.L. Schutte-Vlok & D. Raimondo

e**Distribution:** WC. Langeberg Mountains, Kareekop.

Habitat: Mountain summit.

Rationale: Known only from the type collection from the early 1800s.

F **Amphithalea concava** Granby

Status: **Rare**

N.A. Helme

e**Distribution:** WC. Wemmershoek Mountains.

Habitat: High-alpine montane fynbos on rocky crests, 1 650–2 000 m.

Rationale: A range-restricted species (EOO 8 km^2), known from two subpopulations. Not declining.

F **Amphithalea cymbifolia** (C.A.Sm.) A.L.Schutte

Status: **EN** D

N.A. Helme & D. Raimondo

e**Distribution:** WC. Northern Langeberg.

Habitat: Sandy and rocky soils.

Rationale: Known from two collections: one made in 1926 and a recent collection by N.A. Helme, from a small subpopulation of ± 20 plants. It is possible that a few other subpopulations exist, but not many as it has not been found by A.L. Schutte-Vlok (*Amphithalea* expert) who lives in this area and has explored extensively. It is therefore estimated that less than 250 plants exist.

F **Amphithalea dahlgrenii** (Granby) A.L.Schutte

Status: **VU** D2

A.L. Schutte-Vlok & D. Raimondo

e**Distribution:** WC. Matroosberg and Keeromsberg Mountains.

Habitat: Fynbos, dry, north-facing ridges, 1 000–1 300 m.

Rationale: EOO 21 km^2. Two known locations. Potentially threatened by alien hakea and pine invasions, which already occur as scattered plants within the habitat at one location.

Amphithalea ericifolia (L.) Eckl. & Zeyh. subsp. **erecta** Granby **Plate 61**

Status: **CR** B2ab(ii,iii,iv,v)

A.L. Schutte-Vlok & D. Raimondo

e**Distribution:** WC. Malmesbury.

Habitat: Sand plain fynbos.

Rationale: EOO 4 160 km^2, AOO 10 km^2. Historically occurred between the Cape Flats, Malmesbury and Hopefield. Over 98% of its habitat has been transformed by urban expansion and wheat cultivation. Only four small, severely fragmented subpopulations remain. Declining because of dense invasions of alien plants and too infrequent fires.

Amphithalea ericifolia (L.) Eckl. & Zeyh. subsp. **minuta** Granby

Status: **Critically Rare**

D. Raimondo

e**Distribution:** WC. Riviersonderend Mountains, Skilpadkop.

Habitat: Fynbos, on rocky, south-facing slopes, 1 300 m.

Rationale: EOO < 5 km^2. Known from one high-altitude site. Not threatened.

Amphithalea ericifolia (L.) Eckl. & Zeyh. subsp. **scoparia** Granby

Status: **Rare**

A.L. Schutte-Vlok & D. Raimondo

e**Distribution:** WC. Riviersonderend to Hottentots Holland Mountains.

Habitat: Steep stony or grassy slopes, 975–1 500 m.

Rationale: A range-restricted taxon (EOO < 460 km^2), known from six high-altitude subpopulations. Not threatened.

F **Amphithalea esterhuyseniae** (Granby) A.L.Schutte

Status: **VU** D2

A.L. Schutte-Vlok & D. Raimondo

e**Distribution:** WC. Hex River Mountains.

Habitat: Steep, rocky, south-facing slopes in fynbos.

Rationale: EOO 50 km^2. Only two known locations. Potentially threatened by too frequent fires.

Amphithalea flava (Granby) A.L.Schutte

Status: **VU** D2

A.L. Schutte-Vlok & D. Raimondo

e**Distribution:** WC. Outeniqua, Klein Swartberg and Langeberg Mountains.

Habitat: Arid montane fynbos.

Rationale: Only four locations are known. Potentially threatened by invading alien plants.

Amphithalea imbricata (L.) Druce

Status: **Rare**

A.L. Schutte-Vlok, D. Raimondo & F. Daniels

e**Distribution:** WC. Cape Peninsula to Hottentots Holland Mountains.

Habitat: Ravines at high altitudes.

Rationale: A rare, long-lived resprouter that always occurs as small subpopulations with often only single plants seen.

Amphithalea minima (Granby) A.L.Schutte

Status: **CR** PE

A.L. Schutte-Vlok & D. Raimondo

[e]**Distribution:** NC. Glen Ridge on the Bokkeveld Escarpment near Nieuwoudtville.

Habitat: Fynbos on rocky outcrops.

Rationale: Over 90% of the habitat of this species at its only known location has been transformed for rooibos tea cultivation. Remaining habitat at this site is severely degraded because of overgrazing. It is therefore highly likely that this species is extinct.

Amphithalea obtusiloba (Granby) A.L.Schutte

Status: **EN** D

N.A. Helme & D. Raimondo

[e]**Distribution:** NC. Endemic to the Kamiesberg.

Habitat: Rocky granitic slopes, 1 500 m.

Rationale: Population consists of less than 100 plants. Potentially threatened by too frequent fires and overgrazing.

Amphithalea oppositifolia L.Bolus

Status: **Rare**

A.L. Schutte-Vlok & D. Raimondo

[e]**Distribution:** WC. Kogelberg to Betty's Bay.

Habitat: Fynbos, in sandy soil among rocks on the lower southwestern slopes, 330–500 m.

Rationale: A range-restricted species (EOO < 500 km^2). Not threatened as it occurs above 300 m and is therefore not likely to be affected by urban expansion.

Amphithalea pageae (L.Bolus) A.L.Schutte

Status: **VU** B1ab(iii)

A.L. Schutte-Vlok, D. Raimondo & N.A. Helme

[e]**Distribution:** WC. Montagu to Swellendam.

Habitat: Dry Karoo shales.

Rationale: EOO 2 220 km^2. Six known locations. Some habitat has been transformed by vineyard expansion. The species is currently declining as a result of grazing by livestock. Potentially threatened by urban and agricultural development.

Amphithalea rostrata A.L.Schutte & B.-E.van Wyk

Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v)

A.L. Schutte-Vlok & D. Raimondo

[e]**Distribution:** WC. Carruthers Hill, southeast of Pearly Beach.

Habitat: Fynbos, sandy, stony south-facing slopes, 120 m.

Rationale: A highly range-restricted species (EOO and AOO < 10 km^2), with two known locations. Some habitat has been lost to quarrying and the population is currently declining as a result of alien plants invading the habitat.

Amphithalea sericea Schltr.

Status: **VU** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

A.L. Schutte-Vlok, N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Pearly Beach to Still Bay.

Habitat: Lowland fynbos, sandy limestone hills, 60–500 m.

Rationale: EOO < 2 200 km^2. Eight known locations. Declining as a result of invasions by alien plants, cereal crop cultivation and coastal development.

Amphithalea speciosa Schltr.

Status: **VU** B1ab(ii,iii,v)

N.A. Helme, A.L. Schutte-Vlok & D. Raimondo

[e]**Distribution:** WC. Elim to Bredasdorp.

Habitat: Montane fynbos and renosterveld-fynbos scrub, rocky sandstone hills.

Rationale: EOO 2 000 km^2. Six known locations continue to decline because of invasive alien *Acacia cyclops* and *A. saligna* encroachment. This long-lived resprouter is also threatened by protea and vineyard expansion and coastal development.

Amphithalea spinosa (Harv.) A.L.Schutte

Status: **VU** B1ab(iii,v)

N.A. Helme, A.L. Schutte-Vlok & D. Raimondo

[e]**Distribution:** WC. Hex River Valley to Witteberg.

Habitat: Montane fynbos and renosterveld-fynbos scrub, 900–1 300 m.

Rationale: EOO < 3 000 km^2. Fewer than 10 locations are known. Some habitat has been transformed to vineyards and the population is currently declining because of grazing by livestock.

Amphithalea stokoei L.Bolus

Status: **NT** D2

A.L. Schutte-Vlok & D. Raimondo

[e]**Distribution:** WC. Hottentots Holland Mountains, Kogelberg and Caledon Swartberg.

Habitat: Fynbos, in sandy soils between rocks, 325–500 m.

Rationale: A reseeder that is known from eight locations. Potentially threatened by invading alien plants and too frequent fires.

Amphithalea tomentosa (Thunb.) Granby

Status: **NT** B1ab(ii,iii)

D. Raimondo

[e]**Distribution:** WC. Kogelberg to De Hoop.

Habitat: Lower mountain slopes and coastal fynbos vegetation.

Rationale: EOO 9 000 km^2. With 20 known locations. Declining as a result of coastal development and invasion by alien plants.

[F]**Amphithalea villosa** Schltr.

Status: **EN** B1ab(iii,iv,v)

A.L. Schutte-Vlok & D. Raimondo

[e]**Distribution:** WC. Witteberg and Cederberg Mountains.

Habitat: Transitional arid fynbos, often confined to shale bands.

Rationale: EOO < 2 800 km^2. Seven small, severely fragmented subpopulations are known. Declining as a result of grazing by livestock.

Amphithalea virgata Eckl. & Zeyh.

Status: **VU** A2c; B1ab(i,iii,iv,v)

A.L. Schutte-Vlok & D. Raimondo

[e]**Distribution:** WC. Hermanus to De Hoop.

Habitat: Lowland fynbos, sand plains and slopes of sandstone mountains, up to 450 m.

Rationale: EOO 3 246 km^2. Formerly occurred at 10 locations, but four have been lost to crop cultivation over the past 60 years, resulting in a > 30% reduction of the population (generation length estimated to be 50 years, as it is a long-lived resprouter). The remaining six locations are declining as a result of further habitat loss to crop cultivation and invasion by alien plants.

Amphithalea vlokii (A.L.Schutte & B.-E.van Wyk) A.L.Schutte **Plate 61**

Status: **EN** A2c

J.H. Vlok, A.L. Schutte-Vlok & D. Raimondo

eDistribution: WC. Uniondale.

Habitat: Renosterveld-fynbos scrub on clayish soil.

Rationale: Known from one location, a municipal commonage near Uniondale and where > 50% of the habitat have been lost to quarrying and the construction of a cellular telephone mast over the past 50 years (generation length 30 years).

Argyrolobium Eckl. & Zeyh.

Argyrolobium aciculare Dummer

Status: **Rare**

T.J. Edwards, D. Raimondo & N.A. Helme

eDistribution: WC. Kogelberg.

Habitat: Exposed, rocky sandstone ridges.

Rationale: A range-restricted Kogelberg endemic (EOO < 150 km^2), known from three subpopulations that are protected within the Kogelberg Biosphere Reserve.

Argyrolobium angustissimum (E.Mey.) T.J.Edwards

Status: **CR** PE

T.J. Edwards & D. Raimondo

eDistribution: WC. Paarl Mountain.

Habitat: Granite fynbos.

Rationale: This conspicuous species with very distinctive flowers has not been collected for more than 100 years at its only known location, despite the site being very well explored. It is possibly extinct.

Argyrolobium barbatum Walp.

Status: **VU** A2c

T.J. Edwards & D. Raimondo

eDistribution: EC. Paterson and Addo to Port Elizabeth.

Habitat: Bushveld, limestone outcrops.

Rationale: There are six known locations, two of which have been lost to urban and industrial development and a large proportion of the subpopulation at another location at Coega Kop declined over the past 100 years. This decline is estimated to represent a 30% reduction in the population over two generations—this is a long-lived resprouter and generation length is suspected to be at least 50 years.

F **Argyrolobium campicola** Harms

Status: **NT** A2c

T.J. Edwards & D. Raimondo

eDistribution: FS G KZN. Pretoria to Dundee.

Habitat: Highveld grassland.

Rationale: A species with a large range (EOO 45 000 km^2) but with highly disjunct, small subpopulations. At least 37% of the habitat has been transformed for agriculture and urban expansion over the past 100 years. It is a long-lived resprouter with an average generation length of longer than 50 years. As there is not necessarily a linear relationship with habitat loss and sites, we estimate that at least 20% of existing subpopulations have been lost as a result of habitat transformation. Two of nine subpopulations are highly likely to be locally extinct (100% transformed), equating to a 22% loss over the past three generations.

Argyrolobium crassifolium Eckl. & Zeyh.

Status: **EN** A2c; B1ab(i,iii,iv,v)

T.J. Edwards, D. Raimondo & A.P. Dold

eDistribution: EC. Humansdorp to Uitenhage.

Habitat: Grassland, below 300 m.

Rationale: A population reduction of at least 50% is estimated based on habitat loss to agriculture over the past 100 years (generation length of this long-lived resprouter is suspected to be > 50 years). EOO < 2 400 km^2. Six locations remain. Subpopulations are severely fragmented and threatened by loss of pollinators and too infrequent fires.

Argyrolobium crinitum (E.Mey.) Walp.

Status: **CR** A2c; B1ab(iii)+2ab(iii); C2a(ii)

J.H. Vlok & D. Raimondo

eDistribution: WC. Barrydale.

Habitat: Renosterveld on shale.

Rationale: Previously known only from the type specimen, but relocated near Barrydale in a small fragment of renosterveld in 1995. At the time there were 60 plants, but in 2004 during a second survey of the same site no plants were found. We suspect that this may be due to veld not being burnt for a while, but it may also be the result of overgrazing. Almost 88% of the vegetation unit where this species occurs has been cultivated for wheat. This decline in habitat has taken place over the past 70 years, less than three generations of this long-lived resprouter (generation length is suspected to be over 50 years).

Argyrolobium harmsianum Schltr. ex Harms

Status: **EN** B1ab(ii,iii)

T.J. Edwards & D. Raimondo

eDistribution: WC. Agulhas to Mossel Bay.

Habitat: Coastal limestone.

Rationale: EOO < 1 000 km^2. Four known locations. Declining because of invasion by alien plants and coastal development.

F **Argyrolobium longifolium** (Meisn.) Walp.

Status: **VU** B1ab(i,iii,v)

T.J. Edwards & D. Raimondo

eDistribution: KZN. Pietermaritzburg to Tugela and Port Shepstone.

Habitat: Ngongoni Grassland, Highland Sourveld and Dohne Sourveld.

Rationale: EOO < 9 700 km^2. Six known locations. Some habitat has been transformed to forestry plantations and decline is continuing because of too frequent fires and overgrazing.

F **Argyrolobium megarrhizum** Bolus

Status: **NT** B1ab(ii,iii,v)

T.J. Edwards & D. Raimondo

eDistribution: G MP. Pretoria to Bronkhorstspruit.

Habitat: Mixed bushveld.

Rationale: Although it has a highly restricted range (EOO 2 500 km^2), there are currently estimated to be 10–20 locations. It is likely to have lost habitat to agriculture, and its habitat is being transformed rapidly because of urban expansion between Pretoria and Bronkhorstspruit. This species relies on pollination by carpenter bees and the ongoing habitat loss will have an impact on the population dynamics of these insects and is likely to affect pollination rates. In addition, changes in fire regimes as a result of habitat loss and degradation will have an impact on this species as it only flowers profusely after fire.

[F]**Argyrolobium muddii** Dummer

Status: **EN** A2c; B1ab(iii)

T.J. Edwards & D. Raimondo

[e]**Distribution:** LM MP. Haenertsburg to Pilgrim's Rest.

Habitat: Mistbelt Grassland.

Rationale: EOO 4 200 km^2. Five locations remain. Extensive areas of the habitat have been transformed to forestry plantations over the last 100 years, a period shorter than three generations of this long-lived species (generation length estimated to be > 50 years). The estimate of > 50% reduction in the population is based on > 80% habitat loss in the Woodbush area (Limpopo Province) and > 50% habitat loss around Graskop and Pilgrim's Rest, Mpumalanga. Decline is continuing because of habitat degradation caused by invading alien plants and poor fire management.

Argyrolobium pachyphyllum Schltr.

Status: **EN** A2c; B1ab(iii)

T.J. Edwards & D. Raimondo

[e]**Distribution:** WC. Bredasdorp.

Habitat: Renosterveld.

Rationale: A population reduction of > 80% is estimated, based on > 84% habitat loss to wheat cultivation since 1940 (less than three generations of this long-lived resprouter, generation length suspected to be 50 years). EOO < 4 000 km^2. Seven locations are known through herbarium collections, but two are now locally extinct because of agriculture. Remaining subpopulations are declining as a result of invasion by alien plants and overgrazing by livestock.

Argyrolobium parviflorum T.J.Edwards

Status: **Rare**

T.J. Edwards, D. Raimondo & L. Potter

[e]**Distribution:** EC. Baviaanskloof Mountains.

Habitat: Arid fynbos, 300–1 500 m.

Rationale: A range-restricted species (EOO < 100 km^2), known from only two sites but it probably occurs elsewhere in the vast, unexplored areas within the Baviaanskloof Wilderness Area, where it is not likely to be threatened.

Argyrolobium petiolare (E.Mey.) Steud.

Status: **DD**D

T.J. Edwards & L. Potter

[e]**Distribution:** WC. Namaqualand, Kamiesberg.

Habitat: Unknown, possibly mountain renosterveld.

Rationale: Known only from the type collection, made in the early 1800s. This species is too poorly known to be assessed.

Argyrolobium rarum Dummer

Status: **Rare**

T.J. Edwards & D. Raimondo

[e]**Distribution:** WC. Montagu to Oudtshoorn.

Habitat: Arid montane fynbos.

Rationale: Subpopulations are generally small, consisting of fewer than 10 plants, and occur sparsely over a large range (EOO < 18 700 km^2). No known threats.

Argyrolobium splendens (E.Mey.) Walp.

Status: **CR** PE

T.J. Edwards & D. Raimondo

[e]**Distribution:** WC. Kleinrivier Mountains.

Habitat: Mountain slopes, exact altitude unknown.

Rationale: This species has not been collected for more than 100 years, and is known only from one collection at an unspecified altitude on the Kleinrivier Mountains. If it was collected on the foothills, it is quite likely to be extinct as a result of urban expansion of Hermanus.

[F]**Argyrolobium velutinum** Eckl. & Zeyh.

Status: **EN** B1ab(i,iii,iv,v)

N.A. Helme, T.J. Edwards & D. Raimondo

[e]**Distribution:** WC. Lambert's Bay to Cape Peninsula.

Habitat: Sandveld and sandveld-strandveld ecotone, alkaline coastal sands.

Rationale: EOO 3 000 km^2. Altogether 15 locations are known through herbarium collections, but suitable habitat remains only at nine. Remaining subpopulations are severely fragmented, occurring on isolated vegetation remnants. Locations on the Cape Flats have declined because of urban development, while ± 30% of a subpopulation at Jacobsbaai was lost to coastal development. Potato cultivation between Lambert's Bay and Dwarskersbos is causing a continuing decline in available habitat.

Aspalathus L.

Aspalathus acanthiloba R.Dahlgren

Status: **VU** D2

D. Raimondo

[e]**Distribution:** WC. Cape Hangklip to Gordon's Bay.

Habitat: Montane fynbos, sandy or rocky sandstone soils, 0–200 m.

Rationale: EOO < 50 km^2. Three known locations. Potentially threatened by coastal development, too frequent fires and invasion by alien plants.

Aspalathus acanthoclada R.Dahlgren

Status: **VU** B1ab(ii,iii,iv,v)

N.A. Helme, D. Raimondo & J.E. Victor

[e]**Distribution:** WC. Worcester to Villiersdorp.

Habitat: Renosterveld-fynbos scrub, 300 m.

Rationale: EOO < 700 km^2. Seven known locations. Declining because of urban expansion around Worcester, invading alien plants along the Breede River, and vineyard expansion throughout the Breede River Valley.

Aspalathus acanthophylla Eckl. & Zeyh. **Plate 62**

Status: **VU** B1ab(ii,iii,iv,v)

D. Raimondo & N.A. Helme

[e]**Distribution:** WC. Hopefield to Tygerberg.

Habitat: Renosterveld on red clay soils (does not occur on sandy marine soils), 200–300 m.

Rationale: EOO < 1 350 km^2. Nine locations remain. Available habitat has been extensively transformed to wheat cultivation and this species is still declining as a result of urban expansion, invasion by alien plants and too infrequent fires in remaining renosterveld fragments.

Aspalathus aciloba R.Dahlgren

Status: **VU** D2

N.A. Helme, D.I.W. Euston-Brown & D. Raimondo

[e]**Distribution:** WC. Bredasdorp to Agulhas.

Habitat: Lowland fynbos on white sandy soils and clay soils over shales mixed with limestone fragments.

Rationale: Four locations remain, with one subpopulation lost to road construction. Potentially threatened by invading alien plants.

[F] **Aspalathus aculeata** Thunb. **Plate 62**

Status: **EN** B1ab(iii,v)

N.A. Helme, A.L. Schutte-Vlok & D. Raimondo

[e]**Distribution:** WC. Malmesbury to Riebeek-Kasteel.

Habitat: Renosterveld-fynbos transition on shale soils.

Rationale: EOO 1 088 km^2. With 5–10 small, severely fragmented subpopulations remaining. More than 98% of the habitat has been transformed for the cultivation of wheat, olives and vineyards. It is currently declining because of the impact of fragmentation, including too infrequent fires.

[F] **Aspalathus acutiflora** R.Dahlgren

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

A.L. Schutte-Vlok, J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Still Bay and Albertinia.

Habitat: Sand plain fynbos, marine sands between limestone outcrops, but not on limestone.

Rationale: EOO 400 km^2, AOO < 400 km^2. With 5–10 severely fragmented subpopulations remaining. Declining as a result of invasion by alien plants and habitat degradation caused by thatch harvesting.

[F] **Aspalathus albens** L.

Status: **VU** B1ab(i,ii,iii,iv,v)

A.L. Schutte-Vlok & D. Raimondo

[e]**Distribution:** WC. Klawer to Cape Peninsula.

Habitat: Sandy areas on flats in lowland and coastal fynbos.

Rationale: EOO 6 000 km^2. A formerly widespread and common species, now much reduced because of extensive habitat loss. All Cape Flats subpopulations are likely to be extinct because of urban development and it probably survives only in the area around Mamre and Pella. A few subpopulations along the base of the Piketberg and the area south of Klawer are rapidly declining as a result of the expansion of rooibos tea and potato cultivation, and only ± 5–10 locations remain.

[F] **Aspalathus amoena** (R.Dahlgren) R.Dahlgren

Status: **CR** PE

A.L. Schutte-Vlok & D. Raimondo

[e]**Distribution:** WC. Breede River Valley around Wolseley.

Habitat: Lowland fynbos, in sand that accumulates on riverbanks.

Rationale: Most of the habitat has been transformed for vineyard and orchard cultivation. The remaining fragments are densely invaded by alien *Acacia mearnsii*. It has not been recorded for 40 years and is quite likely to be extinct.

Aspalathus angustifolia (Lam.) R.Dahlgren subsp. **robusta** (E.Phillips) R.Dahlgren

Status: **VU** D1+2

N.A. Helme & J.E. Victor

[e]**Distribution:** NC. Namaqualand, Kamiesberg.

Habitat: Granite slopes and flats, 1 000–1 600 m.

Rationale: Less than 1 000 mature individuals occur at four locations. Potentially threatened by grazing by goats, donkeys and dassies. It is a robust reseeding shrub that grows up to 2 m. Grazing affects reproduction as it causes loss of flowers, pods and seedlings, but mature individuals do not appear to be declining at present.

[F] **Aspalathus araneosa** L. **Plate 62**

Status: **VU** B1ab(ii,iii,iv,v)

A.L. Schutte-Vlok & D. Raimondo

[e]**Distribution:** WC. Malmesbury to Cape Peninsula.

Habitat: Sandy sandstone soils at low altitudes.

Rationale: EOO 3 700 km^2. A formerly common species known from at least 35 locations but now fewer than 10 remain. Subpopulations have been lost to urban expansion and cultivation of wheat, vineyards and citrus in the past. Remaining subpopulations are declining as a result of continued expansion of crop cultivation and invasion by alien plants.

Aspalathus arenaria R.Dahlgren

Status: **VU** B1ab(ii,iii,iv,v)

A.L. Schutte-Vlok & D. Raimondo

[e]**Distribution:** WC. Still Bay to Gouritsmond.

Habitat: Fynbos-thicket mosaic on coastal marine sands.

Rationale: EOO 705 km^2. Ten locations remain. Declining as a result of coastal development around Still Bay, invasion by alien plants and crop cultivation.

[F] **Aspalathus attenuata** R.Dahlgren

Status: **EN** B1ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Tulbagh to Houwhoek.

Habitat: Fynbos, in sandy areas on lower slopes, 100–350 m.

Rationale: EOO 2 450 km^2. Five disjunct locations are known. Declining as a result of continued expansion of the cultivation of wheat, vineyards and deciduous fruit, afforestation, quarrying, urban development and invasion by alien plants.

[F] **Aspalathus barbata** (Lam.) R.Dahlgren

Status: **VU** D2

A.L. Schutte-Vlok & D. Raimondo

[e]**Distribution:** WC. Cape Peninsula, Table Mountain.

Habitat: Montane fynbos in kloofs and depressions.

Rationale: AOO < 20 km^2. Potentially threatened by too infrequent fires.

Aspalathus barbigera R.Dahlgren

Status: **VU** B1ab(iii)

D. Raimondo

[e]**Distribution:** WC. Bredasdorp.

Habitat: Renosterveld-fynbos scrub, 60 m.

Rationale: AOO < 8 400 km^2. More than 70% of the habitat has been transformed by wheat cultivation and only seven locations remain. Declining because of a loss of habitat quality through invasion by alien plants, overgrazing and too infrequent fires.

Aspalathus bidouwensis Garab. ex R.Dahlgren

Status: **EN** B1ab(iii,v)

T. Nkonki & J.E. Victor

[e]**Distribution:** WC. Cederberg area, Biedouw Mountains.

Habitat: Arid fynbos, 660–1 000 m.

Rationale: EOO < 2 000 km^2. Four known locations. Declining because of overgrazing by livestock.

Aspalathus borboniifolia R.Dahlgren

Status: **VU** D2

T. Nkonki & J.E. Victor

[e]**Distribution:** WC. Cape Peninsula, endemic to Table Mountain.

Habitat: Montane fynbos, 660 m.
Rationale: EOO < 12 km². Three known locations. A reseeder potentially threatened by too frequent fires.

Aspalathus bowieana (Benth.) R.Dahlgren

Status: **EN** B1ab(i,ii,iii,iv,v)
J.H. Vlok & D. Raimondo

eDistribution: WC. Outeniqua Mountains.
Habitat: Montane fynbos on slopes and foothills below 850 m.
Rationale: EOO < 700 km². Three known locations continue to decline because of invading alien plants and too infrequent fires. Some habitat has been lost to plantations at Karatara.

Aspalathus burchelliana Benth.

Status: **EN** B1ab(ii,iii)
D. Raimondo

eDistribution: WC. Riviersonderend to Swellendam and around Robertson.
Habitat: Renosterveld-fynbos transition scrub at low altitude, 150–300 m.
Rationale: EOO < 4 000 km². More than 60% of the habitat has already been transformed by agriculture and fewer than five locations are likely to remain. Habitat decline is continuing as a result of vineyard expansion, especially around Robertson, and because of grazing by livestock throughout the range. There are no recent collections of this species, except from the Bontebok National Park, which might be the only remaining location.

[F] **Aspalathus caespitosa** R.Dahlgren

Status: **Rare**
N.A. Helme

eDistribution: WC. Stettynsberg and Du Toit's Mountains.
Habitat: Fynbos, on upper sandstone slopes, 1 250–1 500 m.
Rationale: EOO < 300 km². Known from two high-altitude peaks. Not threatened.

[F] **Aspalathus calcarea** R.Dahlgren

Status: **VU** B1ab(i,ii,iii,iv,v)
A.L. Schutte-Vlok & D. Raimondo

eDistribution: WC. Elim to Bredasdorp and Still Bay.
Habitat: Limestone rock.
Rationale: EOO 5 200 km². Some 15 small severely fragmented subpopulations are known. Declining as a result of invasion by alien plants, crop cultivation, urban expansion and road construction.

Aspalathus campestris R.Dahlgren

Status: **VU** B1ab(ii,iii,v)
D. Raimondo

eDistribution: WC. Montagu and Riviersonderend to Mossel Bay.
Habitat: Renosterveld-fynbos transition on clay hills and flats.
Rationale: EOO < 3 200 km². At least 60% of the habitat is already transformed by wheat and vineyard cultivation. Only ± 10 locations remain on small fragments and decline is continuing. All locations are grazed by sheep and many are overgrazed, possibly negatively affecting this palatable species.

[F] **Aspalathus candicans** Aiton f.

Status: **EN** B1ab(ii,iii,iv,v)
A.L. Schutte-Vlok & D. Raimondo

eDistribution: WC. Breede River Valley, from McGregor to Worcester.
Habitat: Flats or low hills with clay soils.
Rationale: EOO 605 km². Three known locations. Habitat is declining as a result of vineyard expansion. Urban expansion of Worcester is also a threat to this species.

Aspalathus candidula R.Dahlgren

Status: **VU** D2
N.A. Helme, D.I.W. Euston-Brown, D. Raimondo, T. Nkonki & J.E. Victor

eDistribution: WC. Riversdale.
Habitat: Lowland fynbos on limestone, 165 m.
Rationale: Known from three locations. Potentially threatened by alien plants that invade the habitat.

[F] **Aspalathus capensis** (Walp.) R.Dahlgren

Status: **Rare**
A.L. Schutte-Vlok, D.A. Kamundi† & D. Raimondo

eDistribution: WC. Cape Peninsula.
Habitat: Seasonally waterlogged areas in southern Peninsula Sandstone Fynbos.
Rationale: Locally abundant, but range-restricted habitat specialist, EOO 185 km². Protected within the Table Mountain National Park.

Aspalathus capitata L. **Plate 62**

Status: **VU** D1
N.A. Helme & D. Raimondo

eDistribution: WC. Cape Peninsula, Table Mountain, Constantiaberg and Muizenberg.
Habitat: Slopes in sandstone fynbos.
Rationale: EOO 90 km². Fewer than five known locations. Subpopulations are small and the population consists of less than 1 000 plants.

[F] **Aspalathus chenopoda** L. subsp. **gracilis** (Eckl. & Zeyh.) R.Dahlgren

Status: **VU** D2
A.L. Schutte-Vlok, D.A. Kamundi† & D. Raimondo

eDistribution: WC. Babilonstoring, Caledon Swartberg and Kleinrivier Mountains.
Habitat: Fynbos scrub on sandy substrates.
Rationale: Fewer than five locations are known. Potentially threatened by invading alien plants.

[F] **Aspalathus chrysantha** R.Dahlgren

Status: **VU** A2c; D2
A.L. Schutte-Vlok, N.A. Helme & D. Raimondo

eDistribution: WC. Piketberg.
Habitat: Sandy and gravelly flats above 450 m and on sandstone slopes.
Rationale: A population reduction of at least 30% is estimated based on habitat loss to crop cultivation over the past 70 years (generation length of this long-lived resprouter is at least 30 years). Two remaining locations are potentially threatened by further agricultural expansion.

Aspalathus cliffortiifolia R.Dahlgren

Status: **CR** PE
D. Raimondo & J.E. Victor

eDistribution: EC. Port Elizabeth.
Habitat: Coastal fynbos.
Rationale: Known from the type specimen collected in Humewood, now a suburb of Port Elizabeth, in 1911. This species is quite likely to be extinct, but a few remaining fragments of natural habitat in the Humewood area have to be thoroughly searched before it can be declared extinct.

Aspalathus compacta R.Dahlgren

Status: **VU** D2

N.A. Helme & J.E. Victor

e**Distribution:** WC. Skurweberge.

Habitat: Renosterveld-fynbos ecotones.

Rationale: One location is known that is potentially threatened by expanding fruit orchards.

F **Aspalathus complicata** (Benth.) R.Dahlgren

Status: **EX**

A.L. Schutte-Vlok & D. Raimondo

e**Distribution:** WC. Lower slopes of the Piketberg.

Habitat: Slopes near streams.

Rationale: Known only from the type collection from 1934. The site and surrounding areas have been completely transformed to wheat fields.

Aspalathus comptonii R.Dahlgren

Status: **Rare**

T. Nkonki & J.E. Victor

e**Distribution:** WC. Cederberg Mountains, at Middelberg, Sneeuberg and Heuningvlei.

Habitat: Montane fynbos, 900–1 200 m.

Rationale: A range-restricted species (EOO 145 km^2), with three known subpopulations that are protected in the Cederberg Wilderness Area.

Aspalathus concava Bolus

Status: **DD**D

D. Raimondo, T. Nkonki & J.E. Victor

e**Distribution:** WC. Houwhoek.

Habitat: Montane fynbos, 800 m.

Rationale: Known only from the type collection made at an unspecified locality near Houwhoek in 1896. Parts of the area have been transformed to forestry plantations and agriculture, but this species is too poorly known to determine its status.

F **Aspalathus congesta** (R.Dahlgren) R.Dahlgren

Status: **Rare**

D. Raimondo

e**Distribution:** WC. Swartberg and Kammanassie Mountains.

Habitat: High-altitude mountain summits.

Rationale: Restricted to the highest peaks of the region. Not threatened but occurs as scattered individuals.

F **Aspalathus cordicarpa** R.Dahlgren

Status: **EX**

A.L. Schutte-Vlok, J.H. Vlok & D. Raimondo

e**Distribution:** WC. Garcia's Pass.

Habitat: Sands or sandstone gravel at medium altitudes.

Rationale: Last collected in the 1950s. The only known site is now under pines and densely invaded by wattles. Jan Vlok (expert field botanist in the southern Cape) has searched this site often, but has not found this species.

Aspalathus corniculata R.Dahlgren

Status: **DD**D

D. Raimondo

e**Distribution:** WC. Slopes of the Neethlingsberg in the Witzenberg Mountains north of Ceres.

Habitat: Montane fynbos, lower rocky slopes below 830 m in renosterveld-fynbos transition.

Rationale: Known only from the type collection from the 1950s. This species is too poorly known to determine its status. It may be threatened by agriculture if it is confined to lower slopes.

F **Aspalathus cuspidata** R.Dahlgren

Status: **VU** B1ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

e**Distribution:** WC. Brand-se-baai to Vanrhynsdorp.

Habitat: Mixed fynbos and renosterveld on loamy, red clay flats.

Rationale: EOO < 1 200 km^2. Only five locations are known, but this species is likely to be overlooked and we therefore estimate that there are at least 10. One subpopulation was lost to heavy-mineral sand mining and decline is continuing. Other subpopulations are also potentially threatened by vineyard and tomato cultivation.

F **Aspalathus dasyantha** Eckl. & Zeyh.

Status: **CR** B1ab(ii,iii,iv,v)

A.L. Schutte-Vlok, J.H. Vlok & D. Raimondo

e**Distribution:** WC. West of Still Bay.

Habitat: Limestones on coastal marine flats, 160–300 m.

Rationale: EOO 100 km^2. Five subpopulations are known through herbarium records, but only two remain. They are in severely fragmented remnant habitat patches and the species is declining because of invading alien acacias, habitat degradation through thatch harvesting and too infrequent fires.

Aspalathus decora R.Dahlgren

Status: **Rare**

D. Raimondo

e**Distribution:** WC. Cederberg Mountains.

Habitat: Growing in sand derived from Table Mountain Sandstone or directly in rock crevices in fynbos.

Rationale: A range-restricted species (EOO < 300 km^2) that is protected within the Cederberg Wilderness Area.

F **Aspalathus densifolia** Benth.

Status: **DD**D

D.A. Kamundi† & D. Raimondo

e**Distribution:** WC. Witzenberg and Waaihoek Mountains.

Habitat: Montane fynbos, 500–1 000 m.

Rationale: This species was last collected in 1924. It is too poorly known to determine its conservation status.

Aspalathus desertorum Bolus

Status: **NT** D2

T. Nkonki, D. Raimondo & J.E. Victor

e**Distribution:** WC. Gydo Pass and Karoopoort.

Habitat: Compact clay weathered from shales, in renosterveld-fynbos scrub, 330–1 060 m.

Rationale: Eight locations are known. Some habitat has been transformed to fruit orchards and further expansion of orchards is a potential threat.

Aspalathus digitifolia R.Dahlgren

Status: **VU** A2c; D2

J.H. Vlok & D. Raimondo

e**Distribution:** WC. Outeniqua Mountains near Mossel Bay.

Habitat: South-facing sandstone slopes.

Rationale: A population reduction of at least 30% is estimated based on habitat loss to pine plantations within 30 years (generation length suspected to be 10 years), but plantations are no longer expanding. Two known remaining locations are potentially threatened by invasive alien plants.

Aspalathus excelsa R.Dahlgren

Status: **VU** D2

T. Nkonki, N.A. Helme & J.E. Victor

e**Distribution:** WC. Hermanus.

Habitat: Lowland fynbos, 50 m.

Rationale: Only one location is known. Parts of the surrounding habitat has been lost to urban expansion and invasion by alien plants. The population is not declining, but is potentially threatened by further habitat loss.

Aspalathus fasciculata (Thunb.) R.Dahlgren

Status: **DD**D

D. Raimondo & I. Ebrahim

e**Distribution:** WC. Groot Winterhoek Mountains.

Habitat: Montane fynbos on lower slopes, 200–450 m.

Rationale: The lower slopes of the Groot Winterhoek Mountains are infested with alien plants and threatened by the development of vineyards and orchards. However, this species was last collected in 1956, no precise locations are known and the impact of these threats on the species cannot be determined.

Aspalathus ferox Harv.

Status: **CR** PE

D. Raimondo

e**Distribution:** WC. Breede River Valley.

Habitat: Renosterveld.

Rationale: Known from the type locality, indicated only as 'Bosjesveld'. Where exactly this is, is uncertain; it is probably an old place name most probably referring to the property 'Aan de Bosjesman'. The lowland renosterveld on this property has been almost completely transformed for vineyards, hence it is highly likely that this species is extinct.

Aspalathus florulenta R.Dahlgren

Status: **VU** B1ab(ii,iii,v)

N.A. Helme & D. Raimondo

e**Distribution:** WC. Bokkeveld to Nardous Mountain.

Habitat: Montane fynbos on flat sands over sandstone.

Rationale: EOO < 5 000 km^2. Three locations are known, but there are probably up to 10. Its habitat is being converted throughout its range for cultivation of rooibos tea, causing a rapid, continuing decline.

Aspalathus fourcadei L.Bolus

Status: **Rare**

T. Nkonki & J.E. Victor

e**Distribution:** WC. Tsitsikamma and Kouga Mountains.

Habitat: Montane fynbos, 350 m.

Rationale: A range-restricted species (EOO < 100 km^2), known from three sites. Not declining.

F **Aspalathus gerrardii** Bolus

Status: **VU** A2c

L. von Staden

e**Distribution:** EC KZN. Between Richards Bay, St Lucia and Ngoye Forest and in the south from Oribi Gorge and along the coast to Port St Johns.

Habitat: Coastal grasslands, forest margins, often in damp or marshy sites, on sandstones and Msikaba Formation Sandstone in the south, 0–500 m.

Rationale: Although widespread (EOO 10 000 km^2), the range of this species coincides with some of the most highly transformed areas of KwaZulu-Natal. A suffrutescent grassland forb or small tree, generation length likely to be longer than 50 years. Population reduction within the last three generations is estimated at > 30% based on a 48% habitat loss, mainly as a result of sugarcane cultivation, urban and coastal development and forestry plantations.

Aspalathus glabrata R.Dahlgren

Status: **CR** B1ab(iii,v)+2ab(iii,v)

D. Raimondo

e**Distribution:** WC. Darling.

Habitat: Renosterveld on dry hill slopes, in reddish clay sand soil.

Rationale: EOO < 100 km^2, AOO < 1 km^2. Two severely fragmented subpopulations remain. They are on small fragments (< 10 ha each) along a roadside that is being degraded by alien grass invasion, too infrequent fires and clearing of road verges, resulting in a continuing decline in the number of mature individuals.

Aspalathus glabrescens R.Dahlgren

Status: **EN** A2c

J.H. Vlok & D. Raimondo

e**Distribution:** WC. Outeniqua Mountains.

Habitat: Disturbed renosterveld-fynbos scrub in dry, pebbly, loamy soil on north-facing slopes.

Rationale: A population reduction of > 50% is estimated based on habitat loss to crop cultivation and invasion by alien plants over the past 40 years (generation length suspected to be 15 years). Decline due to unmanaged alien invasion is continuing.

Aspalathus globulosa E.Mey.

Status: **VU** B1ab(ii,iii,v)

T. Nkonki & J.E. Victor

e**Distribution:** WC. Betty's Bay to De Hoop. Formerly occurred on the Cape Flats, but now locally extinct.

Habitat: Coastal fynbos on marine sand.

Rationale: EOO 6 000 km^2. Fewer than 10 locations are known. Subpopulations on the Cape Flats are extinct because of urban development and alien plants that invade the habitat. Remaining subpopulations are declining as a result of ongoing coastal development.

Aspalathus glossoides R.Dahlgren

Status: **VU** D2

D. Raimondo & N.A. Helme

e**Distribution:** WC. Piketberg Mountain.

Habitat: Sandy plateau in montane fynbos.

Rationale: EOO 50 km^2, AOO < 20 km^2. Five known locations. At least 70% of the habitat has been transformed to fruit orchards, but over a period longer than three generations. There is no current decline, but further agricultural expansion remains a potential threat.

Aspalathus grobleri R.Dahlgren **Plate 62**

Status: **EN** B1ab(iii,v); C2a(i)

D. Raimondo & I. Ebrahim

e**Distribution:** WC. Swellendam.

Habitat: Renosterveld-fynbos scrub.

Rationale: EOO < 510 km^2. Four known locations remain. Agriculture has caused extensive habitat loss for this species, when large areas were converted to wheat during the 1950s and 1960s. A population of less than 500 mature individuals, consisting of small subpopulations of less than 250 mature individuals, is restricted to small areas of nutrient-rich soils in two reserves, where overgrazing by high concentrations of game is causing a continuing decline.

[F] **Aspalathus horizontalis** (R.Dahlgren) R.Dahlgren
Status: **CR** B2ab(iii,v)
A.L. Schutte-Vlok & D. Raimondo
[e]**Distribution:** WC. Moorreesburg to Blouberg.
Habitat: Clay soils or in a thin layer of sand on clay.
Rationale: EOO < 900 km², AOO < 1 km². Three small, severely fragmented subpopulations remain in isolated remnants of natural vegetation, each no more than 10 ha in size. The habitat within these remnants is continuously being degraded by invasive alien species and a lack of fire.

Aspalathus humilis Bolus
Status: **Rare**
T. Nkonki & J.E. Victor
[e]**Distribution:** WC. Cape Peninsula and Stellenbosch.
Habitat: On sand in rocky montane fynbos, 600–1 100 m.
Rationale: Previously thought to be endemic to Table Mountain, Cape Peninsula, but found at Jonkershoek in 1983 (EOO 200 km²). It occurs only on sandy deposits on sandstone pavements. Both subpopulations are within reserves.

Aspalathus hypnoides R.Dahlgren
Status: **VU** D2
D. Raimondo
[e]**Distribution:** WC. Langeberg Mountains.
Habitat: Montane fynbos on lower slopes.
Rationale: Three known locations are potentially threatened by alien acacia and hakea invasions and forestry plantations, which have affected at least 50% of the southern lower slopes of the Langeberg.

Aspalathus incana R.Dahlgren
Status: **Rare**
J.E. Victor & N.A. Helme
[e]**Distribution:** WC. Klein Swartberg Mountains.
Habitat: Shale band on sandstone slopes, above 1 250 m.
Rationale: A range-restricted (EOO 30 km²), high-altitude habitat specialist that is protected within provincial conservation areas.

Aspalathus incompta Thunb.
Status: **NT** B1ab(iii)
T. Nkonki, D. Raimondo & J.E. Victor
[e]**Distribution:** WC. Riviersonderend to Potberg Reserve.
Habitat: Clay soils in renosterveld associated with silcrete outcrops.
Rationale: EOO < 5 000 km². Only 13 locations remain after most of the habitat has been transformed by wheat cultivation. At present declining owing to invasion by alien plants and overgrazing of renosterveld fragments by livestock.

[F] **Aspalathus incurva** Thunb.
Status: **Rare**
A.L. Schutte-Vlok & D. Raimondo
[e]**Distribution:** WC. Southern Cape Peninsula.
Habitat: Sandy soils in fynbos.
Rationale: A range-restricted species (EOO < 322 km²) that is protected in the Table Mountain National Park.

[F] **Aspalathus inops** Eckl. & Zeyh.
Status: **Rare**
D. Raimondo & A.L. Schutte-Vlok
[e]**Distribution:** WC. Langeberg Mountains.
Habitat: Dry rocky fynbos on north-facing slopes.
Rationale: Known from two sites, but no significant threats.

[F] **Aspalathus intervallaris** Bolus
Status: **NT** A2c; B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)
D. Raimondo & A.L. Schutte-Vlok
[e]**Distribution:** WC. Hangklip to Hermanus.
Habitat: Sand at the foot of mountains or on mountain slopes in low fynbos vegetation, up to 750 m.
Rationale: EOO 160 km², AOO < 160 km². Less than 15 locations are known, around half of which are above 200 m and are protected within reserves. Coastal locations are declining as a result of coastal development and invasion by alien plants. Coastal development has already led to > 30% habitat loss, 25% of which occurred over the past 20 years (generation length suspected to be 10 years).

[F] **Aspalathus intricata** Compton subsp. **intricata**
Status: **Rare**
D. Raimondo & D.A. Kamundi†
[e]**Distribution:** WC. Witteberg Mountains near Laingsburg and Gydo Pass near Ceres.
Habitat: Low- to medium-altitude arid fynbos slopes.
Rationale: Known from two disjunct subpopulations. Not known to be threatened.

Aspalathus isolata (R.Dahlgren) R.Dahlgren
Status: **EN** B1ab(ii,iii)
N.A. Helme & D. Raimondo
[e]**Distribution:** NC WC. Matsikamma Mountains and Bokkeveld Escarpment near Nieuwoudtville.
Habitat: Montane fynbos, in deep acid sands on sandstone mountain plateaus, 800 m.
Rationale: EOO < 500 km². Habitat at two known locations is declining because of rooibos tea cultivation. In addition, the location on the Matsikamma Mountain is too frequently burnt, while the Bokkeveld Escarpment location is infested by alien pines.

[F] **Aspalathus joubertiana** Eckl. & Zeyh.
Status: **EN** A2ac; B1ab(iii,v)
A.L. Schutte-Vlok & D. Raimondo
[e]**Distribution:** WC. Napier to Potberg.
Habitat: Mixed fynbos-renosterveld scrub, in clay soil at low altitude.
Rationale: A population reduction of > 50% is estimated based on habitat loss to agriculture over the past 60 years (a long-lived resprouter, generation length at least 30 years). EOO < 1 900 km². Six severely fragmented subpopulations remain and the number of mature individuals is declining because of too infrequent fires.

Aspalathus karrooensis R.Dahlgren
Status: **Critically Rare**
J.H. Vlok & D. Raimondo
[e]**Distribution:** WC. Rooiberg Mountain.
Habitat: Rocky outcrops in montane fynbos.
Rationale: Occurs only on the Rooiberg, where two known subpopulations are protected in the Rooiberg Nature Reserve.

[F] **Aspalathus keeromsbergensis** R.Dahlgren
Status: **Rare**
D.A. Kamundi† & D. Raimondo
[e]**Distribution:** WC. Keeromsberg Mountains.

Habitat: Montane fynbos, 500–740 m.
Rationale: A range-restricted species (EOO < 20 km²) that is not threatened.

Aspalathus lactea Thunb. subsp. **breviloba** R.Dahlgren

Status: **VU** D2
N.A. Helme & D. Raimondo

eDistribution: WC. Breede River and Hex River Valleys.
Habitat: Renosterveld on fine-grained, mainly clay soils in valleys and on plains below 800 m.
Rationale: The habitat of this taxon has been affected by cultivation of vineyards and urban expansion around Worcester. Individuals at four known locations are not declining, but further agricultural and urban expansion remain potential threats.

Aspalathus lamarckiana R.Dahlgren

Status: **Rare**
T. Nkonki & J.E. Victor

eDistribution: WC. Witteberg and Klein Swartberg Mountains.
Habitat: Arid fynbos, 660 m.
Rationale: Restricted to a small area near the Laingsburg–Ladismith Division border, at Wittepoort. Not threatened.

[F] **Aspalathus lanceicarpa** R.Dahlgren

Status: **Rare**
D. Raimondo & W. Berrington

eDistribution: EC. Van Stadens Mountains.
Habitat: Southern slopes in montane fynbos.
Rationale: More than 10 000 plants occur in a small area of < 35 km². Its mountainous habitat is not threatened and it can be dominant after fire.

Aspalathus latifolia Bolus

Status: **VU** D2
N.A. Helme & D. Raimondo

eDistribution: WC. Piketberg Mountain.
Habitat: Montane fynbos, 660–1 330 m.
Rationale: Five known locations are potentially threatened by agriculture (orchard cultivation), invading alien plants and afforestation.

[F] **Aspalathus lebeckioides** R.Dahlgren

Status: **VU** B1ab(ii,iii,iv,v)
D. Raimondo & N.A. Helme

eDistribution: WC. From Mamre to the Cape Peninsula to Agulhas Plain.
Habitat: Lowland clay flats.
Rationale: EOO 7 800 km². Fewer than 10 known locations are declining as a result of crop cultivation, coastal development and invasion by alien plants.

Aspalathus lenticula Bolus

Status: **CR** B1ab(iii)+2ab(iii)
D. Raimondo & K. Marais

eDistribution: WC. Tulbagh to Paarl.
Habitat: Renosterveld-fynbos scrub, 230 m.
Rationale: Until recently this species was known only from the type collection, made in 1896 in the Tulbagh Valley, an area now extensively transformed to vineyards. It was thought extinct until a subpopulation was discovered on a small renosterveld fragment near Paarl in 2007. EOO and AOO 2 km². Individuals at this location are declining as a result of dense invasions of alien plants and fertiliser and herbicide runoff from surrounding agricultural fields.

Aspalathus longifolia Benth.

Status: **VU** B1ab(ii,iii,v)+2ab(ii,iii,v)
J.H. Vlok, N.A. Helme & D. Raimondo

eDistribution: WC. Langeberg Mountains, Garcia's Pass to Gourits River.
Habitat: Shale bands on renosterveld-fynbos ecotones on northern slopes.
Rationale: EOO and AOO < 200 km². Fewer than 10 known locations are declining because of invasion by alien plants and grazing by livestock too soon after fire.

[F] **Aspalathus lotoides** Thunb. subsp. **lagopus** (Thunb.) R.Dahlgren

Status: **VU** B1ab(ii,iii)
N.A. Helme & D. Raimondo

eDistribution: WC. Jacobsbaai to Dassenberg.
Habitat: Coastal and inland granite outcrops.
Rationale: EOO 2 020 km². Habitat at fewer than 10 known locations is declining as a result of crop cultivation, coastal development and invasion by alien plants.

[F] **Aspalathus lotoides** Thunb. subsp. **lotoides**

Status: **VU** B1ab(i,ii,iii,iv,v)
D. Raimondo & N.A. Helme

eDistribution: WC. Cape Peninsula to Darling and Jacobsbaai.
Habitat: Loamy sands associated with granites close to the coast, and on marine sand.
Rationale: EOO 8 000 km². Nine known locations are declining as a result of urban expansion and invasions of alien plants.

Aspalathus macrantha Harv.

Status: **EN** B1ab(ii,iii,iv)+2ab(ii,iii,iv)
D. Raimondo

eDistribution: WC. Cape Peninsula and Hottentots Holland Mountains.
Habitat: Montane fynbos, 200–350 m.
Rationale: EOO 400 km², AOO < 400 km². Four known locations are threatened by urban expansion and consequent changes in fire regime. This reseeder requires fire for regeneration but fires are generally suppressed close to urban areas.

Aspalathus macrocarpa Eckl. & Zeyh.

Status: **VU** D2
D. Raimondo

eDistribution: WC. Langeberg Mountains.
Habitat: Dry montane fynbos on shale.
Rationale: Three known locations are potentially threatened by expansion of vineyards.

[F] **Aspalathus millefolia** R.Dahlgren

Status: **VU** B1ab(ii,iii,v)
N.A. Helme & D. Raimondo

eDistribution: WC. Houwhoek to Riversdale.
Habitat: Shale slopes and flats.
Rationale: EOO 5 145 km². Ten locations are known, but some may already be locally extinct. Declining as a result of habitat loss to the cultivation of wheat, deciduous fruit and proteas and expansion of vineyards.

[F] **Aspalathus muraltioides** Eckl. & Zeyh.

Status: **EN** B1ab(ii,iii,iv,v)

A.L. Schutte-Vlok & D. Raimondo

[e]**Distribution:** WC. Piketberg to Worcester.

Habitat: Mixed renosterveld-fynbos scrub, fine-grained clay soils.

Rationale: More than 80% of the habitat has been transformed by agriculture over the past 100 years (more than three generations) and only seven severely fragmented subpopulations remain. EOO 3 200 km^2. The population continues to decline because of further ploughing and too infrequent fires.

[F] **Aspalathus myrtillifolia** Benth.

Status: **DD**D

D. Raimondo & D.A. Kamundi†

[e]**Distribution:** Unknown.

Habitat: Unknown.

Rationale: Known only from the type collection, made in the 1700s, without a precise locality.

Aspalathus obliqua R.Dahlgren

Status: **CR** PE

D. Raimondo & E. Marinus

[e]**Distribution:** NC. Bokkeveld Escarpment.

Habitat: Montane fynbos, 600–700 m.

Rationale: This species is known only from the type collection, made on a farm on the Bokkeveld Escarpment near Nieuwoudtville in 1830. Most of the land on this farm is cultivated and the rest is grazed by sheep. This is a palatable species and it has quite likely been negatively affected by heavy grazing on fragments of natural vegetation, as numerous visits to the area and a thorough search of the farm in 2002 failed to locate any individuals. It is quite likely to be extinct.

[F] **Aspalathus oblongifolia** R.Dahlgren

Status: **VU** B1ab(ii,iii,iv,v)

A.L. Schutte-Vlok & D. Raimondo

[e]**Distribution:** WC. Pringle Bay to Hermanus, and at Potberg.

Habitat: Fynbos, in sand or sandstone gravel on low mountain slopes and hills.

Rationale: EOO 2 100 km^2. Seven locations are known. Those around Hermanus and Pringle Bay are declining as a result of habitat loss to coastal development.

Aspalathus obtusata Thunb.

Status: **VU** D2

N.A. Helme

[e]**Distribution:** WC. Matsikamma Mountain and between Vredendal and Lambert's Bay.

Habitat: Succulent karoo, on rocky quartz ridges.

Rationale: Two locations are known, one north of Vredendal is potentially threatened by mining.

Aspalathus obtusifolia R.Dahlgren

Status: **VU** B1ab(ii,iii,v)+2ab(ii,iii,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Riversdale to Mossel Bay.

Habitat: Lowland fynbos in fine-grained, black soil, up to 130 m.

Rationale: EOO < 3 000 km^2. Known from fewer than 10 locations. Experiencing a continuing decline as a result of invasion by alien plants, urban expansion and agriculture.

Aspalathus odontoloba R.Dahlgren

Status: **EN** B1ab(iii)+2ab(iii)

D. Raimondo & N.A. Helme

[e]**Distribution:** WC. Albertinia.

Habitat: Lowland fynbos, below 10 m.

Rationale: EOO and AOO < 500 km^2. Habitat quality is declining at three known locations because of invasions by alien species of *Pinus* and *Eucalyptus* and destructive thatch harvesting.

Aspalathus oliveri R.Dahlgren

Status: **Critically Rare**

T. Nkonki & J.E. Victor

[e]**Distribution:** WC. Tierberg in the Groot Swartberg Mountains.

Habitat: Northern slopes in subalpine fynbos, 1 250–2 500 m.

Rationale: One known site is protected within a provincial nature reserve.

Aspalathus orbiculata Benth.

Status: **Critically Rare**

N.A. Helme, T. Nkonki & J.E. Victor

[e]**Distribution:** WC. Matroosberg.

Habitat: Shale bands at 1 250 m.

Rationale: A rare, high-altitude habitat specialist that is not threatened.

[F] **Aspalathus pachyloba** Benth. subsp. **rugulicarpa** R.Dahlgren

Status: **Critically Rare**

D. Raimondo & D.A. Kamundi†

[e]**Distribution:** WC. Matroosberg.

Habitat: Lower slopes in montane fynbos.

Rationale: Known to occur at a single site where it is not threatened.

Aspalathus pallescens Eckl. & Zeyh.

Status: **VU** D2

D. Raimondo, N.A. Helme & D.I.W. Euston-Brown

[e]**Distribution:** WC. De Hoop.

Habitat: Lowland fynbos, limestone ridges, 200 m.

Rationale: One known location is potentially threatened by invading alien acacias.

[F] **Aspalathus patens** Garab. ex R.Dahlgren

Status: **Rare**

D. Raimondo

[e]**Distribution:** WC. Swartberg and Kammanassie Mountains.

Habitat: Mountain summits.

Rationale: A high-altitude habitat specialist known from three sites where it is not threatened.

[F] **Aspalathus pendula** R.Dahlgren

Status: **VU** B1ab(ii,iii)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Piketberg and northwestern Olifants River Mountains.

Habitat: Shales and sandy middle to lower slopes.

Rationale: EOO < 2 000 km^2. Habitat at 10 known locations is declining because of expanding wheat and rooibos cultivation.

Aspalathus pilantha R.Dahlgren

Status: **Critically Rare**

N.A. Helme, T. Nkonki & J.E. Victor

eDistribution: WC. Matroosberg.

Habitat: Montane fynbos, 700 m.

Rationale: One site is known, but this species is not threatened.

F **Aspalathus pinguis** Thunb. subsp. **occidentalis** R.Dahlgren

Status: **VU** B1ab(ii,iii,v)

N.A. Helme & D. Raimondo

eDistribution: WC. Langebaan to Piketberg.

Habitat: Renosterveld on clay flats.

Rationale: EOO < 1 859 km^2. Eight locations are known. A few subpopulations are protected within the West Coast National Park but all other locations are declining as a result of urban development, agricultural expansion and invasions of alien plants.

F **Aspalathus polycephala** E.Mey. subsp. **polycephala**

Status: **Rare**

D.A. Kamundi† & D. Raimondo

eDistribution: WC. Cederberg.

Habitat: Stony fynbos slopes.

Rationale: A range-restricted taxon (EOO 350 km^2) with three known subpopulations that are protected in the Cederberg Wilderness Area.

Aspalathus potbergensis R.Dahlgren **Plate 62**

Status: **VU** D2

D. Raimondo

Distribution: WC. Potberg.

Habitat: Montane fynbos, 400–500 m.

Rationale: EOO < 150 km^2. A locally common species known from fewer than five locations. Despite its occurrence in a reserve, it is potentially threatened by invasions of alien plants, as the financial resources to clear aliens are not readily available.

Aspalathus proboscidea R.Dahlgren

Status: **CR** B1ab(ii,iii,v)+2ab(ii,iii,v)

D. Raimondo

eDistribution: NC. Bokkeveld Mountains.

Habitat: Arid montane fynbos in sand, 700–800 m.

Rationale: EOO and AOO < 10 km^2. Declining because of habitat loss to rooibos tea cultivation at its only known location.

Aspalathus prostrata Eckl. & Zeyh.

Status: **VU** D2

N.A. Helme, D. Raimondo, D.I.W. Euston-Brown, T. Nkonki & J.E. Victor

eDistribution: WC. Arniston.

Habitat: Lowland fynbos on limestone, 50–100 m.

Rationale: Three known locations are potentially threatened by invasions of alien plants and infrastructure development at an airfield.

F **Aspalathus psoraleoides** (C.Presl) Benth.

Status: **EN** B1ab(iii)

D. Raimondo & D.A. Kamundi†

eDistribution: WC. Cape Peninsula and Babilonstoring Mountain.

Habitat: Low fynbos in sands weathered from sandstone.

Rationale: EOO < 700 km^2. Three known locations. Two subpopulations on the Cape Peninsula are protected, but one other disjunct site on the Babilonstoring Mountain is declining as a result of alien plants that invade the habitat.

F **Aspalathus puberula** (Eckl. & Zeyh.) R.Dahlgren

Status: **CR** PE

A.L. Schutte-Vlok & D. Raimondo

eDistribution: WC. Tygerberg to Darling.

Habitat: Clay soils.

Rationale: Last collected in 1956, 10 of the 11 subpopulations known through herbarium records are from sites that have now been transformed. The species has lost most (98%) of its habitat to wheat and vineyard expansion, invading alien plants and urban expansion. In addition, it is very likely that the lack of fire of renosterveld fragments has resulted in this species disappearing from most of its remaining habitat. There is one unconfirmed record from the Tygerberg Hills and it is possible that this species is still extant here. Urgent surveys are needed to establish whether or not this species is extinct.

F **Aspalathus pycnantha** R.Dahlgren

Status: **VU** A2c; B1ab(iii,v)+2ab(iii,v)

N.A. Helme, D.I.W. Euston-Brown & D. Raimondo

eDistribution: WC. Bredasdorp.

Habitat: Gravelly shale lowlands.

Rationale: A population reduction of at least 40% is estimated based on habitat loss to wheat, vineyard and protea cultivation over the past 40 years (generation length suspected to be 15 years). Current EOO and AOO < 1 200 km^2. About eight remaining locations are declining because of ongoing habitat degradation caused by invading alien plants and grazing by livestock.

Aspalathus quadrata L.Bolus

Status: **VU** B1ab(iii,v)+2ab(iii,v)

N.A. Helme & D. Raimondo

eDistribution: WC. Albertinia.

Habitat: Lowland fynbos, 300 m.

Rationale: EOO and AOO < 2 000 km^2. Habitat degradation due to destructive thatch harvesting and invasion by alien plants is causing a continuing decline in numbers of mature individuals at fewer than 10 known locations. None of the remaining subpopulations are in protected areas.

Aspalathus ramosissima R.Dahlgren

Status: **Rare**

N.A. Helme, J.H. Vlok & D. Raimondo

eDistribution: WC. Groot Swartberg Mountains and Anysberg.

Habitat: Rocky outcrops on montane fynbos, 1 300–1 700 m.

Rationale: A high-alpine habitat specialist known from three collecting records. It not suspected to be declining.

Aspalathus rectistyla R.Dahlgren

Status: **CR** B2ab(iii)

D. Raimondo

eDistribution: WC. Piketberg to Porterville.

Habitat: Renosterveld, shale soils.

Rationale: Wheat cultivation has caused a > 90% loss of habitat and only a few severely fragmented subpopulations are likely to remain on small fragments, with an estimated AOO < 2 km^2. Declining as a result of grazing by livestock and the negative effects of fragmentation, including pesticide drift, loss of pollinators and poor reproduction.

[F] **Aspalathus recurva** Benth.

Status: **VU** B1ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Piketberg to Swellendam.

Habitat: Renosterveld-fynbos scrub, 40–300 m.

Rationale: EOO 5 300 km^2. The 10 known locations are declining as a result of expanding agriculture (vineyards and cultivation of deciduous fruit), urban expansion and invasions of alien plants.

[F] **Aspalathus recurvispina** R.Dahlgren

Status: **CR** B1ab(iii)+2ab(iii); C2a(ii)

I. Ebrahim, D. Raimondo & A.L. Schutte-Vlok

[e]**Distribution:** EC. Port Elizabeth.

Habitat: Coastal fynbos below 100 m.

Rationale: All six locations known through historical records are in areas now transformed to suburbs of Port Elizabeth, and it was thought extinct until a small subpopulation of ± 200 plants was found in a 1.5 ha roadside fragment of natural vegetation in Humewood. This subpopulation is likely to continue to decline as a result of the effects of fragmentation and degradation of the habitat as well as invasion by alien plants.

Aspalathus repens R.Dahlgren

Status: **CR** B1ab(iii)+2ab(iii); C2a(ii)

D. Raimondo, N.A. Helme & D.I.W. Euston-Brown

[e]**Distribution:** WC. Bredasdorp.

Habitat: Lowland fynbos on limestone, 90 m.

Rationale: EOO 5 km^2, AOO < 1 km^2. Three severely fragmented subpopulations are declining as a result of alien plants that invade the habitat. One subpopulation is potentially threatened by railway construction. The population consists of ± 230 mature individuals, 200 of which are in a single subpopulation.

[F] **Aspalathus retroflexa** L. subsp. **bicolor** (Eckl. & Zeyh.) R.Dahlgren

Status: **CR** PE

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Cape Flats to Mamre.

Habitat: Mountain and lowland fynbos on sandy flats, 100–300 m.

Rationale: All five locations known through herbarium collections are either transformed or degraded and this taxon is quite likely extinct.

Aspalathus rosea Garab. ex R.Dahlgren

Status: **EN** A2c; B1ab(iii,v)

N.A. Helme, A.L. Schutte-Vlok, D.I.W. Euston-Brown & D. Raimondo

[e]**Distribution:** WC. Bot River to Elim.

Habitat: Lowland fynbos, 100–200 m.

Rationale: A population reduction of at least 50% is estimated based on habitat loss to wheat and vineyard expansion over the past three generations (45 years). EOO < 1 400 km^2. Seven severely fragmented remaining subpopulations are declining because of agricultural expansion, invasion by alien plants and grazing by livestock.

Aspalathus rostrata Benth.

Status: **Rare**

T. Nkonki & J.E. Victor

[e]**Distribution:** WC. Langeberg Mountains near Robertson.

Habitat: Dry montane fynbos or renosterveld-fynbos scrub, 1 000 m.

Rationale: EOO < 250 km^2. Only five subpopulations are known that are not threatened.

[F] **Aspalathus rostripetala** R.Dahlgren

Status: **CR** B1ab(iii,v)+2ab(iii,v)

D. Raimondo & D.A. Kamundi†

[e]**Distribution:** WC. Olifants River Valley north of Citrusdal.

Habitat: Sandy flat area in arid fynbos.

Rationale: EOO 10 km^2, AOO < 10 km^2. One location remains. The habitat is fragmented by citrus cultivation and habitat quality in fragments continues to decline because of pesticide runoff and the exclusion of fire.

Aspalathus rycroftii R.Dahlgren

Status: **CR** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

D. Raimondo, I. Ebrahim & E. Marinus

[e]**Distribution:** WC. Malmesbury.

Habitat: Renosterveld in clays on low hills.

Rationale: EOO 42 km^2, AOO < 10 km^2. More than 80% of the renosterveld habitat of this species has been transformed by wheat cultivation and urban expansion of Malmesbury. It was probably formerly more common, but recent surveys located only three subpopulations, one of which was lost to a housing development in 2005. Two severely fragmented remaining subpopulations continue to decline because of invading alien plants and too infrequent fires.

[F] **Aspalathus salteri** L.Bolus

Status: **NT** B1ab(ii,iii,iv,v)

D. Raimondo & A.L. Schutte-Vlok

[e]**Distribution:** WC. Cape Peninsula to Cape Infanta.

Habitat: Fynbos, on coastal sands mostly associated with limestone.

Rationale: EOO 8 400 km^2. Some 18 known locations are declining as a result of invasion by alien plants throughout its range, agriculture on the Agulhas Plain, and urban expansion on the Cape Flats and at Infanta.

[F] **Aspalathus sanguinea** Thunb. subsp. **foliosa** R.Dahlgren

Status: **VU** B1ab(ii,iii,v)+2ab(ii,iii,v)

D. Raimondo & A.L. Schutte-Vlok

[e]**Distribution:** WC. Riversdale plain.

Habitat: Coastal sands.

Rationale: EOO and AOO < 2 000 km^2. The 8–10 known locations are declining because of invasion by alien plants, agriculture and urban expansion around Still Bay, Riversdale and Albertinia.

[F] **Aspalathus sanguinea** Thunb. subsp. **sanguinea**

Status: **VU** B1ab(ii,iii,v)+2ab(ii,iii,v)

D. Raimondo & A.L. Schutte-Vlok

[e]**Distribution:** WC. Bredasdorp to Still Bay.

Habitat: Calcareous fynbos scrub on limestone rocks along coastal deposits.

Rationale: EOO 490 km^2, AOO < 490 km^2. Fewer than 10 known locations are declining as a result of alien plants that invade the habitat.

[F] **Aspalathus secunda** E.Mey.

Status: **DD**D

D. Raimondo & A.L. Schutte-Vlok

[e]**Distribution:** WC. Riebeek-Kasteel Mountain.

Habitat: Mountain slopes, altitude unknown.

Rationale: Last collected before 1950. The specific habitat of this species is not known. It could be affected by vineyard expansion if it occurs on lower slopes.

F **Aspalathus shawii** L.Bolus subsp. **glabripetala** (R.Dahlgren) R.Dahlgren Plate 62

Status: **Rare**

A.L. Schutte-Vlok, D. Raimondo & D.A. Kamundi†

e**Distribution:** WC. Langeberg Mountains near Montagu.

Habitat: Mountain slopes and summits.

Rationale: A range-restricted taxon (EOO < 50 km²) that is not threatened.

Aspalathus singuliflora R.Dahlgren

Status: **CR** PE

D. Raimondo & I. Rogers

e**Distribution:** WC. Breede River Valley near Touwsrivier.

Habitat: Lowland fynbos on alluvial soils.

Rationale: Alluvial soils around Smousbos Hill, where this species was last collected in 1920, are all cultivated and it is quite likely to be extinct.

Aspalathus smithii R.Dahlgren

Status: **EN** B1ab(ii,iii,v)

N.A. Helme

e**Distribution:** WC. From Caledon to Bredasdorp and Swellendam.

Habitat: Renosterveld, 100–120 m.

Rationale: EOO < 1 200 km². Ten small, severely fragmented subpopulations remain on isolated fragments as most of the renosterveld habitat of this species has been transformed by wheat cultivation. Declining because of grazing by livestock and alien plants that invade fragments.

F **Aspalathus steudeliana** Brongn.

Status: **VU** A2c

N.A. Helme & D. Raimondo

e**Distribution:** WC. Ashton and Agulhas to Mossel Bay.

Habitat: Renosterveld with fynbos elements, on shale and silcrete flats with clay soil.

Rationale: More than 80% of the habitat has been transformed for the cultivation of wheat, at least 40% of which occurred since 1970, within the past three generations of this slow-growing reseeder (generation length ± 15 years).

Aspalathus stokoei L.Bolus

Status: **Rare**

T. Nkonki & J.E. Victor

e**Distribution:** WC. Kogelberg.

Habitat: Montane fynbos, streamside, 350–900 m.

Rationale: A range-restricted (EOO < 400 km²) habitat specialist that is protected in the Kogelberg Biosphere Reserve.

F **Aspalathus stricticlada** (R.Dahlgren) R.Dahlgren

Status: **EN** B1ab(i,ii,iii,iv,v)

A.L. Schutte-Vlok, D. Raimondo & D.A. Kamundi†

e**Distribution:** WC. Malmesbury and Vredenburg.

Habitat: Renosterveld-fynbos transitional veld.

Rationale: EOO 2 064 km². Three remaining locations are declining because of habitat loss to urban and coastal development.

Aspalathus suaveolens Eckl. & Zeyh.

Status: **Rare**

T. Nkonki & J.E. Victor

e**Distribution:** WC. Groot Winterhoek Mountains.

Habitat: Montane fynbos, 700–1 250 m.

Rationale: A range-restricted species (EOO < 200 km²), with only three known subpopulations that are protected in a wilderness area.

F **Aspalathus subulata** Thunb.

Status: **CR** B1ab(iii,v)

A.L. Schutte-Vlok & D. Raimondo

e**Distribution:** WC. Caledon Swartberg.

Habitat: Fynbos, in rocky outcrops on lower southern slopes.

Rationale: EOO 31 km². The only known location is densely infested by invasive alien plants.

Aspalathus sulphurea R.Dahlgren

Status: **DD**D

D. Raimondo

e**Distribution:** WC. Visgat, between Witzenberg and Groot Winterhoek Mountains.

Habitat: Montane fynbos.

Rationale: Known only from the type collection, made in the 1940s.

F **Aspalathus taylorii** R.Dahlgren

Status: **VU** D2

D. Raimondo, N.A. Helme & D.A. Kamundi†

e**Distribution:** WC. Riviersonderend Mountains.

Habitat: Fynbos, on lower northern slopes and foothills.

Rationale: EOO < 30 km². Two known locations are potentially threatened by invading alien pines.

F **Aspalathus ternata** (Thunb.) Druce

Status: **VU** A2abc; B1ab(i,ii,iii,iv,v)

D. Raimondo & A.L. Schutte-Vlok

e**Distribution:** WC. Lambert's Bay to Cape Peninsula.

Habitat: Coastal sands.

Rationale: EOO 5 200 km². A formerly common species, known from at least 27 subpopulations. Eleven are now locally extinct because of habitat loss to agriculture, eight others are quite possibly already locally extinct, and the remaining eight are likely to be declining as a result of ongoing habitat loss to potato cultivation in the Sandveld and urban development along the West Coast. At least a 30% population reduction is suspected to have taken place since 1965, within less than three generations of this species.

F **Aspalathus tridentata** L. subsp. **fragilis** R.Dahlgren

Status: **Rare**

D. Raimondo & D.A. Kamundi†

e**Distribution:** WC. Southern Cederberg and northern Kouebokkeveld Mountains.

Habitat: Alluvial soils near rivers or streams.

Rationale: This range-restricted taxon is known from three collections (EOO 425 km²). Its habitat is not known to be threatened.

Aspalathus truncata Eckl. & Zeyh.

Status: **Rare**

D. Raimondo

e**Distribution:** WC. Elandskloof Mountains to Bain's Kloof.

Habitat: Montane fynbos, rocky slopes below 1 000 m.

Rationale: A range-restricted species (EOO < 250 km²), with four known subpopulations that are not threatened.

[F] **Aspalathus tulbaghensis** R.Dahlgren **Plate 62**

Status: **CR** B1ab(ii,iii)+2ab(ii,iii)
N.A. Helme & J.E. Victor

[e]**Distribution:** WC. Wolseley.

Habitat: Sandy flats and lower slopes.

Rationale: EOO and AOO < 10 km². This species occurs in an area that is > 80% transformed to agriculture. There is a single known location, where a recent change of land ownership resulted in the expansion of fruit orchards and continued habitat loss.

[F] **Aspalathus tylodes** Eckl. & Zeyh.

Status: **EN** B1ab(i,ii,iii,iv,v)
A.L. Schutte-Vlok & D. Raimondo

[e]**Distribution:** WC. Cape Flats to Albertinia.

Habitat: Lowland marine flats and sandy areas below 400 m.

Rationale: This formerly common species is known from at least 22 locations through herbarium specimens. It was already locally extinct on the Cape Peninsula by 1998 and only six small, severely fragmented subpopulations remain in an EOO that has been reduced by > 50% to 3 500 km². Habitat and number of subpopulations continue to decline as a result of urban development, agriculture and invasions of alien plants.

Aspalathus vacciniifolia R.Dahlgren

Status: **Critically Rare**
T. Nkonki & J.E. Victor

[e]**Distribution:** WC. Somerset Sneeukop, Hottentots Holland Mountains.

Habitat: Subalpine montane fynbos, on steep, stony, windswept slopes, 1 000–1 300 m.

Rationale: This species occurs at only one known site that is not threatened.

[F] **Aspalathus varians** Eckl. & Zeyh.

Status: **EN** B1ab(iii,v)
A.L. Schutte-Vlok & D. Raimondo

[e]**Distribution:** WC. Bellville to Ceres.

Habitat: Renosterveld-fynbos transition.

Rationale: EOO 4 900 km². Of 18 subpopulations known from herbarium records, only six severely fragmented subpopulations are likely to remain. Most collections are very old, dating from pre-1966. There is a continuing decline in habitat quality because of mismanagement of renosterveld fragments. Members of the genus require fire to recruit and most fragments are not regularly burnt.

Aspalathus variegata Eckl. & Zeyh.

Status: **EX**
T. Nkonki & J.E. Victor

[e]**Distribution:** WC. Cape Flats.

Habitat: Lowland fynbos, in acid sands.

Rationale: Last collected in 1898. Extinct because of urban expansion on the Cape Flats.

Aspalathus venosa E.Mey.

Status: **Rare**
N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Bokkeveld Escarpment, Gifberg and Matsikamma Mountains.

Habitat: Pockets of sandy soils in rocky sandstone pavements.

Rationale: EOO 250 km². A habitat specialist of areas that are sheltered from rooibos tea cultivation and too frequent fires, therefore unlikely to be threatened.

[F] **Aspalathus verbasciformis** R.Dahlgren

Status: **Rare**
D. Raimondo

[e]**Distribution:** WC. Langeberg Mountains, from Montagu to Swellendam.

Habitat: Lower slopes and foothills.

Rationale: EOO 360 km². Not threatened.

Aspalathus vulpina Garab. ex R.Dahlgren **Plate 62**

Status: **VU** B1ab(iii,v)+2ab(iii,v); C1
J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Northern slopes of the Langeberg Mountains.

Habitat: Renosterveld-fynbos transition on lower slopes, on thin sands mixed with gravel on horizontal sandstone rocks, 600 m.

Rationale: EOO and AOO < 40 km². Fewer than 10 locations and less than 10 000 mature individuals remain. At least 10% of the habitat has been transformed to pasture and degraded by invading alien plants and grazing by livestock over the past 30 years (generation length 10 years). Decline continues.

[F] **Aspalathus wurmbeana** E.Mey.

Status: **EN** B1ab(ii,iii,iv,v)
A.L. Schutte-Vlok, J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Gifberg to Paarl.

Habitat: Renosterveld.

Rationale: EOO 1 550 km². A formerly common species, known from at least 19 subpopulations through herbarium collections. Extensive habitat loss to wheat and citrus cultivation resulted in only six severely fragmented subpopulations remaining. Further habitat loss to rooibos tea cultivation is causing a continuing decline.

[F] **Aspalathus zeyheri** (Harv.) R.Dahlgren **Plate 62**

Status: **VU** B1ab(ii,iii,iv,v)
A.L. Schutte-Vlok & D. Raimondo

[e]**Distribution:** WC. Swellendam and Potberg to Riversdale.

Habitat: Renosterveld, on hard clay soils.

Rationale: EOO 5 200 km². Only 11 severely fragmented subpopulations remain. This species was formerly common on the Riversdale plain but most of its habitat has been transformed by agriculture and subpopulations occur on small fragments, many of which are poorly managed—burnt too frequently and overgrazed.

Bauhinia L.

Bauhinia bowkeri Harv.

Status: **NT** D2
J.E. Victor & A.E. van Wyk

[e]**Distribution:** EC KZN. Mzimvubu to Kei River.

Habitat: Riverbanks.

Rationale: Known from five locations but likely to occur at a few more. Potentially threatened by subsistence agriculture.

Caesalpinia L.

Caesalpinia bracteata Germish.

Status: **VU** D1
J.E. Victor, P.G. Desmet & A.E. van Wyk

[e]**Distribution:** NC. Augrabies Falls.

Habitat: Granite.

Rationale: Occurs on two farms below Augrabies Falls and known from less than 1 000 mature individuals. Not threatened.

Plate 61



A.L. Schutte-Vlok

Otholobium saxosum EN



N.A. Helme

Amphithalea ericifolia subsp. *erecta* CR



J.H. Vlok

Amphithalea vlokii EN



C.H. Stirton

Otholobium sp. nov. *'Esterhuysen 33240a'* VU



C.H. Stirton

Otholobium sp nov. *'Stirton & Zantovska 11281'* VU



N.A. Helme

Otholobium pungens EN



C.H. Stirton

Otholobium swartbergense Rare

Plate 62



A.L. Schutte-Vlok

Aspalathus shawii subsp. *glabripetala* Rare



J.H. Vlok

Aspalathus vulpina VU



N.A. Helme

Aspalathus aculeata EN



C.H. Stirton

Aspalathus araneosa VU



C. Burgers

Aspalathus acanthophylla VU



N.A. Helme

Aspalathus grobleri EN



C.H. Stirton

Aspalathus capitata VU



C. Burgers

Aspalathus potbergensis VU



C. Burgers

Aspalathus zeyheri VU



N.A. Helme

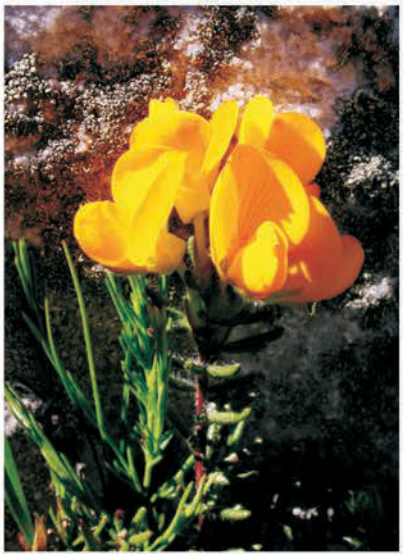
Aspalathus tulbaghensis CR

Plate 63



N.A. Helme

Stirtonanthus insignis NT



A.L. Schutte-Vlok

Cyclopia bolusii VU



W. Berrington

Cyclopia pubescens CR



A.L. Schutte-Vlok

Stirtonanthus taylorianus VU



D. Raimondo

Cyclopia longifolia CR



A.L. Schutte-Vlok

Cyclopia plicata EN



N.A. Helme

Stirtonanthus insignis (habitat) NT



A.L. Schutte-Vlok

Cyclopia burtonii VU

Plate 64



A.L. Schutte-Vlok

Liparia racemosa Rare



A.L. Schutte-Vlok

Liparia confusa Rare



N.A. Helme

Liparia bonaespei EN



D. Raimondo

Liparia striata EN



D. Raimondo

Liparia striata (pods) EN



D. Raimondo

Xiphotheca guthriei EN



N.A. Helme

Liparia laevigata VU



D. Raimondo

Xiphotheca lanceolata EN

Plate 65



D. Raimondo

Polhillia canescens VU



C. Kloppers

Polhillia brevicalyx CR



N.A. Helme

Polhillia connata CR



C. Burgers

Polhillia obsoleta (habit) EN



C. Burgers

Polhillia obsoleta EN



I. Ebrahim

Polhillia pallens VU

Plate 66


A.L. Schutte-Vlok

Psoralea trullata Rare


N.A. Helme

Psoralea implexa EN


C.H. Stirton

Psoralea repens NT


J.H. Vlok

Psoralea sp. nov. *'Stirton & Zantovska 11568'* Rare


A.T.D. Abbott

Tephrosia bachmannii VU


C.H. Stirton

Psoralea sp. nov. *'Muir 1850'* EN


J.H. Vlok

Psoralea sp. nov. *'Stirton & Zantovska 11582'* EN


A.T.D. Abbott

Tephrosia pondoensis EN


C.H. Stirton

Psoralea peratica EN

F **Caesalpinia rostrata** N.E.Br.

Status: **VU** A2c; B1ab(ii,iii,iv,v)

J.E. Burrows, M. Lötter & D. Raimondo

Distribution: MP. Mpumalanga lowveld, possibly also occurs in Mozambique.

Habitat: Bushveld, often along river valleys and drainage lines.

Rationale: A population reduction of at least 40% is estimated based on habitat loss to sugarcane cultivation over the past 60 years (three generations) and habitat loss is continuing. EOO 700 km^2, AOO < 700 km^2. Fewer than 10 locations remain. The only collection from Mozambique is very old and possibly refers to an area within South Africa.

Calpurnia E.Mey.

Calpurnia reflexa A.J.Beaumont

Status: **Rare**

D.A. Kamundi† & J.E. Victor

Distribution: EC FS. Mountains of the northern parts of Eastern Cape, through Lesotho to eastern parts of the Free State.

Habitat: Ravines above 1 800 m.

Rationale: A high-altitude habitat specialist that occurs as scattered subpopulations. Known from fewer than 10 sites where it is not threatened.

Calpurnia woodii Schinz

Status: **VU** D2

J.E. Victor & C.R. Scott-Shaw

e**Distribution:** KZN. Bushmans River Valley near Estcourt.

Habitat: Grassland and grassland-woodland transitions on steep, dry, southeast-facing slopes with loose shale soils, 1 500 m.

Rationale: A highly range-restricted species (EOO ± 20 km^2), known from two locations, one inside a nature reserve. Individuals outside the reserve are potentially threatened by severe overgrazing, resulting in erosion and too frequent fires.

Crotalaria L.

Crotalaria lebeckioides Bond

Status: **Rare**

D. Raimondo & R.C. Turner

e**Distribution:** WC. Ladismith to Barrydale.

Habitat: Stony slopes, karroid scrub, 500–600 m.

Rationale: A rare, range-restricted species (EOO 684 km^2), occurring in small subpopulations or as scattered individuals, but not threatened.

Crotalaria monophylla Germish.

Status: **VU** D2

M. Lötter, J.E. Burrows & L. von Staden

e**Distribution:** MP. Steenkampsberg.

Habitat: Quartzite.

Rationale: One known location is potentially threatened by invading alien plants and infrastructure development.

Crotalaria pearsonii Baker f.

Status: **Rare**

L. Potter

e**Distribution:** NC. Richtersveld.

Habitat: Ravines and cliffs.

Rationale: A habitat specialist known from five sites. Not threatened.

Cullen Medik.

Cullen holubii (Burtt Davy) C.H.Stirt.

Status: **VU** B1ab(iii)

L. von Staden

e**Distribution:** LM. Between the Pienaars River, Bela-Bela and Nylsvley.

Habitat: Springbokvlakte Thornveld.

Rationale: EOO 1 200–1 480 km^2. Five locations are known, but they are all from roadsides and there are likely to be up to 10 locations in total, as its vegetation type is quite widespread. About 60% of the habitat has been transformed in the past, mainly for agriculture, but the generation length of this species is unknown and therefore it cannot be listed under Criterion A. There is ongoing habitat loss because of expanding rural settlements, overgrazing and invasion by alien plants.

Cyclopia Vent.

F **Cyclopia alopecuroides** A.L.Schutte

Status: **EN** B1ab(v)

J.H. Vlok & D. Raimondo

e**Distribution:** WC. Groot Swartberg and Kammanassie Mountains.

Habitat: Subalpine montane fynbos occurring on shale bands, 1 500–2 000 m.

Rationale: EOO 520 km^2. Four locations are known. Plants on the Kammanassie Mountains are reseeders, while those on the Groot Swartberg resprout after fire. Harvesting for honey bush tea is causing a continuing decline to the reseeding individuals, which, unlike the resprouting subpopulations, are unable to cope with harvesting pressure.

F **Cyclopia bolusii** Hofmeyr & E.Phillips **Plate 63**

Status: **VU** D1

D. Raimondo & A.L. Schutte-Vlok

e**Distribution:** WC. Groot Swartberg.

Habitat: Subalpine fynbos.

Rationale: Subpopulations are small, consisting of fewer than 10 mature individuals and are restricted to a small area (EOO 710 km^2). The total population is estimated to be less than 1 000 mature individuals.

Cyclopia burtonii Hofmeyr & E.Phillips **Plate 63**

Status: **VU** D1+2

A.L. Schutte-Vlok & F. Daniels

e**Distribution:** WC. Groot Swartberg Mountains.

Habitat: Rocky, sandy soil on crests and upper mountain slopes, 1 600–2 070 m.

Rationale: A rare, range-restricted endemic (EOO 350 km^2). The population is estimated to have less than 1 000 mature individuals. Potentially threatened by harvesting for tea at fewer than five known locations.

Cyclopia filiformis Kies

Status: **EX**

J.E. Victor & A.P. Dold

e**Distribution:** EC. Van Stadens River.

Habitat: Coastal fynbos on riverbanks, 100 m.

Rationale: Not recorded since the type collection was made in 1897. Repeated searches in the area have failed to relocate it. Afforestation and invasion by alien plants have possibly led to extinction of this species.

Cyclopia latifolia DC.

Status: **CR** D

A.L. Schutte-Vlok, N.A. Helme & F. Daniels

eDistribution: WC. Cape Peninsula, Constantiaberg and Table Mountain.

Habitat: Marshy, rocky, sandstone seeps, 900–1 000 m.

Rationale: Only 23 plants are known. The population is potentially threatened by poor fire management.

Cyclopia laxiflora Benth.

Status: **EX**

A.L. Schutte-Vlok & F. Daniels

eDistribution: WC. Knysna and Plettenberg Bay.

Habitat: Sandy flats.

Rationale: Known from two specimens collected in the 1800s. Habitat loss to coastal development and commercial forestry plantations probably caused its extinction.

Cyclopia longifolia Vogel **Plate 63**

Status: **CR** B1ab(iii)+2ab(iii); C2a(i)

W. Berrington, D. Raimondo, J.E. Victor, A.L. Schutte-Vlok & A.P. Dold

eDistribution: EC. Van Stadens Mountains.

Habitat: Moist, sandy soil along riverbanks, 300–600 m.

Rationale: EOO < 100 km², AOO < 10 km². Three small, severely fragmented subpopulations remain after much of the habitat has been transformed to forestry plantations. Each subpopulation consists of between 30 and 40 mature individuals, with the total population being no more than 150 mature individuals. Declining as a result of alien plants that invade the habitat and a deleterious fire regime.

F **Cyclopia maculata** (Andrews) Kies

Status: **NT** B1ab(iii,v)

J.H. Vlok & D. Raimondo

eDistribution: WC. Bain's Kloof to Riversdale.

Habitat: Streamsides in lowland fynbos.

Rationale: EOO 4 300 km². The 15 known locations are declining as a result of water abstraction and invading alien acacias, as it occurs in a habitat that is particularly prone to dense invasions. This species is also harvested for the honey bush tea industry.

Cyclopia plicata Kies **Plate 63**

Status: **EN** B1ab(iii,v)

J.H. Vlok & D. Raimondo

eDistribution: WC. Kammanassie and Kouga Mountains.

Habitat: Montane fynbos on shale bands in loamy rocky soil, 1 000–1 700 m.

Rationale: EOO 760 km². Two known locations are declining because of harvesting for honey bush tea and an altered fire regime.

Cyclopia pubescens Eckl. & Zeyh. **Plate 63**

Status: **CR** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

D. Raimondo, A.P. Dold & W. Berrington

eDistribution: EC. Port Elizabeth.

Habitat: Lowland fynbos in marshy drainage lines, 300 m.

Rationale: EOO 24 km², AOO < 5 km². Seven small, severely fragmented subpopulations remain after > 80% of the habitat has been transformed by urban expansion, agriculture and invasion by alien plants. These threats, as well as damage by vlei rats and mowing by landowners, are causing a continuing decline.

Cyclopia squamosa A.L.Schutte

Status: **CR** D

N.A. Helme

eDistribution: WC. Wemmershoek Peak.

Habitat: Deep, peaty soils on upper, south-facing sandstone slopes.

Rationale: This species occurs at extremely low densities. Only three plants occurring at a single site are currently known, and they are vulnerable to too frequent fires.

Eriosema (DC.) G.Don

F **Eriosema fasciculatum** Schinz

Status: **DD**D

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

eDistribution: LM. Northeastern Drakensberg Escarpment, Shiluvane mission.

Habitat: Unknown.

Rationale: This species is known only from the type collection, from an area that is partly severely disturbed, but intact natural vegetation remains. The species may be threatened, but as its exact location is not known, no assessment of its threat status can be made.

Eriosema latifolium (Benth. ex Harv.) C.H.Stirt.

Status: **VU** D2

C.R. Scott-Shaw & D. Raimondo

eDistribution: EC KZN. Izingloweni to Lusikisiki.

Habitat: Pondoland coastal grassland.

Rationale: A range-restricted Pondoland endemic, known from four herbarium collections and last collected in 1979. We suspect it may be vulnerable to the ongoing degradation of its habitat by grazing livestock. It is also potentially threatened by the proposed N2 highway to be built through the middle of its range, which may also result in further habitat loss to expansion of human settlements along the new road.

Eriosema naviculare C.H.Stirt.

Status: **EN** B1ab(iii)+2ab(iii)

M. Lötter, J.E. Burrows & L. von Staden

eDistribution: MP. Between Hazyview and Numbi Gate, Kruger National Park.

Habitat: Bushveld and grassland.

Rationale: EOO 22 km², AOO < 22 km². Fewer than five locations are known. Habitat at locations outside the Kruger National Park is declining because of urban and agricultural expansion.

F **Eriosema populifolium** Benth. ex Harv. subsp. **populifolium**

Status: **EN** A2c; B1ab(ii,iii,iv)

L. von Staden & D. Raimondo

eDistribution: KZN. Southern KwaZulu-Natal, from Umlaas Road to Hlokozi-Highflats.

Habitat: Moist grassland, restricted to areas of deep black soils, 400–1 100 m.

Rationale: A population reduction of at least 50% is estimated based on 54% habitat loss to sugarcane cultivation and forestry plantations over the last 80 years (generation length 30–50 years). EOO 1 600–3 000 km². Many subpopulations now locally extinct in the southern parts of the range. Remaining severely fragmented subpopulations are now isolated because of the fragmentation of the habitat and they continue to decline as a result of poor recruitment in small subpopulations.

Eriosema umtamvunense C.H.Stirt.

Status: **VU** A2c

L. von Staden

[e]**Distribution:** EC KZN. The plateau above the Umtamvuna River gorge.

Habitat: Pondoland coastal grasslands, Msikaba Formation Sandstone, 50–600 m.

Rationale: At least a 30% reduction in the population within the last three generations of this long-lived, suffrutescent grassland forb, based on a 37% habitat loss within the range of this locally common, but highly range-restricted species (generation length estimated to be > 50 years, EOO 75 km^2). There is ongoing loss of habitat, mainly because of coastal development, but a large area of the range is protected within the Umtamvuna Nature Reserve.

Erythrophleum Afzel. ex G.Don

[F] **Erythrophleum lasianthum** Corbishley

Status: **NT**[*] A2cd; B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya

Distribution: KZN. False Bay to Maputaland in KwaZulu-Natal, also occurs in Swaziland and Mozambique.

Habitat: Sand forest.

Rationale: An observed population reduction of > 30% occurred over the last three generations (120 years) because of bark harvesting for the medicinal plant trade and habitat loss outside protected areas. South African EOO 11 600 km^2, AOO < 2 000 km^2. Subpopulations are severely fragmented and there is continuing decline of forest habitat as a result of deforestation, subsistence crop cultivation and bark harvesting. The national assessment is downgraded by one category because of the South African population being continuous with the rest of the global population in Swaziland and Mozambique.

Indigofera L.

[F] **Indigofera amitina** N.E.Br.

Status: **Rare**

J.E. Burrows, M. Lötter & L. von Staden

Distribution: MP. Between Barberton, Waterval Boven and Amsterdam. Also occurs in northeastern Swaziland.

Habitat: Riparian habitats in grassland and bushveld.

Rationale: A habitat specialist, known from only six collections, but it is not threatened.

Indigofera hantamensis Diels

Status: **Rare**

D. Raimondo

[e]**Distribution:** NC. Roggeveld to Calvinia.

Habitat: Scree slopes.

Rationale: A rare species, known from only three subpopulations scattered over a large area. Not threatened.

Indigofera hispida Eckl. & Zeyh.

Status: **VU** B1ab(iii)

D. Raimondo

[e]**Distribution:** EC WC. Uniondale to Port Elizabeth.

Habitat: Montane fynbos, 100–1 000 m.

Rationale: EOO < 12 600 km^2. Most of the seven known locations are declining because of invasion by alien plants.

[F] **Indigofera hybrida** N.E.Br.

Status: **VU** D2

J.E. Burrows, M. Lötter & L. von Staden

Distribution: MP. Ermelo to Wakkerstroom.

Habitat: Dry highveld grassland.

Rationale: Known from three locations. Some habitat has been transformed to forestry plantations and agriculture and further habitat loss remains a potential threat.

Indigofera limosa L.Bolus

Status: **DD**

L. Potter

[e]**Distribution:** NC. Namaqualand, Kamiesberg.

Habitat: Seasonally moist, grassy areas.

Rationale: Known only from the type collection, made in 1911 at an unspecified locality. This species is too poorly known to assess.

Indigofera platypoda E.Mey.

Status: **EN** B1ab(ii,iii)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Saldanha Bay.

Habitat: Occurs on transition between acid and neutral sands in fynbos.

Rationale: EOO 300 km^2, AOO < 300 km^2. Habitat at three known locations is declining as a result of coastal development and overgrazing.

Indigofera pseudoevansii Hilliard & B.L.Burtt

Status: **Critically Rare**

C.R. Scott-Shaw & J.E. Victor

[e]**Distribution:** KZN. Upper Loteni Valley, Impendle.

Habitat: Montane grassland, 2 000 m.

Rationale: Known only from the type collection. Not threatened.

[F] **Indigofera psoraloides** (L.) L.

Status: **VU** A2c; B1ab(i,ii,iii,iv,v)

D. Raimondo, N.A. Helme & R. Koopman

[e]**Distribution:** WC. Citrusdal to the Cape Peninsula.

Habitat: Lowland fynbos on heavy clay soils.

Rationale: A population reduction of at least 30% is estimated based on habitat loss to crop cultivation over the past 80 years (generation length 50 years).
EOO 9 900 km^2. Eight locations are known, but it is now locally extinct at three on the Cape Peninsula because of urban development. Alien invasive plants and urban expansion around Gordon's Bay are causing a continuing decline.

Indigofera superba C.H.Stirt.

Status: **Rare**

L. Potter

[e]**Distribution:** WC. Kleinrivier Mountains.

Habitat: Montane fynbos, lower slopes, 100–400 m.

Rationale: A range-restricted species (EOO < 100 km^2). Two known subpopulations are protected in reserves.

Indigofera thesioides Jarvie & C.H.Stirt.

Status: **EN** D

D. Raimondo & J.H. Vlok

[e]**Distribution:** WC. Groot Swartberg, Meiringspoort.

Habitat: Arid fynbos, karroid scrub, 700 m.

Rationale: A naturally rare, range-restricted species (EOO < 1 km^2) with a population of less than 250 mature individuals.

Indigofera triquetra E.Mey.

Status: **VU** B1ab(ii,iii)

D. Raimondo & L. Potter

[e]**Distribution:** WC. Between Piketberg, Malmesbury and Tulbagh.

Habitat: Renosterveld-fynbos scrub, 200–400 m.

Rationale: EOO < 5 600 km^2. Habitat at 5–10 locations continues to decline as a result of expanding wheat, vineyard, rooibos tea and olive cultivation.

Lebeckia Thunb.

Lebeckia bowieana Benth.

Status: **CR** A2bc; C2a(i); D

A.L. Schutte-Vlok & D. Raimondo

[e]**Distribution:** WC. Bredasdorp to Heidelberg.

Habitat: Renosterveld in rocky shale outcrops.

Rationale: A population reduction of > 80% is estimated based on habitat loss to wheat cultivation over the past 80 years (generation length at least 50 years). Less than 50 mature individuals remain in two small subpopulations. The population is declining as a result of habitat degradation caused by grazing livestock.

[F] **Lebeckia brevicarpa** M.M.le Roux & B.-E.van Wyk

Status: **NT** B1ab(ii,iii)

D. Raimondo & M. le Roux

[e]**Distribution:** NC WC. Bokkeveld and Cederberg Mountains.

Habitat: Deep, sandy soils on sandstone slopes above 400 m.

Rationale: EOO 2 500 km^2. Declining at most of the 15 known locations owing to habitat loss to expanding cultivation of rooibos tea.

[F] **Lebeckia fasciculata** Benth.

Status: **CR** B1ab(iii)+2ab(iii); D

J.H. Vlok, D.A. Kamundi† & D. Raimondo

[e]**Distribution:** WC. Herbertsdale.

Habitat: Transition between thicket and renosterveld on shales.

Rationale: EOO < 5 km^2. Two small, severely fragmented subpopulations consisting of only 13 plants in total are declining because of the effects of habitat fragmentation, including a lack of fire.

[F] **Lebeckia gracilis** Eckl. & Zeyh.

Status: **EN** A2bc; B1ab(ii,iii,iv,v)

D. Raimondo & M. le Roux

[e]**Distribution:** EC WC. Port Elizabeth to Bredasdorp.

Habitat: Coastal fynbos in deep, sandy soil below 300 m.

Rationale: A population reduction of at least 70% is estimated based on habitat loss to agriculture, forestry plantations, invasion by alien plants and coastal development over the past 120 years (generation length 50–80 years), resulting in local extinctions at 73% of known locations. Only 2–5 locations within an EOO of 4 000 km^2 are likely to remain and they continue to decline because of ongoing habitat loss.

[F] **Lebeckia grandiflora** Benth.

Status: **Rare**

D. Raimondo, M. le Roux & D.A. Kamundi†

[e]**Distribution:** WC. Kogelberg.

Habitat: Sandstone slopes.

Rationale: A rare, range-restricted species (EOO < 200 km^2), known from only three collections and not recently recorded despite searches. It may be an inconspicuous species that appears for only 3–5 years after fire, but it is unlikely to be threatened.

[F] **Lebeckia lotonoides** Schltr.

Status: **NT** B1ab(iii)

N.A. Helme, S. Boatwright & D. Raimondo

[e]**Distribution:** NC WC. Hondeklip Bay to Brand-se-baai.

Habitat: Well drained sandy soils, often moving sand dunes.

Rationale: EOO 5 050 km^2. Altogether 11 locations are known, but there are likely to be many more as this species is extremely common in the area north of the mouth of the Olifants River. Only ± 5% of the habitat is currently transformed by heavy-mineral sand mining, but decline is continuing.

[F] **Lebeckia melilotoides** R.Dahlgren

Status: **VU** D1+2

D. Raimondo & J.H. Vlok

[e]**Distribution:** WC. Southern Tanqua Karoo between Ceres and Touwsrivier.

Habitat: Sandy soils in the Tanqua Karoo.

Rationale: The population consists of less than 1 000 individuals, occurring at three known locations. Potentially threatened by overgrazing and infrastructure expansion of an army base outside the town of Touwsrivier.

[F] **Lebeckia meyeriana** Eckl. & Zeyh.

Status: **EN** A2b

M. le Roux, N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Cape Peninsula.

Habitat: Lower mountain slopes, 80–600 m.

Rationale: A Cape Peninsula endemic (EOO < 570 km^2). The urban development of Cape Town has resulted in the loss of 22 of the 36 known locations (61%) over the past 120 years. As this is a long-lived resprouter (generation length 50–80 years), loss has taken place over less than three generations.

[F] **Lebeckia plukenetiana** E.Mey.

Status: **EN** A2bc

D. Raimondo & M. le Roux

[e]**Distribution:** WC. Darling and Worcester to the Cape Peninsula.

Habitat: Renosterveld on shales and granites.

Rationale: Once common in the Swartland and upper Breede River Valley, 19 of 24 locations known through herbarium collections and ± 75% of the habitat of this species have been lost to urban expansion and wheat, vineyard and deciduous fruit cultivation over the past 150 years. It is a resprouter and we suspect it has a generation length of 50–80 years.

[F] **Lebeckia uniflora** B.-E.van Wyk & M.M.le Roux

Status: **Rare**

D. Raimondo & M. le Roux

[e]**Distribution:** WC. Kogelberg and Palmiet River Mountains near Caledon.

Habitat: Montane fynbos, 500–1 250 m.

Rationale: A range-restricted species (EOO < 95 km^2) that appears only after fire. Protected in the Kogelberg Biosphere Reserve.

[F] **Lebeckia zeyheri** M.M.le Roux & B.-E.van Wyk

Status: **CR** PE

D. Raimondo & M. le Roux

[e]**Distribution:** WC. Swartland, Klipfontein.

Habitat: Renosterveld on shale soils.

Rationale: Known only from the type, collected more than 100 years ago. The farm and surrounding areas are now extensively transformed for wheat cultivation and searches of small habitat fragments failed to locate any surviving individuals. It is quite likely to be extinct.

Lessertia DC.

Lessertia dykei L.Bolus

Status: **DD**D

J.E. Victor & C.R. Scott-Shaw

[e]**Distribution:** KZN. Mont-aux-Sources.

Habitat: Subalpine grassland and Drakensberg alpine tundra, 2 400–3 300 m.

Rationale: Known only from the 1926 type collection.

[F] **Lessertia lanata** Harv.

Status: **EN** B1ab(ii,iii,iv,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Swartberg Mountains.

Habitat: Stony, lower slopes in mesic renosterveld.

Rationale: EOO 31 km^2. Two known locations are declining as a result of grazing by livestock, agriculture and road construction.

Liparia L.

Liparia angustifolia (Eckl. & Zeyh.) A.L.Schutte

Status: **EN** B1ab(ii,iii,iv,v)

A.L. Schutte-Vlok & D. Raimondo

[e]**Distribution:** WC. Hottentots Holland Mountains to Palmiet River.

Habitat: Restricted to marshy areas below 130 m.

Rationale: EOO < 2 600 km^2. Five known locations are declining as a result of invasion by alien plants and urban and coastal development. Owing to its wetland habitat, it is also potentially threatened by extraction of groundwater.

Liparia bonaespei A.L.Schutte **Plate 64**

Status: **EN** D

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Hottentots Holland Mountains.

Habitat: Fynbos, occurs at altitudes above 1 400 m on north-facing slopes.

Rationale: A rare, high-altitude habitat specialist, EOO < 60 km^2. Recent observations indicated that subpopulations are small, consisting of fewer than 10 mature individuals, and the total population is likely to be less than 250 mature individuals.

Liparia boucheri (E.G.H.Oliv. & Fellingham) A.L.Schutte

Status: **EN** D

A.L. Schutte-Vlok, M. Johns & D. Raimondo

[e]**Distribution:** WC. Kogelberg.

Habitat: Fynbos, in rocky, shallow sandstone, 1 120–1 330 m.

Rationale: A range-restricted species (EOO < 10 km^2), known from only one site where less than 100 plants occur.

Liparia calycina (L.Bolus) A.L.Schutte

Status: **Rare**

A.L. Schutte-Vlok & D. Raimondo

[e]**Distribution:** WC. Hottentots Holland and Kleinrivier Mountains.

Habitat: Rocky, shady places along streamsides, 460–1 000 m.

Rationale: A habitat specialist occurring mostly within nature reserves. Not threatened.

[F] **Liparia capitata** Thunb.

Status: **Rare**

D. Raimondo

[e]**Distribution:** WC. Hex River to Riviersonderend Mountains, Klein Swartberg and Kouga Mountains.

Habitat: Mountain slopes on shale or granite bands.

Rationale: A habitat specialist, known from seven subpopulations. No recorded threats.

[F] **Liparia confusa** A.L.Schutte **Plate 64**

Status: **Rare**

A.L. Schutte-Vlok & D. Raimondo

[e]**Distribution:** WC. Swartberg Mountains.

Habitat: Subalpine fynbos in deep, humic sandy-loamy soils, above 1 500 m.

Rationale: A range-restricted (EOO < 350 km^2) habitat specialist. Not threatened.

Liparia congesta A.L.Schutte

Status: **VU** B1ab(iii,v)

A.L. Schutte-Vlok & D. Raimondo

[e]**Distribution:** WC. Cederberg to Swartruggens Mountains and Katbakkies Pass.

Habitat: Arid fynbos amongst boulders in deep sandy soils, 1 600–1 800 m.

Rationale: A slow-growing reseeder occurring at only six known locations within an EOO of < 5 000 km^2. It is declining because of too frequent fires in the Wuppertal and Clanwilliam areas.

Liparia genistoides (Lam.) A.L.Schutte

Status: **EN** B1ab(iii)

A.L. Schutte-Vlok & D. Raimondo

[e]**Distribution:** WC. Kammanassie and Kouga Mountains.

Habitat: Banks of perennial streams, 1 300–1 660 m.

Rationale: EOO < 1 000 km^2. Habitat quality at two known locations is declining because of extraction of water.

Liparia graminifolia L.

Status: **EX**

F. Daniels

[e]**Distribution:** WC. Cape Flats.

Habitat: Acid lowland sands.

Rationale: Last collected in 1829 at 'Doornhoogte' (present-day Mowbray) on the Cape Flats. It is extinct as a result of urban development.

Liparia laevigata (L.) Thunb. **Plate 64**

Status: **VU** D1+2

N.A. Helme, A.L. Schutte-Vlok & D. Raimondo

[e]**Distribution:** WC. Cape Peninsula.

Habitat: Marshy places, 740–1 030 m.

Rationale: EOO < 20 km^2. Five known subpopulations are all small, consisting of less than 70 plants and there are not likely to be more than 1 000 individuals in the population. Potentially threatened by invading alien plants and too frequent fires.

Liparia parva Vogel ex Walp.

Status: **VU** D1+2

A.L. Schutte-Vlok & D. Raimondo

[e]**Distribution:** WC. Southern Cape Peninsula.

Habitat: Fynbos, in rocky places below 300 m.

Rationale: AOO 20 km^2. Subpopulations are small and scattered, and the population is probably less than 1 000 mature individuals. Potentially threatened by urban development, invasion by alien plants and too frequent fires.

Liparia racemosa A.L.Schutte **Plate 64**

Status: **Rare**

A.L. Schutte-Vlok & J.E. Victor

[e]**Distribution:** WC. Swartberg Mountains.

Habitat: Sandy soils along streamsides, 1 600 m.

Rationale: A habitat specialist known from only five sites that are protected in reserves.

Liparia rafnioides A.L.Schutte

Status: **VU** D2

A.L. Schutte-Vlok, M. Johns & D. Raimondo

[e]**Distribution:** WC. Hottentots Holland and Groot Drakenstein Mountains.

Habitat: Streamsides, 500–1 600 m.

Rationale: Two known locations are potentially threatened by invading alien plants and extraction of groundwater.

Liparia splendens (Burm.f.) Bos & de Wit subsp. **splendens**

Status: **VU** D2

A.L. Schutte-Vlok & D. Raimondo

[e]**Distribution:** WC. Cape Peninsula and Cape Flats.

Habitat: Fynbos, on rocky slopes.

Rationale: AOO < 20 km^2. Potentially threatened by invading alien plants and too frequent fires.

Liparia striata A.L.Schutte **Plate 64**

Status: **EN** A2c; B1ab(iii,v)+2ab(iii,v)

A.L. Schutte-Vlok & D. Raimondo

[e]**Distribution:** WC. Southern Overberg between Heidelberg and Swellendam.

Habitat: Clay loam soil on silcrete above 200 m.

Rationale: A population reduction of at least 50% is estimated based on habitat loss to wheat cultivation between 1940 and 1960. Generation length is > 50 years. EOO and AOO < 400 km^2. Four remaining locations are declining as a result of grazing by livestock and alien plants that invade the habitat.

Lotononis (DC.) Eckl. & Zeyh.

Lotononis acocksii B.-E.van Wyk

Status: **EN** B1ab(iii,v)

J.H. Vlok, A.L. Schutte-Vlok & D. Raimondo

[e]**Distribution:** WC. Rooiberg and Swartberg Mountains.

Habitat: Renosterveld-fynbos scrub.

Rationale: EOO < 2 800 km^2. Three known locations remain after most of the habitat has been transformed by wheat cultivation. Subpopulations on fragments are declining because of heavy grazing and too infrequent fires. This species requires fire to recruit.

Lotononis acuminata Eckl. & Zeyh.

Status: **VU** B1ab(ii,iii,iv,v)

D. Raimondo

[e]**Distribution:** EC. Humansdorp to Port Elizabeth.

Habitat: Disturbed renosterveld and grassy fynbos.

Rationale: EOO 2 100 km^2. Fewer than 10 locations remain after habitat was lost to urban expansion of Humansdorp and Port Elizabeth. Declining as a result of continued habitat loss to agriculture, and grazing and harvesting for medicinal purposes.

Lotononis acutiflora Benth.

Status: **CR** B1ab(ii,iii,v)+2ab(ii,iii,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** NC. Kamiesberg, between Groot Tuin and Leliefontein.

Habitat: Renosterveld flats on granite loams.

Rationale: EOO < 50 km^2, AOO < 2 km^2. Habitat quality at one known location is declining because of grazing by sheep, cattle and wild donkeys that roam the area in large herds. In addition it has lost 50% of its habitat to crop cultivation over the past 70 years, but generation length is unknown.

[F] **Lotononis amajubica** (Burtt Davy) B.-E.van Wyk

Status: **Rare**

M. Lötter, J.E. Burrows & L. von Staden

[e]**Distribution:** FS KZN MP. High mountain peaks of southern Mpumalanga, northwestern KwaZulu-Natal and eastern Free State.

Habitat: Well-drained, high-altitude grassland, 1 600–1 800 m.

Rationale: A habitat specialist that can be very common locally.

Lotononis anthyllopsis B.-E.van Wyk

Status: **Rare**

D. Raimondo & L. Potter

[e]**Distribution:** NC. Namaqualand, Steinkopf region.

Habitat: Arid succulent karoo shrubland.

Rationale: Known range is small (EOO 300 km^2), but it is not likely to be threatened.

Lotononis arenicola Schltr.

Status: **Rare**

D. Raimondo

[e]**Distribution:** NC. Namaqualand, Steinkopf.

Habitat: Arid succulent karoo shrubland.

Rationale: A range-restricted species (EOO < 200 km^2) that is not threatened.

Lotononis argentea Eckl. & Zeyh.

Status: **VU** D2

D. Raimondo & A.L. Schutte-Vlok

[e]**Distribution:** WC. Barrydale to Waboomsberg.

Habitat: Karroid scrub, on southwest-facing slopes of koppies, 300–1 000 m.

Rationale: Four known locations are potentially threatened by grazing livestock.

Lotononis azureoides B.-E.van Wyk

Status: **Rare**

D. Raimondo

[e]**Distribution:** WC. Nuweveld Mountains.

Habitat: Steep, rocky sandstone slopes at 1 600 m.

Rationale: A range-restricted species (EOO < 500 km^2), known from two collections. No significant threats.

[F] **Lotononis bachmanniana** Dummer

Status: **NT** A4c; B1ab(iii)+2ab(iii)

L. von Staden

[e]**Distribution:** EC KZN. Umtamvuna to Ntsubane.

Habitat: Damp sites in Pondoland coastal grassland.
Rationale: This range-restricted, but locally common species (EOO 900 km^2) appears to persist in spite of heavy grazing over most of its range, and more than 10 locations remain. More than 20% of its habitat, however, has been irreversibly transformed, mainly for cultivation and forestry plantations, over the past 100 years, which is less than three generations for this long-lived, suffrutescent grassland forb (generation length at least 50 years). Ongoing habitat loss to coastal development, especially in the northern parts of the range, may bring the total population reduction to 30% within the next 50 years.

[F] **Lotononis bolusii** Dummer

Status: **CR** PE
A.L. Schutte-Vlok, D.A. Kamundi† & D. Raimondo
[e]**Distribution:** WC. Olifants River Valley to Hopefield.
Habitat: Lowland fynbos.
Rationale: Of four herbarium collections, only two have detailed locality descriptions that can be retraced. One site occurs near Aurora and was collected in 1969, but the area has subsequently been ploughed for potato cultivation. The second is Piekenierskloof, where the subpopulation was lost to road construction. The other two were both collected before 1896 and do not have specific locality information. As most lowland fynbos within the range of this species has been converted for crop cultivation, it is possibly extinct.

Lotononis carnea B.-E.van Wyk

Status: **DD**D
D. Raimondo & L. Potter
[e]**Distribution:** NC. Kamiesberg and Nieuwoudtville.
Habitat: Karroid scrub, 800–1 200 m.
Rationale: This species is known only from three herbarium collections, two of which were collected over 70 years ago. It is too poorly known to determine its status, but it may be threatened by expansion of rooibos tea cultivation in the Nieuwoudtville area.

Lotononis carnosa (Eckl. & Zeyh.) Benth. subsp. **condensata** (Harv.) B.-E.van Wyk

Status: **DD**D
J.E. Victor
[e]**Distribution:** EC. Kentani and Kokstad.
Habitat: Unknown.
Rationale: This taxon, which is known only from two collections made over 70 years ago, might be threatened by overgrazing and too frequent fires, but is currently too poorly known to assess.

Lotononis carnosa (Eckl. & Zeyh.) Benth. subsp. **latifolia** B.-E.van Wyk

Status: **DD**D
D. Raimondo
[e]**Distribution:** EC. Engcobo, Keiskammahoek and Alice.
Habitat: Unknown.
Rationale: This taxon has not been collected since the 1940s, and is too poorly known to assess.

Lotononis complanata B.-E.van Wyk

Status: **EN** A2c
A.L. Schutte-Vlok, F. Daniels & D. Raimondo
[e]**Distribution:** WC. Wellington, Elandsberg Nature Reserve.
Habitat: Fynbos-renosterveld ecotone in an alluvial fynbos lowland habitat where soils are a mixture of shale and sandstone.
Rationale: A population reduction of > 50% is estimated based on habitat loss to wheat cultivation since 1940 (generation length 30 years) and a single subpopulation of ± 1 000 mature individuals remain, protected in a private nature reserve and not declining.

Lotononis comptonii B.-E.van Wyk

Status: **EN** B1ab(iii,v)+2ab(iii,v)
D. Raimondo, A.L. Schutte-Vlok & J.H. Vlok
[e]**Distribution:** WC. Bantamskop to Seweweekspoort in the Swartberg.
Habitat: Dry fynbos, on shallow, rocky soil.
Rationale: EOO and AOO < 500 km^2. One of four known locations was lost to road construction over the last 10 years; the others are declining as a result of overgrazing by livestock.

Lotononis dahlgrenii B.-E.van Wyk

Status: **VU** D2
J.H. Vlok & D. Raimondo
[e]**Distribution:** WC. Little Karoo, Rooiberg.
Habitat: Arid, rocky mountain summits.
Rationale: EOO and AOO < 20 km^2. One known location is potentially threatened by grazing livestock.

Lotononis densa (Thunb.) Harv. subsp. **congesta** B.-E.van Wyk

Status: **VU** D2
D. Raimondo & N.A. Helme
[e]**Distribution:** WC. Piketberg, Porterville and Moorreesburg.
Habitat: Renosterveld on south-facing slopes.
Rationale: Three known locations are potentially threatened by expansion of wheat, olives and vineyards.

Lotononis densa (Thunb.) Harv. subsp. **densa**

Status: **VU** D2
D. Raimondo
[e]**Distribution:** WC. Moorreesburg to Paarl.
Habitat: Shale soils in renosterveld, 200 m.
Rationale: Three known locations are potentially threatened by expansion of wheat cultivation. More than 80% of the habitat of this taxon has already been transformed, but generation length is not known.

Lotononis dichiloides Sond.

Status: **CR** PE
L. von Staden & D. Raimondo
[e]**Distribution:** KZN. Durban.
Habitat: Grassland.
Rationale: This species was last collected in the 1930s. Its habitat is > 90% transformed because of urban expansion, agriculture and is degraded as a result of overgrazing and too frequent fires. It is likely to be extinct.

Lotononis difformis B.-E.van Wyk

Status: **VU** D2
M. Lötter & L. Potter
[e]**Distribution:** MP. Piet Retief.
Habitat: Grassland.
Rationale: Known from a single location, where part of the habitat has been transformed to forestry plantations. Expansion of plantations is a potential threat.

[F] **Lotononis elongata** (Thunb.) D.Dietr.

Status: **EN** B1ab(iii)

D. Raimondo, D.A. Kamundi† & J.H. Vlok

[e]**Distribution:** WC. Swartberg and Outeniqua Mountains to the Langkloof.

Habitat: Fynbos on deep loamy soils.

Rationale: EOO 3 500 km^2. Three known locations remain after much of the habitat has been lost to crop cultivation. Subpopulations on the Outeniqua Mountains near Herold are declining as a result of dense alien *Hakea sericea* invasion of the habitat.

Lotononis esterhuyseniana B.-E.van Wyk

Status: **Rare**

D. Raimondo & L. Potter

[e]**Distribution:** WC. Swartruggens, Stompiesvlei.

Habitat: Sandy flats in fynbos at high altitudes, 1 000–1 330 m.

Rationale: A rare, high-altitude habitat specialist with a restricted range (EOO < 100 km^2). Not likely to be declining.

Lotononis exstipulata L.Bolus

Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v)

D. Raimondo & A.L. Schutte-Vlok

[e]**Distribution:** WC. Worcester, Hottentots Kloof and Baviaansberg.

Habitat: Renosterveld, 1 200 m.

Rationale: EOO and AOO < 500 km^2. Four known locations are declining because of grazing by livestock, agricultural expansion and road construction.

[F] **Lotononis filiformis** B.-E.van Wyk

Status: **EN** B1ab(iii)

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Oudtshoorn to Mossel Bay.

Habitat: Renosterveld-fynbos scrub in arid fynbos, 430–530 m.

Rationale: EOO 610 km^2. Three known locations are declining as a result of dense invasions of alien hakea in the habitat.

[F] **Lotononis glabrescens** (Dummer) B.-E.van Wyk

Status: **DD**D

D.A. Kamundi†

[e]**Distribution:** KZN. Nkandla.

Habitat: Unknown.

Rationale: Known from only one collection at an unspecified locality in the Nkandla district.

Lotononis globulosa B.-E.van Wyk

Status: **VU** D2

D. Raimondo & A.L. Schutte-Vlok

[e]**Distribution:** WC. Ceres to Witteberg.

Habitat: Karroid scrub, 1 050 m.

Rationale: Four known locations are potentially threatened by expanding crop cultivation.

Lotononis gracilifolia B.-E.van Wyk

Status: **EN** B1ab(ii,iii,iv)

D. Raimondo & N.A. Helme

[e]**Distribution:** WC. Laingsburg and Worcester.

Habitat: Stony flats.

Rationale: EOO < 1 050 km^2. Fewer than five locations are declining because of ongoing habitat loss to vineyard expansion and urban development around Worcester.

Lotononis harveyi B.-E.van Wyk

Status: **DD**D

J.E. Victor & A.P. Dold

[e]**Distribution:** EC. Winterberg, Hogsback.

Habitat: Unknown.

Rationale: Known from the type collection. The habitat and population status of this species are not known.

Lotononis involucrata (P.J.Bergius) Benth. subsp. **bracteata** B.-E.van Wyk

Status: **VU** D2

D. Raimondo

[e]**Distribution:** WC. Potberg.

Habitat: Sandy soils.

Rationale: One known location (EOO < 10 km^2) is potentially threatened by invading alien plants.

Lotononis involucrata (P.J.Bergius) Benth. subsp. **digitata** B.-E.van Wyk

Status: **VU** D2

D. Raimondo

[e]**Distribution:** WC. Between Worcester and Robertson.

Habitat: Breede Alluvium Renosterveld.

Rationale: Known from one location. Vineyard expansion was a past and is a potential threat.

Lotononis lamprifolia B.-E.van Wyk

Status: **CR** B1ab(iii)

D. Raimondo & J.H. Vlok

[e]**Distribution:** WC. Langeberg Mountains between Muiskraal and Lemoenshoek.

Habitat: Arid fynbos on northern slopes, 300 m.

Rationale: EOO < 20 km^2. Less than 500 mature individuals at a single location are declining because of grazing by livestock and habitat loss to erosion.

Lotononis laticeps B.-E.van Wyk

Status: **Critically Rare**

D. Raimondo

[e]**Distribution:** WC. Stompiesvlei, Swartruggens.

Habitat: Sandy, stony plateau.

Rationale: A rare, high-altitude habitat specialist known only from the type locality, but it is unlikely to be threatened.

Lotononis macrocarpa Eckl. & Zeyh.

Status: **EN** B2ab(ii,iii,iv,v)

D. Raimondo

[e]**Distribution:** WC. Clanwilliam, Vredenburg, Saldanha and Hermon.

Habitat: Renosterveld on seasonally moist/damp clays.

Rationale: More than 50% of known locations are now locally extinct because of crop cultivation. Four remaining locations, with an AOO of < 100 km^2, are declining as a result of urban expansion and invasion by alien plants.

Lotononis magnifica B.-E.van Wyk

Status: **CR** PE

N.A. Helme & D. Raimondo

[e]**Distribution:** NC. Summit of the Kamiesberg.

Habitat: Renosterveld on granite flats.

Rationale: Known from only one location, where it was last collected more than 70 years ago. Subsequently > 50% of the habitat has been converted to crop fields and the remainder is severely overgrazed and eroded. B.-E. van Wyk and N.A. Helme have searched the site but was unable to locate any surviving individuals. The species is quite likely to be extinct.

Lotononis minor Dummer & Jenn.

Status: **Rare**

D. Raimondo

Distribution: EC. Barkly East district, southern Drakensberg Mountains.

Habitat: Grassland on mountain slopes.

Rationale: A rare, range-restricted species known from only two collections.

Lotononis mollis (E.Mey.) Benth.

Status: **VU** D1+2

J.H. Vlok, N.A. Helme & D. Raimondo

[e]**Distribution:** NC WC. Kamiesberg and Nuweveld Mountains.

Habitat: Karroid shrubland.

Rationale: Less than 1 000 mature individuals occur at two known locations. Potentially threatened by grazing livestock.

[F] **Lotononis monophylla** Harv.

Status: **CR** B1ab(iii,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** EC. Van Stadens Mountains.

Habitat: Stony places.

Rationale: Known from one location, adjacent to a plantation, where its habitat is being degraded and numbers of individuals are declining because of a lack of fire.

[F] **Lotononis nutans** B.-E.van Wyk

Status: **VU** D2

D.A. Kamundi† & D. Raimondo

[e]**Distribution:** WC. Touwsberg to Uniondale.

Habitat: Renosterveld, 700 m.

Rationale: Two known locations are potentially threatened by agricultural expansion.

Lotononis oligocephala B.-E.van Wyk

Status: **DD**D

L. Potter

[e]**Distribution:** NC. Springbok.

Habitat: Unknown.

Rationale: Known from the type collection. The distribution, habitat and population status of this species are too poorly known to determine its status.

Lotononis pallens (Eckl. & Zeyh.) Benth.

Status: **DD**D

L. Potter

[e]**Distribution:** WC. Clanwilliam.

Habitat: Sandstone slopes.

Rationale: Known from the type collection from the 1830s. The distribution, habitat and population status of this species are too poorly known to determine its status.

Lotononis pariflora N.E.Br.

Status: **Critically Rare**

D. Raimondo

[e]**Distribution:** LM. Wolkberg Mountains, The Downs.

Habitat: Mistbelt grassland, gentle slopes, 1 900 m.

Rationale: EOO < 30 km^2. Known from a single population protected within a nature reserve.

Lotononis perplexa (E.Mey.) Eckl. & Zeyh.

Status: **DD**D

L. von Staden

[e]**Distribution:** WC. Cape Peninsula.

Habitat: Mountain and lowland fynbos, mostly on granite soils, 100–830 m.

Rationale: This species was often collected before 1970, but has not been recorded for nearly 40 years. There is not enough known about this species and its management needs to determine its status. It may have been affected by altered fire cycles.

Lotononis plicata B.-E.van Wyk

Status: **VU** D2

D. Raimondo

[e]**Distribution:** WC. Vanrhynsdorp to Bitterfontein.

Habitat: Namaqualand Klipkoppe Shrubland.

Rationale: Two known locations are potentially threatened by overgrazing by livestock.

Lotononis polycephala Benth.

Status: **EN** A2ac; B1ab(iii,v)+2ab(iii,v)

N.A. Helme, D. Raimondo & J.E. Victor

[e]**Distribution:** NC. Namaqualand, Kamiesberg.

Habitat: Renosterveld flats with seasonally wet granite loams, 1 000–1 200 m.

Rationale: A range-restricted species (EOO < 600 km^2) that has lost > 50% of its habitat to crop cultivation over the past 60 years (generation length estimated to be 30 years). Ongoing habitat degradation as a result of overgrazing by large herds of feral donkeys and domestic sheep and cattle is causing a continuing decline at four known locations.

[F] **Lotononis prostrata** (L.) Benth.

Status: **NT** A2c

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Tulbagh to Stellenbosch.

Habitat: Shale flats and lower slopes in Swartland Shale Renosterveld and low-lying fynbos, 100–320 m.

Rationale: More than 80% of the habitat has been transformed over the past 100 years and is now highly fragmented by agriculture and urban development. A population reduction of 25% is estimated based on habitat loss over the past 30 years (generation length ± 10 years) and the population is still declining as a result of overgrazing by livestock, lack of fire and invasion by alien plants.

Lotononis purpurescens B.-E.van Wyk

Status: **Rare**

D. Raimondo

[e]**Distribution:** WC. Montagu.

Habitat: Sandstone fynbos, mountain kloofs.

Rationale: A range-restricted species (EOO < 50 km^2) with only two known subpopulations. Occurs in rocky mountainous areas and is not threatened.

Lotononis racemiflora B.-E.van Wyk

Status: **CR** PE

D. Raimondo

[e]**Distribution:** WC. Bokwater west of Clanwilliam.

Habitat: Sandy slopes.

Rationale: Known only from the type locality, where it was collected in 1948. This area has subsequently been extensively transformed for citrus and rooibos tea cultivation and it is therefore possibly extinct.

[F] **Lotononis rigida** (E.Mey.) Benth.

Status: **VU** B1ab(ii,iii,iv,v)
J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Worcester to Oudtshoorn.
Habitat: Renosterveld-fynbos scrub, 330–460 m.
Rationale: EOO < 5 600 km^2. This palatable species is declining at fewer than 10 known locations owing to overgrazing by livestock and habitat loss to urban expansion.

Lotononis trichodes (E.Mey.) B.-E.van Wyk

Status: **VU** D2
J.E. Victor & A.P. Dold

[e]**Distribution:** EC. Katberg.
Habitat: Montane grassland.
Rationale: One known location is potentially threatened by invading alien plants and afforestation.

Lotononis venosa B.-E.van Wyk

Status: **VU** D2
D. Raimondo

[e]**Distribution:** WC. Klein Roggeveld Mountains.
Habitat: Open karroid scrub on sandy clay alluvium.
Rationale: EOO < 100 km^2. Two known locations. Some of the habitat has been transformed for crop cultivation in the past. Further agricultural expansion and overgrazing by livestock are potential threats.

Lotononis viborgioides Benth.

Status: **EN** B1ab(ii,iii,v)
N.A. Helme, D. Raimondo & F. Daniels

[e]**Distribution:** WC. Montagu to Bredasdorp.
Habitat: Shale.
Rationale: EOO < 2 045 km^2. Four known locations remain after large areas of the habitat have been transformed for crop cultivation. Habitat loss is continuing and habitat degradation through overgrazing is also causing a decline.

Lotononis villosa (E.Mey.) Steud.

Status: **VU** D2
D. Raimondo

[e]**Distribution:** WC. Piketberg to Caledon.
Habitat: Coastal renosterveld, 180 m.
Rationale: Five known locations are potentially threatened by expanding crop cultivation.

[F] **Lotononis virgata** B.-E.van Wyk

Status: **Rare**
T.J. Edwards & D. Raimondo

[e]**Distribution:** KZN. Drakensberg Mountains, Giant's Castle to Van Reenen's Pass.
Habitat: Streambanks or on rocky dolerite outcrops.
Rationale: A rare habitat specialist that occurs in small subpopulations of only a few individuals. Most of the habitat is protected.

Macrotyloma (Wight & Arn.) Verdc.

Macrotyloma coddii Verdc.

Status: **VU** D2
C.R. Scott-Shaw & L. Potter

[e]**Distribution:** KZN. Kranskop, Mapumulo and Noodsberg.
Habitat: Stony grassland, 1 000 m.
Rationale: Three known locations are potentially threatened by overgrazing and too frequent fires.

Melolobium Eckl. & Zeyh.

[F] **Melolobium stipulatum** (Thunb.) Harv.

Status: **VU** D2
N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Touwsrivier.
Habitat: Stony clays above 900 m.
Rationale: Three known locations are potentially threatened by urban and vineyard expansion.

[F] **Melolobium subspicatum** Conrath

Status: **VU** D2
J.E. Victor & M.F. Pfab

[e]**Distribution:** G NW. Krugersdorp to Pretoria, possibly occurs as far as Brits.
Habitat: Grassland.
Rationale: Very small pockets of suitable habitat remain within the Gauteng Province (AOO estimated < 20 km^2). Development is currently prohibited on any locations where it occurs, and although most of the habitat has already been lost, there is no continuing decline. Habitat fragmentation, however, has resulted in an altered fire regime (fires occur either too frequently or not at all), which may potentially affect the remaining subpopulations.

Newtonia Baill.

[F] **Newtonia hildebrandtii** (Vatke) Torre var. **hildebrandtii**

Status: **Declining**
J.E. Victor & A. Krige
Distribution: KZN. In South Africa restricted to Maputaland, northern KwaZulu-Natal, but is widespread in southern Africa including Swaziland, Mozambique, Zimbabwe, Tanzania, Zambia and Kenya.
Habitat: Sand forest.
Rationale: This taxon is locally very common, often dominant in its habitat, but it reproduces very slowly and recruitment is very low. Harvesting for firewood in northern KwaZulu-Natal, along with overgrazing of saplings by game within protected areas, is causing a continuing decline, but population reduction is not estimated to exceed 30%.

Otholobium C.H.Stirt.

[F] **Otholobium accrescens** C.H.Stirt.

Status: **NT** A2c
D. Raimondo

[e]**Distribution:** EC. Eastern foothills of the Elandsberg and Groot Winterhoek Mountains.
Habitat: Fynbos, 550–650 m.
Rationale: Two locations are known, but this is an overlooked species that is likely to be more common. A population reduction of 20% is estimated based on habitat loss to forestry plantations over the past 100 years. This is a long-lived resprouter, generation length > 50 years.

Otholobium argenteum (Thunb.) C.H.Stirt.

Status: **DD**D
D. Raimondo & C.H. Stirton

[e]**Distribution:** NC. Namaqualand, Kamiesberg.
Habitat: Karroid scrub.
Rationale: One of the rarest species of *Otholobium*, known only from the type collection, and not recorded for more than 100 years. C.H. Stirton (*Otholobium* expert) searched for this species on three visits to the site, but failed to locate it.

Otholobium bolusii (H.M.L.Forbes) C.H.Stirt.
Status: **NT** B1ab(ii,iii,iv,v)
D. Raimondo
e**Distribution:** WC. Cederberg to Paarl.
Habitat: Mesic montane fynbos and West Coast renosterveld.
Rationale: EOO < 10 000 km². About 20 locations are known. Some habitat has been transformed for wheat cultivation and remaining subpopulations are declining as a result of grazing by livestock and continued expansion of crop cultivation.

Otholobium bowieanum (Harv.) C.H.Stirt.
Status: **EN** A2ac; B1ab(ii,iii,iv,v)
J.H. Vlok & D. Raimondo
e**Distribution:** WC. Langeberg.
Habitat: Montane to lowland fynbos on loamy to clay soils, 60–650 m.
Rationale: A population reduction of > 50% is estimated based on habitat loss to crop cultivation over the past 110 years (generation length > 50 years). EOO < 500 km². Four remaining locations continue to decline because of invasive alien plants and further habitat loss to agriculture.

Otholobium carneum (E.Mey.) C.H.Stirt.
Status: **Rare**
D. Raimondo
e**Distribution:** EC. Kouga and Baviaanskloof Mountains.
Habitat: Sandstone slopes.
Rationale: All known subpopulations are protected in nature reserves and wilderness areas where they are not threatened.

Otholobium hamatum (Harv.) C.H.Stirt.
Status: **VU** B1ab(ii,iii,v)
N.A. Helme & D. Raimondo
e**Distribution:** NC WC. Kamiesberg and the Cederberg.
Habitat: Floodplains, 800–1 200 m.
Rationale: EOO < 5 000 km². Fewer than 10 known locations are declining because of habitat loss to crop cultivation, road construction and grazing by livestock.

Otholobium heterosepalum (Fourc.) C.H.Stirt.
Status: **Rare**
D. Raimondo
e**Distribution:** EC WC. Langkloof to Humansdorp.
Habitat: Montane fynbos on forest margins, 400–600 m.
Rationale: A habitat specialist known from only five subpopulations.

Otholobium incanum C.H.Stirt.
Status: **VU** D2
N.A. Helme & D. Raimondo
e**Distribution:** WC. Vredendal to Lambert's Bay.
Habitat: Calcareous soils, 80–120 m.
Rationale: Four known locations are potentially threatened by coastal development, and expanding potato and vineyard cultivation.

Otholobium macradenium (Harv.) C.H.Stirt.
Status: **Rare**
D. Raimondo & L. von Staden
e**Distribution:** WC. Langeberg and Swartberg Mountains.
Habitat: Dry mountains, fynbos slopes, 1 100–1 500 m.
Rationale: A high-altitude habitat specialist known from only five small, localised subpopulations. It is a resprouter that is not affected by too frequent fires.

Otholobium pungens C.H.Stirt. **Plate 61**
Status: **EN** B1ab(iii)+2ab(iii)
D. Raimondo
e**Distribution:** WC. Kleinmond to Potberg.
Habitat: Renosterveld-fynbos scrub and coastal renosterveld, 20–160 m.
Rationale: EOO 675 km². Two known locations are declining as a result of invasion by alien plants. Until 1986 this rare species was known only from the vicinity of Potberg Mountain, but it was recently discovered near Hawston, substantially increasing the known range. It was probably more common in the intervening areas, which are now under wheat cultivation.

Otholobium pustulatum C.H.Stirt.
Status: **Rare**
L. Potter
e**Distribution:** NC. Springbok.
Habitat: Mountain renosterveld, 700–800 m.
Rationale: A range-restricted species (EOO < 35 km²), known from two subpopulations, but not threatened.

Otholobium racemosum (Thunb.) C.H.Stirt.
Status: **Rare**
D. Raimondo
e**Distribution:** WC. Outeniqua and Kammanassie Mountains.
Habitat: Fynbos, mountain slopes, 900–1 000 m.
Rationale: Subpopulations are small, consisting of less than 50 individuals. Not threatened.

Otholobium rotundifolium (L.f.) C.H.Stirt.
Status: **VU** A2ac; B1ab(iii)+2ab(iii)
N.A. Helme & D. Raimondo
e**Distribution:** WC. Jonkershoek to Kleinrivier Mountains.
Habitat: Montane fynbos on granite or shale (possibly sandstone) on middle mountain slopes, 430–530 m.
Rationale: A population reduction of > 30% is estimated based on habitat loss to vineyard and deciduous fruit cultivation over the past 120 years (generation length > 50 years). EOO and AOO < 2 000 km². Habitat quality at six known locations is declining as a result of invasive alien plants.

Otholobium rubicundum C.H.Stirt.
Status: **CR** B1ab(iii,v)
J.H. Vlok & D. Raimondo
e**Distribution:** WC. Lower slopes of the Swartberg Mountains.
Habitat: Renosterveld and arid montane fynbos, 650 m.
Rationale: EOO < 100 km². Fewer than five severely fragmented subpopulations remain on isolated renosterveld fragments after most of the habitat has been transformed for crop cultivation. Decline is continuing as a result of overgrazing by livestock.

F **Otholobium saxosum** C.H.Stirt. **Plate 61**
Status: **EN** D
J.H. Vlok & D. Raimondo
e**Distribution:** WC. Langeberg Mountains, Garcia's Pass.
Habitat: Moist loamy soils on south-facing slopes.
Rationale: Less than 250 mature individuals remain at two known locations after the habitat of this species was lost to forestry plantations and invasion by alien plants, but it is not currently declining.

Otholobium sp. nov.
Voucher: *Drewe 450* HER, K
Status: **VU** D2
N.A. Helme & D. Raimondo
e**Distribution:** WC. Kleinrivier Mountains above Hermanus.
Habitat: Montane fynbos on shale bands, 400 m.
Rationale: One known location is potentially threatened by invasive alien plants.

Otholobium sp. nov.
Voucher: *Esterhuysen 11381* K
Status: **CR** B1ab(iii,v); C2a(i)
D. Raimondo
e**Distribution:** WC. Lower slopes of Shaw's Mountain.
Habitat: Stony clay slopes, on transitions between sandstone and shale soils.
Rationale: Known from one location. This very rare species has lost most of its habitat to wheat cultivation. Its habitat is currently being degraded by grazing livestock and ongoing invasion of alien species of *Eucalyptus*, *Hakea* and *Acacia*. The only known location is a municipal commonage and future housing or agricultural development is therefore a potential threat.

F **Otholobium sp. nov.** **Plate 61**
Voucher: *Esterhuysen 33240a* BOL
Status: **VU** B1ab(ii,iii,iv,v)
D. Raimondo & C.H. Stirton
e**Distribution:** WC. Hawston to De Hoop.
Habitat: Coastal limestone soils.
Rationale: EOO 9 000 km^2. Eight locations remain after much of the habitat has been transformed for crop cultivation. Declining as a result of invasive alien plants and coastal development.

Otholobium sp. nov.
Voucher: *Stirton, Vlok & Zantovska 11561* NBG
Status: **VU** D2
D. Raimondo
e**Distribution:** WC. Foothills of the Groot Swartberg Mountains.
Habitat: Transition soils between shale and sandstone.
Rationale: EOO < 50 km^2. Three known locations are potentially threatened by crop cultivation and expansion of infrastructure.

Otholobium sp. nov. **Plate 61**
Voucher: *Stirton & Zantovska 11281* NBG
Status: **VU** B1ab(ii,iii,iv,v)
N.A. Helme & D. Raimondo
e**Distribution:** WC. Tulbagh to Barrydale and Bot River.
Habitat: Renosterveld on shales, 660 m.
Rationale: EOO 7 250 km^2. Seven known locations are declining because of habitat loss to expanding vineyards and olive cultivation.

Otholobium swartbergense C.H.Stirt. **Plate 61**
Status: **Rare**
D. Raimondo
e**Distribution:** WC. Groot Swartberg Mountains.
Habitat: In short grass on rocky outcrops, in dry, loamy soils.
Rationale: A range-restricted species (EOO 350 km^2), known from six sites, but not threatened.

Otholobium thomii (Harv.) C.H.Stirt.
Status: **EN** B1ab(iii,iv,v)+2ab(iii,iv,v)
D. Raimondo
e**Distribution:** WC. Kleinmond to Bredasdorp Mountains.
Habitat: Montane fynbos, 100–600 m.
Rationale: EOO 91 km^2, AOO < 91 km^2. Declining at two of five known locations because of invasion by alien plants and golf course and coastal development.

F **Otholobium uncinatum** (Eckl. & Zeyh.) C.H.Stirt.
Status: **NT** B1ab(ii,iii,iv,v)
N.A. Helme & D. Raimondo
e**Distribution:** WC. Piketberg to Hawston.
Habitat: Renosterveld, 160 m.
Rationale: EOO 7 100 km^2. The 14 known locations are declining because of continued habitat loss to wheat, vineyards, olive and deciduous fruit cultivation.

Otholobium venustum (Eckl. & Zeyh.) C.H.Stirt.
Status: **VU** B1ab(ii,iii,v)+2ab(ii,iii,v)
N.A. Helme & D. Raimondo
e**Distribution:** WC. Lambert's Bay to Langebaan.
Habitat: Calcareous sands and clays within 3 km of the coast.
Rationale: EOO and AOO < 1 000 km^2. Eight known locations are declining as a result of continued habitat loss to urban and coastal development.

Pearsonia Dummer

Pearsonia callistoma Campb.-Young & K.Balkwill
Status: **EN** B1ab(iii,v)+2ab(iii,v)
D. Raimondo & L. von Staden
e**Distribution:** LM. Wolkberg Mountains.
Habitat: Montane grassland on dry dolomites of the Chuniespoort Formation.
Rationale: EOO 200 km^2, AOO < 200 km^2. Habitat at two of four known locations is being degraded by overgrazing by livestock and invasion by alien plants, causing a continuing decline in mature individuals.

F **Pearsonia hirsuta** Germish.
Status: **VU** D2
P.A. Manyama
e**Distribution:** MP. Lydenburg.
Habitat: Low grassland between rocks, in humus-rich, sandy soil.
Rationale: Four known locations are potentially threatened by the expansion of forestry plantations and agriculture.

Podalyria Willd.

Podalyria argentea Salisb.
Status: **EN** A2c; B1ab(iii)
A.L. Schutte-Vlok & D. Raimondo
e**Distribution:** WC. Cape Flats, Cape Peninsula and Hottentots Holland Mountains.
Habitat: Wet, peaty soil below 500 m.
Rationale: Most of the habitat of this long-lived resprouter has been transformed for urban and agricultural development over the past 110 years (generation length > 50 years) and > 50% of known subpopulations are now locally extinct. EOO < 3 600 km^2. Three remaining locations are declining because of ongoing habitat loss to urban expansion.

Podalyria cordata R.Br.

Status: **VU** B1ab(iii)+2ab(iii)
D. Raimondo & A.L. Schutte-Vlok

Distribution: WC. Hottentots Holland Mountains.
Habitat: Sandstone slopes.
Rationale: EOO 800 km², AOO < 100 km². The 10 known locations are declining because of ongoing habitat degradation through invasion by alien plants.

Podalyria microphylla E.Mey.

Status: **CR** A2c; B1ab(ii,iii,iv,v)
J.H. Vlok, A.L. Schutte-Vlok & D. Raimondo

Distribution: WC. Tygerberg, Klipheuwel and Paarl hills.
Habitat: Shale.
Rationale: Previously listed as Extinct, this species has been rediscovered on three small fragments. More than 90% of the habitat of this long-lived resprouter has been transformed for agriculture and urban development over the past 80 years (generation length 50 years). Current EOO 50 km². Three small, severely fragmented subpopulations are expected to continue declining because of ongoing habitat loss to urban expansion.

Podalyria orbicularis E.Mey.

Status: **VU** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)
A.L. Schutte-Vlok & D. Raimondo

Distribution: WC. Caledon Swartberg and Riviersonderend Mountains.
Habitat: Moist, south-facing slopes.
Rationale: EOO and AOO < 250 km². Seven known locations are declining as a result of invasion by alien plants.

Podalyria pearsonii E.Phillips

Status: **VU** B1ab(i,ii,iii,iv,v)
A.L. Schutte-Vlok & D. Raimondo

Distribution: NC WC. Nieuwoudtville and Gifberg.
Habitat: Deep, sandy soil, 830–867 m.
Rationale: EOO < 3 000 km². Fewer than 10 known locations are rapidly declining because of habitat loss to rooibos tea cultivation. This species is a resprouter, is myrmecochorous, and requires fire to germinate. Possibly threatened by a lack of fire because of habitat fragmentation.

Podalyria sericea (Andrews) R.Br. ex Aiton f.

Status: **NT** B1ab(ii,iii,v)
A.L. Schutte-Vlok & D. Raimondo

Distribution: WC. Saldanha to the Cape Peninsula.
Habitat: Granite outcrops on well-drained, humic, sandy loams below 500 m.
Rationale: EOO < 10 000 km². Less than 25 known locations are declining as a result of invasion by alien plants, too infrequent fires and urban expansion of Cape Town.

Podalyria velutina Burch. ex Benth.

Status: **NT** B1ab(iii,v)+2ab(iii,v)
L. von Staden & A.L. Schutte-Vlok

Distribution: EC KZN. Port Shepstone to Lusikisiki.
Habitat: Moist, sheltered sites in Pondoland coastal grassland and forest margins, often along streams, Msikaba Formation Sandstone, 0–400 m.
Rationale: EOO 1 525 km², AOO < 1 525 km². Occurring at more than 10 locations. The most serious threat to this species is too frequent, intense grassland fires. It was often collected in the past, but it is now quite rare and appears to be restricted to sites sheltered from fire. It is also declining as a result of ongoing habitat loss to coastal development and subsistence agriculture.

Polhillia C.H.Stirt.

Polhillia brevicalyx (C.H.Stirt.) B.-E.van Wyk & A.L.Schutte **Plate 65**

Status: **CR** A2bc; B1ab(i,ii,iii,v)+2ab(i,ii,iii,v); C2a(ii)
D. Raimondo, F. Daniels & C. Kloppers

Distribution: WC. Swellendam.
Habitat: Renosterveld shales.
Rationale: A population reduction of > 80% is estimated based on > 90% habitat loss to wheat cultivation over the past 60 years (generation length 30 years). Ninety plants remain at a single location in a drainage line between cultivated fields (EOO and AOO 500 m²) and are declining because of alien grass invasion and a lack of fire.

Polhillia canescens C.H.Stirt. **Plate 65**

Status: **VU** A2c; D1+2
D. Raimondo, I. Ebrahim & C. Kloppers

Distribution: WC. Bredasdorp.
Habitat: Renosterveld slopes.
Rationale: A population reduction of at least 30% is estimated based on habitat loss to wheat cultivation over the past 60 years (generation length estimated to be 50 years). Less than 1 000 mature individuals remain at two locations. The population is not declining at present, but is potentially threatened by further expansion of wheat cultivation and grazing by livestock.

Polhillia connata (Harv.) C.H.Stirt. **Plate 65**

Status: **CR** B1ab(iii)+2ab(iii)
D. Raimondo & A.L. Schutte-Vlok

Distribution: WC. Riversdale to lower Breede River Valley.
Habitat: Renosterveld, 300 m.
Rationale: Until recently this species was known from only three collections from the Riversdale area and was thought possibly extinct as all known sites were surveyed repeatedly over the last 20 years but no plants could be located. However, a small subpopulation was discovered in the lower Breede River Valley in August 2008. Current EOO and AOO < 5 km². The subpopulation at the only known location is likely to continue declining as a result of overgrazing by livestock.

Polhillia involucrata (Thunb.) B.-E.van Wyk & A.L.Schutte

Status: **Rare**
L. Potter

Distribution: NC. Roggeveld Escarpment and Williston.
Habitat: Mountain renosterveld on well-drained, sandy loams.
Rationale: A rare, habitat specialist known from only four subpopulations, but not threatened.

Polhillia obsoleta (Harv.) B.-E.van Wyk **Plate 65**

Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v)
N.A. Helme, D. Raimondo & J.E. Victor

Distribution: WC. Worcester.
Habitat: Renosterveld, 300–430 m.
Rationale: EOO < 100 km², AOO < 10 km². Fewer than five known locations are declining as a result of urban expansion.

Polhillia pallens C.H.Stirt. **Plate 65**

Status: **VU** A2c

D. Raimondo & I. Ebrahim

e**Distribution:** WC. Bredasdorp to Potberg.

Habitat: Renosterveld in deep clay soils on southwest-facing slopes, 30 m.

Rationale: A population reduction of at least 30% is estimated based on habitat loss to crop cultivation during the 1950s and 1960s, which is within the last three generations for this long-lived species (generation length at least 50 years).

Psoralea L.

Psoralea abbottii C.H.Stirt.

Status: **VU** B1ab(i,ii,iii,iv,v)

J.E. Victor & A.E. van Wyk

e**Distribution:** EC KZN. Ngele Mountain and Pondoland from Umtamvuna to Mkambati.

Habitat: Pondoland coastal grassland on sandstone, in moist sites, forest margins or open grasslands adjacent to marshes, 300–600 m.

Rationale: EOO 8 000 km^2. Fewer than 10 known locations are declining because of expanding crop cultivation, too frequent fires and overgrazing.

F **Psoralea asarina** (P.J.Bergius) T.M.Salter

Status: **NT** B1ab(ii,iii,iv,v)

D. Raimondo

e**Distribution:** WC. Cape Peninsula to Riversdale.

Habitat: Montane fynbos and renosterveld-fynbos lowland scrub.

Rationale: EOO 10 530 km^2. Altogether 13 locations are known, but it is locally extinct at three. Other subpopulations probably occur, especially on unexplored slopes of the Hottentots Holland Mountains. Declining around Still Bay because of alien plants that invade the habitat.

Psoralea cataracta C.H.Stirt.

Status: **EX**

D. Raimondo & C.H. Stirton

e**Distribution:** WC. Tulbagh.

Habitat: Streamsides.

Rationale: Known only from the type collection from the late 1700s. Most of the habitat has now been transformed to forestry plantations. Repeated searches have failed to locate surviving individuals.

Psoralea fascicularis DC.

Status: **EN** A2bc; B1ab(iii)

C.H. Stirton & D. Raimondo

e**Distribution:** WC. Stellenbosch to Caledon.

Habitat: Lowland fynbos, moist areas on granite and shales.

Rationale: Most of the habitat has been transformed to vineyards and lost to urban expansion around Stellenbosch, resulting in the local extinction of > 50% of known subpopulations over the past 100 years (generation length at least 50 years). Current EOO 1 900 km^2. Three remaining locations are declining as a result of continued habitat loss.

F **Psoralea filifolia** Thunb.

Status: **EN** B1ab(ii,iii,iv,v)

C.H. Stirton & D. Raimondo

e**Distribution:** WC. Wolseley to Aurora.

Habitat: Sandy seepages.

Rationale: EOO 4 695 km^2. Three locations remain after most of the habitat has been transformed for the cultivation of vineyards, wheat and potatoes. Decline continues.

Psoralea glaucina Harv.

Status: **CR** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v); C2a(i)

N.A. Helme & D. Raimondo

e**Distribution:** WC. Cape Flats near Muizenberg.

Habitat: Seasonally damp neutral to alkaline sands below 100 m.

Rationale: EOO < 100 km^2. Two small, severely fragmented natural subpopulations remain and two have been reintroduced. Declining because of continued habitat loss to urban development and invasion by alien plants.

Psoralea gueinzii Harv.

Status: **EX**

C.H. Stirton & D. Raimondo

e**Distribution:** WC. Stellenbosch.

Habitat: Lowland fynbos, marshy places.

Rationale: This species was last collected in 1927, and subsequently > 90% of its habitat has been transformed to vineyards and urban expansion. Remaining fragments are severely degraded by alien plant infestations. Repeated searches have failed to locate surviving individuals.

F **Psoralea implexa** C.H.Stirt. **Plate 66**

Status: **EN** D

N.A. Helme

e**Distribution:** WC. Du Toit's Kloof Mountains.

Habitat: Upper, steep, open, rocky slopes of kloofs with western and eastern aspects in fynbos.

Rationale: Less than 100 plants occur at a single known location where they are potentially threatened by invading alien hakeas.

Psoralea odoratissima Jacq.

Status: **NT** D2

D. Raimondo

e**Distribution:** WC. Villiersdorp to Swartberg Mountains.

Habitat: Streamsides, on mountain slopes often associated with shale bands, 300–1 330 m.

Rationale: Fewer than 10 known locations are potentially threatened by invading alien plants.

Psoralea oreophila Schltr.

Status: **Rare**

C.H. Stirton & D. Raimondo

e**Distribution:** WC. Bain's Kloof to Franschhoek.

Habitat: Montane fynbos, 460–1 660 m.

Rationale: A high-altitude habitat specialist occurring in small, sparse subpopulations.

Psoralea peratica C.H.Stirt. **Plate 66**

Status: **EN** B1ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

e**Distribution:** WC. Piketberg Mountains.

Habitat: Mainly along sandy seepages.

Rationale: EOO 490 km^2. Known from fewer than five locations. Some subpopulations on upper slopes are declining because of invasions of alien plants and prolonged droughts—farmers report a reduction in rainfall of as much as 50% over the last 40 years. Subpopulations at lower altitudes are declining as a result of habitat loss to crop cultivation and overgrazing by livestock.

Psoralea repens L. **Plate 66**

Status: **NT** A4bc
C.H. Stirton & D. Raimondo

eDistribution: EC WC. Cape Peninsula to Eastern Cape.
Habitat: Coastal fynbos, below 50 m.
Rationale: A population reduction of 20% is estimated based on a decline in the number of known locations due to coastal development since 1970 (generation length ± 15 years). Population decline as a result of coastal development is highly likely to continue into the future.

F **Psoralea sp. nov.**
Voucher: *Esterhuysen 35181* BOL
Status: **Rare**
D. Raimondo

eDistribution: WC. Groot Swartberg Mountains, Swartberg Pass.
Habitat: Subalpine montane fynbos, 1 800 m.
Rationale: A range-restricted species, known from only one collection at high altitude, but is likely to occur on other high peaks of the Groot Swartberg. However, EOO is not likely to be larger than 500 km^2.

F **Psoralea sp. nov.**
Voucher: *Helme 3468* NBG
Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)
N.A. Helme & D. Raimondo

eDistribution: WC. Redelinghuys.
Habitat: Damp sands.
Rationale: EOO and AOO < 500 km^2. Recently discovered at three locations. Most of the habitat has been transformed for potato and rooibos tea cultivation, and habitat loss is continuing.

F **Psoralea sp. nov.** **Plate 66**
Voucher: *Muir 1850* PRE
Status: **EN** B1ab(iii,v)
C.H. Stirton, J.H. Vlok & D. Raimondo

eDistribution: WC. Albertinia to Still Bay.
Habitat: Soils derived from limestone outcrops.
Rationale: EOO 620 km^2. Fewer than five known locations are declining as a result of invading alien acacias and habitat degradation caused by thatch harvesting.

F **Psoralea sp. nov.**
Voucher: *Stirton 10212* NU
Status: **Rare**
N.A. Helme

eDistribution: WC. Langeberg and Swartberg Mountains.
Habitat: Upper slopes in montane fynbos on streamsides and moist, south-facing slopes.
Rationale: A rare habitat specialist, known from only six subpopulations, but it is not threatened.

F **Psoralea sp. nov.**
Voucher: *Stirton 11225* NBG
Status: **Rare**
N.A. Helme

eDistribution: WC. Limietberg to Du Toit's Kloof Mountains.
Habitat: Upper sandstone fynbos slopes.
Rationale: A range-restricted mountain species (EOO 320 km^2) that occurs as small, scattered subpopulations. Only three sites are known, but it is not threatened.

F **Psoralea sp. nov.** **Plate 66**
Voucher: *Stirton & Zantovska 11568* K
Status: **Rare**
C.H. Stirton & D. Raimondo

eDistribution: WC. Groot Swartberg Mountains.
Habitat: Subalpine fynbos gullies above 1 700 m.
Rationale: A rare, range-restricted (EOO < 500 km^2) habitat specialist that is not threatened.

F **Psoralea sp. nov.** **Plate 66**
Voucher: *Stirton & Zantovska 11582* NU
Status: **EN** B1ab(iii,v)
J.H. Vlok & D. Raimondo

eDistribution: WC. Outeniqua Mountains.
Habitat: Seepage areas in montane fynbos, 530–590 m.
Rationale: EOO < 250 km^2. Five known locations are declining as a result of dense alien pine and hakea invasion of the habitat. This species is also likely to be very sensitive to extraction of water.

F **Psoralea tenuissima** E.Mey.
Status: **Rare**
D. Raimondo

eDistribution: WC. Cederberg to Kouebokkeveld and Du Toit's Kloof Mountains.
Habitat: Streamsides in montane fynbos above 960 m.
Rationale: Restricted to high-altitude streamsides in the arid mountain ranges. Known from fewer than 10 sites. Not threatened.

Psoralea trullata C.H.Stirt. **Plate 66**
Status: **Rare**
D. Raimondo

eDistribution: WC. Langeberg Mountains to Tsitsikamma Mountains.
Habitat: Marshy places in montane fynbos.
Rationale: Occurs as small, sparse subpopulations. Not threatened.

Rafnia Thunb.

Rafnia angulata Thunb. subsp. **ericifolia** (T.M.Salter) G.J.Campbell & B.-E.van Wyk
Status: **EN** A2c; B1ab(iii)
G. Campbell-Young & D. Raimondo

eDistribution: WC. Paarl to Durbanville.
Habitat: Fynbos or renosterveld-fynbos transition, on gentle, stony slopes, in sandy quartzitic or clay soils, 0–2 200 m.
Rationale: A population reduction of at least 50% is estimated based on > 50% habitat loss to agriculture and urban development over the past 100 years (generation length > 50 years). Current EOO and AOO < 400 km^2. Three remaining locations are declining as a result of invasion by alien plants and inappropriate fire management.

F **Rafnia angulata** Thunb. subsp. **humilis** (Eckl. & Zeyh.) G.J.Campbell & B.-E.van Wyk
Status: **CR** A2c; B1ab(iii)+2ab(iii)
D. Raimondo & P.A. Manyama

eDistribution: WC. Cape Peninsula including the Cape Flats.
Habitat: Lowland flats on sand dunes.
Rationale: A population reduction of > 80% is estimated based on a > 90% habitat loss to urban expansion and

the local extinction of > 80% of known locations over the past 150 years (generation length 50 years). One known location remains (EOO and AOO < 10 km²) where the habitat is being degraded by invading alien plants.

[F] **Rafnia angulata** Thunb. subsp. **montana** G.J.Campbell & B.-E.van Wyk

Status: **Critically Rare**

D. Raimondo & G. Campbell-Young

[e]**Distribution:** WC. Klein Swartberg Mountains.

Habitat: Alpine montane fynbos, on flat areas or mountain peaks and burnt slopes, 2 000 m.

Rationale: Known from one site (EOO < 10 km²) in a protected area. A resprouter that is not threatened by too frequent fires.

[F] **Rafnia angulata** Thunb. subsp. **thunbergii** (Harv.) G.J.Campbell & B.-E.van Wyk

Status: **EN** A2c; B1ab(iii)+2ab(iii)

P.A. Manyama

[e]**Distribution:** WC. Worcester district, in the Hex River Valley near De Doorns and along the Breede River.

Habitat: Disturbed roadsides and on foothills.

Rationale: A population reduction of at least 50% is estimated based on habitat loss to vineyards, deciduous fruit cultivation and urban expansion over the past three generations (90 years). EOO 265 km², AOO < 265 km². Five remaining locations are declining because of ongoing habitat loss.

[F] **Rafnia capensis** (L.) Schinz subsp. **elsieae** G.J.Campbell & B.-E.van Wyk

Status: **Rare**

G. Campbell-Young & D. Raimondo

[e]**Distribution:** WC. Waaihoek and Milner Peak.

Habitat: Montane fynbos, above 1 800 m.

Rationale: EOO < 150 km². A high-altitude habitat specialist that is not affected by too frequent fires.

Rafnia crispa C.H.Stirt.

Status: **CR** B1ab(iii)+2ab(iii)

D. Raimondo & G. Campbell-Young

[e]**Distribution:** WC. Elandskloof Mountains.

Habitat: Sandy, stony flats or gentle slopes, 200 m.

Rationale: EOO and AOO < 10 km². One known location, surrounded by plantations remain after most of the habitat has been lost to afforestation. Declining as a result of too infrequent fires—this species requires fire to recruit.

[F] **Rafnia inaequalis** G.J.Campbell & B.-E.van Wyk

Status: **EN** B1ab(iii)+2ab(iii); C2a(i); D

D. Raimondo & G. Campbell-Young

[e]**Distribution:** WC. Piketberg.

Habitat: Montane fynbos.

Rationale: EOO and AOO < 100 km². Less than 250 mature individuals occur at two locations after most of the habitat has been transformed to fruit orchards. Declining because of a lack of fire on habitat fragments.

[F] **Rafnia racemosa** Eckl. & Zeyh. subsp. **pumila** G.J.Campbell & B.-E.van Wyk

Status: **Critically Rare**

D. Raimondo & G. Campbell-Young

[e]**Distribution:** WC. Between Goudini Sneeukop and Deception Peak.

Habitat: Montane fynbos.

Rationale: Known from one site, resprouts after fire. Not threatened.

[F] **Rafnia rostrata** G.J.Campbell & B.-E.van Wyk subsp. **pluriflora** G.J.Campbell & B.-E.van Wyk

Status: **Rare**

D. Raimondo & G. Campbell-Young

[e]**Distribution:** WC. Swartberg Mountains.

Habitat: Montane fynbos.

Rationale: A range-restricted taxon (EOO < 250 km²), known from five sites. Not threatened.

[F] **Rafnia vlokii** G.J.Campbell & B.-E.van Wyk

Status: **VU** D2

D. Raimondo & G. Campbell-Young

[e]**Distribution:** WC. Outeniqua Mountains.

Habitat: Transitional vegetation between renosterveld and dry, grassy fynbos, along disturbed roadsides or on lower slopes in dry, rocky, loamy or sandy soil.

Rationale: Four known locations are potentially threatened by expanding forestry plantations.

Rhynchosia Lour.

Rhynchosia arida C.H.Stirt.

Status: **VU** D2

D. Raimondo & N.A. Helme

[e]**Distribution:** WC. Gifberg and Matsikamma Mountains.

Habitat: Karroid scrub, 260–450 m.

Rationale: Two known locations are potentially threatened by expanding wheat and rooibos tea cultivation and grazing by livestock.

Rhynchosia connata Baker f.

Status: **DD**D

D. Raimondo

[e]**Distribution:** KZN. Camperdown.

Habitat: Unknown, probably valley bushveld.

Rationale: Known only from the type, collected in 1910. This species is too poorly known to determine its status, but it is quite likely to be threatened by agriculture.

Rhynchosia foliosa Markötter

Status: **DD**D

J.E. Victor

[e]**Distribution:** KZN. Oliviershoek Pass.

Habitat: Grassland.

Rationale: Known only from the type, collected in 1905. This species is too poorly known to determine its status, but it is possibly threatened by agriculture.

[F] **Rhynchosia rogersii** Schinz

Status: **VU** D2

M. Lötter, J.E. Burrows & L. von Staden

[e]**Distribution:** MP. Barberton.

Habitat: Montane grassland on serpentine soils.

Rationale: Known from two locations. It has recently lost habitat to illegal afforestation, and although not currently declining, expanding plantations remain a potential threat.

Rhynchosia vendae C.H.Stirt.

Status: **VU** B1ab(i,ii,iii,iv,v)

L. von Staden

[e]**Distribution:** LM. Eastern Soutpansberg Mountains, Tengwe to Punda Maria–Pafuri area in the Kruger National Park.

Habitat: Variety of habitats within Makuleke Sandy Bushveld, including wooded watercourses, open grassy sandveld and rocky outcrops.

Rationale: EOO 900–1 400 km². Known from 5–8 locations. About 38% of the habitat in the western part of the range is already transformed, mainly by human settlements and subsistence agriculture. Ongoing habitat loss due to expanding human settlements is causing a continuing decline. This species is also potentially threatened by harvesting of rootstocks for medicinal purposes.

Stirtonanthus B.-E.van Wyk & A.L.Schutte

Stirtonanthus chrysanthus (Adamson) B.-E.van Wyk & A.L.Schutte

Status: **EN** B1ab(ii,iii,iv,v)
A.L. Schutte-Vlok, J.E. Victor & D. Raimondo

[e]**Distribution:** WC. Waterkloof and Peak Plaats in the Klein Swartberg.

Habitat: Montane fynbos on streambanks, 800–1 500 m.

Rationale: EOO 4 km². Habitat quality and two known locations are declining because of extraction of water.

Stirtonanthus insignis (Compton) B.-E.van Wyk & A.L.Schutte **Plate 63**

Status: **NT** D2
J.E. Victor & A.L. Schutte-Vlok

[e]**Distribution:** WC. Montagu.

Habitat: Arid fynbos, 800–1 200 m.

Rationale: Fewer than 10 known locations are potentially threatened by expanding crop cultivation.

Stirtonanthus taylorianus (L.Bolus) B.-E.van Wyk & A.L.Schutte **Plate 63**

Status: **VU** D2
A.L. Schutte-Vlok, D. Raimondo & J.E. Victor

[e]**Distribution:** WC. Swartberg Mountains.

Habitat: Montane fynbos on streambanks, 700–1 500 m.

Rationale: Two known locations are potentially threatened by extraction of groundwater, a deleterious fire regime and road construction and maintenance.

Tephrosia Pers.

Tephrosia bachmannii Harms **Plate 66**

Status: **VU** A2c
L. von Staden

[e]**Distribution:** EC KZN. Oribi Gorge to Mkambati.

Habitat: Restricted to Msikaba Formation Sandstone, but occurs in a variety of habitats including open grasslands, rocky sites and forest margins.

Rationale: A range-restricted (EOO 2 070 km²) but locally common species. Population reduction based on habitat loss to crop cultivation, timber plantations and urban expansion is estimated to be at least 33% over the last two generations (100 years) of this long-lived, suffrutescent grassland forb (generation length at least 50 years). Ongoing threats include habitat degradation due to too frequent fires and overgrazing in the southern parts of the range and ongoing habitat loss due to coastal development in the northern parts of the range.

Tephrosia inandensis H.M.L.Forbes

Status: **EN** A2c
L. von Staden

[e]**Distribution:** KZN. Durban, Noodsberg and Eshowe.

Habitat: Grassland, 600–900 m.

Rationale: A population reduction of > 50% is estimated based on 68% habitat loss to urban expansion, agriculture, overgrazing and too frequent fires over the last 100 years. The suffrutescent habit indicates that it is a long-lived resprouter and generation length is estimated to be 30–50 years.

Tephrosia pondoensis (Codd) Schrire **Plate 66**

Status: **EN** B1ab(iii,v); C2a(i)
L. von Staden & A.T.D. Abbott

[e]**Distribution:** EC KZN. Oribi Gorge to the Msikaba River.

Habitat: Pondoland scarp forest and adjacent grassland on sandstone, in forest margins, along drainage lines or on rocky outcrops, 300–600 m.

Rationale: A range-restricted species (EOO 1 250 km²), known from a few small, isolated subpopulations each consisting of leass than 100 mature individuals. Total population is estimated not to exceed 2 000 mature individuals. Subpopulations are severely fragmented and there is a continuing decline in the habitat quality and number of mature individuals as a result of too frequent fires, browsing by livestock and harvesting of firewood and wood for building materials.

Umtiza Sim

Umtiza listeriana Sim

Status: **VU** B1ab(v)
V.L. Williams & L. von Staden

[e]**Distribution:** EC. Between East London, Kentani and King William's Town.

Habitat: Forest and thicket.

Rationale: EOO 2 626 km². The number of mature individuals is declining at six known locations because of harvesting for the traditional medicinal trade. Also threatened by expansion of human settlements in places.

Wiborgia Thunb.

[F]**Wiborgia fusca** Thunb. subsp. **macrocarpa** R.Dahlgren

Status: **EN** B1ab(ii,iii,iv,v)
N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Vredenburg.

Habitat: Granite soils on slopes of granite koppies.

Rationale: EOO < 1 000 km². Three known locations are declining as a result of coastal housing development, wheat cultivation and industrial development.

Wiborgia humilis (Thunb.) R.Dahlgren

Status: **EN** B1ab(ii,iii,iv,v)
D. Raimondo & J.S. Boatwright

[e]**Distribution:** NC WC. Gifberg to Nieuwoudtville.

Habitat: Montane fynbos near streams, 600–800 m.

Rationale: EOO < 1 500 km². Five known locations remain after most of the habitat has been converted for rooibos tea cultivation. Decline is continuing.

[F]**Wiborgia tenuifolia** E.Mey.

Status: **NT** A2c; B1ab(i,ii,iii,iv,v)
J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Worcester to Riversdale, including the Little Karoo.

Habitat: Lowland renosterveld-fynbos scrub.

Rationale: Although still relatively widespread (EOO 17 030 km²) and common (> 20 known locations), this species has lost at least 25% of its habitat to crop cultivation and urban expansion over the past 50 years (generation length 20 years) and continues to decline. Also threatened by overgrazing by livestock in the Little Karoo.

Xiphotheca Eckl. & Zeyh.

Xiphotheca canescens (Thunb.) A.L.Schutte & B.-E.van Wyk

Status: **VU** B1ab(iii,v)+2ab(iii,v)
N.A. Helme, D. Raimondo & F. Daniels

e**Distribution:** NC. Nieuwoudtville Escarpment.
Habitat: Arid montane fynbos on rocky outcrops, 660–780 m.
Rationale: EOO < 100 km², AOO < 10 km². Six known locations. There is a continuing decline in habitat quality and the number of mature individuals as a result of rooibos tea cultivation. Although the specific habitat of this species is not ploughed, there is a lack of fire as a result of the tea plantations. This species is a reseeder that requires fire to recruit.

F **Xiphotheca cordifolia** A.L.Schutte & B.-E.van Wyk

Status: **VU** D1+2
A.L. Schutte-Vlok & D. Raimondo

e**Distribution:** WC. Hex River Mountains, Milner Peak.
Habitat: Fynbos on shale scree along streams in kloofs.
Rationale: A range-restricted (EOO and AOO < 2 km²), slow-growing reseeder that is potentially threatened by too frequent fires. Subpopulations are small and the total population is probably less than 1 000 mature individuals.

Xiphotheca elliptica (DC.) A.L.Schutte & B.-E.van Wyk

Status: **NT** D2
A.L. Schutte-Vlok & D. Raimondo

e**Distribution:** WC. Wemmershoek Mountains to Caledon Swartberg.
Habitat: Montane fynbos on sandstone slopes, 360–1 400 m.
Rationale: Seven small, sparse subpopulations are known. This species is likely to have lost subpopulations to vineyards and is now potentially threatened by invasive alien plants.

Xiphotheca fruticosa (L.) A.L.Schutte & B.-E.van Wyk

Status: **VU** B1ab(iii,v)
A.L. Schutte-Vlok, D. Raimondo & J.E. Victor

e**Distribution:** WC. Cape Peninsula, Hottentots Holland and Hex River Mountains, Montagu and Bredasdorp.
Habitat: Sandstone slopes in fynbos, 100–1 200 m.
Rationale: EOO < 13 200 km². This slow-growing, myrmecochorous species requires fire to germinate. Fewer than 10 known locations are declining as a result of invasion by alien plants and too frequent fires.

Xiphotheca guthriei (L.Bolus) A.L.Schutte & B.-E.van Wyk **Plate 64**

Status: **EN** B1ab(ii,iii,)
A.L. Schutte-Vlok & D. Raimondo

e**Distribution:** WC. Kleinrivier Mountains to Potberg.
Habitat: Renosterveld on silcrete soils.
Rationale: EOO 3 350 km². Ten small, severely fragmented subpopulations remain after most of the habitat has been transformed for wheat and vineyard cultivation. It currently continues to decline as a result of alien plants that invade the habitat.

Xiphotheca lanceolata (E.Mey.) Eckl. & Zeyh. **Plate 64**

Status: **EN** B1ab(i,ii,iii,iv,v)
A.L. Schutte-Vlok, J.E. Victor & D. Raimondo

e**Distribution:** WC. Cape Flats to Stellenbosch.
Habitat: Renosterveld-fynbos mosaic.
Rationale: EOO 2 001 km². Altogether 29 small, severely fragmented subpopulations remain after > 80% of the habitat has been transformed by agricultural and urban expansion. It continues to decline because of too infrequent fires, quarrying and ongoing agricultural expansion.

Xiphotheca phylicoides A.L.Schutte & B.-E.van Wyk

Status: **CR** B1ab(ii,iii)
A.L. Schutte-Vlok & D. Raimondo

e**Distribution:** WC. Outeniqua Mountains.
Habitat: Fynbos slopes on shale bands.
Rationale: EOO 70 km². Three small, severely fragmented subpopulations remain. Declining at one location because of invading alien hakeas and another is threatened by expanding forestry plantations. The third, the smallest subpopulation of ± 10 plants, is protected in a nature reserve.

Xiphotheca reflexa (Thunb.) A.L.Schutte & B.-E.van Wyk

Status: **EN** A2bc; B1ab(i,ii,iii,iv,v)
J.E. Victor, A.L. Schutte-Vlok & D. Raimondo

e**Distribution:** WC. Piketberg to Elim.
Habitat: Sand plain fynbos.
Rationale: Crop cultivation has caused extensive habitat loss for this slow-growing resprouter, resulting in the local extinction of 60% of known subpopulations over the past 100 years (generation length > 50 years). EOO 2 389 km². Seven small, severely fragmented subpopulations continue to decline because of invasion by alien plants and ongoing agricultural expansion.

F **Xiphotheca sp. nov.**
Voucher: *Helme 2086* NBG

Status: **CR** B1ab(iii,v)+2ab(iii,v); C2a(ii)
A.L. Schutte-Vlok & D. Raimondo

e**Distribution:** WC. Lower Breede River Valley.
Habitat: Renosterveld on silcrete outcrops.
Rationale: A recently discovered species known from only one location where less than 100 mature individuals occur. EOO and AOO < 10 km². Additional fieldwork in the area has not located any other subpopulations. The population is declining because of grazing by livestock and inappropriate fire management. It grows in an area with high agricultural potential and is likely to continue to lose habitat to crop cultivation.

GENTIANACEAE

Chironia L.

F **Chironia albiflora** Hilliard

Status: **Rare**
J.E. Victor, A.E. van Wyk & L. von Staden

e**Distribution:** EC KZN. Umtamvuna to Magwa Falls.
Habitat: Msikaba Formation Sandstone, in variable habitats including riverine forests, stream margins, scrubby vegetation on rocky outcrops and, rarely, open grassland.
Rationale: EOO 470 km². Known from five subpopulations, but probably overlooked. Rare, occurring as

scattered individuals. Individuals in open grassland sites may be threatened by overgrazing and too frequent fires, a major cause of grassland degradation and loss of grassland forb diversity in KwaZulu-Natal and Pondoland. However, most subpopulations occur on sheltered sites in rocky outcrops and deep within forested ravines, where they are not threatened.

F **Chironia stokoei** I.Verd.

Status: **Rare**

J.E. Victor

e**Distribution:** WC. Kogelberg and Kleinrivier Mountains.

Habitat: Sandstone slopes in fynbos.

Rationale: Known from a restricted range (EOO 305 km^2), and fewer than five sites. Occurs on mountain slopes within protected areas and is not threatened.

Sebaea Sol. ex R.Br.

F **Sebaea laxa** N.E.Br.

Status: **VU** D2

R.C. Turner

e**Distribution:** WC. Langeberg Mountains between Swellendam and Riversdale.

Habitat: Fynbos, middle to high altitude.

Rationale: Two known locations are potentially threatened by expanding forestry plantations and alien pines that invade the habitat.

F **Sebaea rara** Wolley-Dod

Status: **NT** B1ab(ii,iii,iv,v)

D. Raimondo & R.C. Turner

e**Distribution:** WC. Cape Peninsula to Albertinia.

Habitat: Sandy flats.

Rationale: EOO 7 300 km^2. Less than 15 locations remain after much of the habitat has been transformed by urban expansion and agriculture. Decline continues, especially around Albertinia.

F **Sebaea scabra** Schinz

Status: **NT** B1ab(ii,iii,iv,v)

D. Raimondo & R.C. Turner

e**Distribution:** WC. Cape Peninsula to Riversdale.

Habitat: Sandy flats.

Rationale: EOO 7 000 km^2. Five locations are known, but this species is likely to be overlooked and we suspect that there are at least 15 locations. It is declining because of habitat loss to urban development, agriculture and invasions of alien plants.

GERANIACEAE

Geranium L.

Geranium angustipetalum Hilliard & B.L.Burtt

Status: **Critically Rare**

C.R. Scott-Shaw & J.E. Victor

e**Distribution:** KZN. Bushman's Nek.

Habitat: Subalpine grassland, scrub communities in damp ground at the foot of a moist, south-facing cave on sandstone cliffs.

Rationale: Known from one site in southern KwaZulu-Natal Drakensberg. Not threatened.

F **Geranium drakensbergensis** Hilliard & B.L.Burtt

Status: **Rare**

D.A. Kamundi† & D. Raimondo

Distribution: KZN. KwaZulu-Natal Drakensberg Mountains, Cobham Forest.

Habitat: Permanently moist environments such as the base of rock outcrops and near streams, 1 220–2 745 m.

Rationale: A habitat specialist, known from six subpopulations, but not threatened.

F **Geranium ornithopodioides** Hilliard & B.L.Burtt

Status: **EN** B1ab(i,ii,iii,iv,v)

C.R. Scott-Shaw & L. von Staden

e**Distribution:** KZN. Pinetown and Umzinto districts, KwaZulu-Natal.

Habitat: Scarp forest on sandstone, in forest margins or along streams, 300–700 m.

Rationale: Known from a few collections from two relatively disjunct areas in KwaZulu-Natal. Nevertheless, the range is extremely small: EOO 400 km^2, but could be as small as 25 km^2 if it proves to be locally extinct at an historical location that is extensively transformed. Based on herbarium collections, there are two or three locations, and there is a continuing decline in the habitat quality at present mainly because of dense invasions of alien plants in riparian areas.

F **Geranium sparsiflorum** R.Knuth

Status: **VU** B1ab(iii)

L. von Staden

e**Distribution:** EC KZN. Southern KwaZulu-Natal between Kokstad, Ixopo and Weza. Also around Lusikisiki (Eastern Cape).

Habitat: Moist montane grasslands and Ngongoni Veld, in seasonally moist areas, 500–1 700 m.

Rationale: EOO 5 500 km^2. There are only five known locations, four of which are from herbarium collections made in the late 1800s. It is probably extinct at some of these locations, but equally there may be as many as 10 locations, as many areas of the Transkei remain botanically poorly explored. Surveys are required to relocate subpopulations at historical locations. Habitat loss is continuing, especially in the Eastern Cape, it is assumed that this species is declining.

Monsonia L.

Monsonia lanuginosa R.Knuth

Status: **Rare**

J.E. Victor

e**Distribution:** LM. Strydpoort Mountains.

Habitat: Mountain summits.

Rationale: A rare species known from two collections. Not threatened.

F **Monsonia speciosa** L.

Status: **EN** A2bc

D. Raimondo, R.C. Turner & D.A. Snijman

e**Distribution:** WC. Clanwilliam to Gordon's Bay.

Habitat: Clay and granite slopes and flats, mostly in renosterveld.

Rationale: A population reduction of > 50% is estimated based on > 70% habitat loss to agriculture and urban development over the past 80 years. This is a long-lived resprouter, generation length is at least 30 years.

Pelargonium L'Hér ex Aiton

Pelargonium album J.J.A.van der Walt

Status: **Rare**

M. Lötter, J.E. Burrows & D. Raimondo

e**Distribution:** MP. Pilgrim's Rest.

Habitat: Grows on humus-rich soils, in shady rock crevices on dolomite hills.

Rationale: A range-restricted species (EOO < 500 km^2) that has lost some habitat to forestry plantations but is not declining at present.

Pelargonium appendiculatum (L.f.) Willd.

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

[e]**Distribution**: WC. Leipoldtville.

Habitat: Strandveld on deep, calcareous, coastal, sandy soils.

Rationale: EOO 65 km^2, AOO < 65 km^2. Three known locations are declining as a result of expanding rooibos and potato cultivation.

[F] **Pelargonium attenuatum** Harv.

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

[e]**Distribution**: WC. Olifants River Valley.

Habitat: Alluvial sands.

Rationale: EOO 250 km^2, AOO < 250 km^2. Fewer than five locations remain and the species continues to decline because of its habitat being ideally suited for the cultivation of rooibos, potatoes, onions and citrus.

Pelargonium bubonifolium (Andrews) Pers.

Status: **Rare**

D. Raimondo

Distribution: NC. Witputs in the extreme southern part of Namibia and from Steinkopf and Okiep in Namaqualand.

Habitat: Stony places in clay in low succulent vegetation.

Rationale: Four subpopulations are known, but there are likely to be more, as this species occurs in very remote areas. According to the herbarium records plants are localised and occur in small subpopulations.

Pelargonium burgerianum J.J.A.van der Walt

Status: **Rare**

J.E. Victor

[e]**Distribution**: WC. Hex River Mountains and Koo Valley.

Habitat: Fynbos, gentle slopes on Table Mountain Sandstone soils.

Rationale: Known from four sites, all in mountainous areas that are not threatened.

Pelargonium caledonicum L.Bolus

Status: **CR** A2ac; B1ab(ii,iii,iv)

D. Raimondo & D. Pillay

[e]**Distribution**: WC. Caledon.

Habitat: Renosterveld, on grey loam soils derived from shale.

Rationale: A population reduction of > 80% is estimated based on habitat loss to wheat cultivation within the past 90 years (generation length 30 years). EOO 45 km^2. Four small, severely fragmented subpopulations remain on isolated habitat fragments and continue to decline because of ongoing expansion of wheat cultivation, inappropriate fire management and invasion by alien plants.

[F] **Pelargonium campestre** (Eckl. & Zeyh.) Steud.

Status: **DD**D

P.A. Manyama & D.A. Kamundi†

[e]**Distribution**: EC. Uncertain, the type was collected near the Swartkops River.

Habitat: Unknown.

Rationale: Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

[F] **Pelargonium caroli-henrici** B.Nord.

Status: **Rare**

D.A. Kamundi† & D. Raimondo

[e]**Distribution**: WC. Vanrhynsdorp.

Habitat: Grows in flat ground with quartzite pebbles.

Rationale: A range-restricted species (EOO 520 km^2), known from three sites and not threatened.

[F] **Pelargonium chelidonium** (Houtt.) DC.

Status: **EN** A2ac; B1ab(ii,iii,v)

N.A. Helme & D. Raimondo

[e]**Distribution**: WC. Clanwilliam to Riebeek-Kasteel.

Habitat: Renosterveld, clay flats.

Rationale: A population reduction of > 50% is estimated based on habitat loss for the cultivation of citrus (in the Olifants River Valley) and wheat (northern Swartland) over the past 90 years (generation length 30 years). EOO 4 700 km^2. Five remaining locations are declining as a result of ongoing habitat loss to agriculture and invasion by alien plants.

[F] **Pelargonium citronellum** J.J.A.van der Walt

Status: **Rare**

D. Raimondo & N.A. Helme

[e]**Distribution**: WC. Herbertsdale to Ladismith.

Habitat: Near streams in well-drained sands.

Rationale: A habitat specialist that occurs as scattered subpopulations. Not threatened.

Pelargonium connivens E.M.Marais

Status: **VU** D2

D. Raimondo

[e]**Distribution**: NC. Nieuwoudtville.

Habitat: Hantam karoo vegetation on shales.

Rationale: One known location is potentially threatened by crop cultivation and overgrazing.

Pelargonium crassipes Harv.

Status: **EN** B1ab(i,ii,iii,iv,v)

D. Raimondo

[e]**Distribution**: WC. Lutzville to Clanwilliam.

Habitat: Sandy soils in areas with < 300 mm of rain during the winter months.

Rationale: EOO < 2 000 km^2. Most known subpopulations are now locally extinct owing to crop cultivation and fewer than five locations remain. The species is declining because of continued habitat loss to cash crop, vineyard, and rooibos tea cultivation.

[F] **Pelargonium curviandrum** E.M.Marais **Plate 67**

Status: **VU** B1ab(ii,iii,v)

J.H. Vlok & D. Raimondo

[e]**Distribution**: WC. Montagu to Oudtshoorn.

Habitat: Sandstone or clay slopes.

Rationale: EOO 2 500 km^2. Fewer than 10 known locations are declining because of habitat degradation as a result of ostrich farming.

[F] **Pelargonium denticulatum** Jacq. **Plate 67**

Status: **Rare**

N.A. Helme

[e]**Distribution**: WC. Herbertsdale.

Habitat: Ravines.

Rationale: EOO < 500 km^2. Known to occur at only a few sites in a habitat that is not threatened.

Pelargonium desertorum Vorster

Status: **Rare**

D. Raimondo, G. Williamson & L. Potter

Distribution: NC. Richtersveld.

Habitat: Lower, south-facing slopes on granite-derived soils.

Rationale: A range-restricted species (EOO 156 km^2), known from only a few sites in a habitat that is not threatened.

F **Pelargonium divisifolium** Vorster

Status: **NT** D2

N.A. Helme & D. Raimondo

Distribution: WC. Riviersonderend Mountains.

Habitat: Lower sandstone slopes in fynbos.

Rationale: EOO < 140 km^2. Fewer than 10 known locations are potentially threatened by alien plants that invade the habitat.

Pelargonium ellaphieae E.M.Marais

Status: **EN** C2a(i)

D. Raimondo

Distribution: WC. Citrusdal to the Cape Peninsula.

Habitat: Sparse fynbos, growing amongst rocks on sandy mountain foothills.

Rationale: This species historically occurred from Muizenberg to Citrusdal, but is now restricted to a few subpopulations in the greater Citrusdal area. Subpopulations are usually small and scattered with 2–8 plants in isolated groups. It is therefore estimated that the total population consists of less than 2 500 plants and that there are not more than 250 adult individuals per subpopulation. The number of mature individuals is declining as a result of illegal collecting for the specialist horticultural trade.

Pelargonium exhibens Vorster

Status: **NT** D2

J.E. Victor & A.P. Dold

Distribution: EC. Grahamstown to Graaff-Reinet.

Habitat: Bushveld and succulent mountain scrub.

Rationale: Fewer than 10 known locations are potentially threatened by harvesting for traditional medicine.

F **Pelargonium fasciculaceum** E.M.Marais

Status: **NT** B1ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

Distribution: WC. Olifants River Valley to Nieuwoudtville.

Habitat: Deep sands in arid fynbos.

Rationale: EOO < 5 300 km^2. This species is declining as a result of expansion of rooibos tea and potato cultivation, but more than 10 locations remain at present.

F **Pelargonium glabriphyllum** E.M.Marais

Status: **Rare**

D. Raimondo & D.A. Kamundi†

Distribution: NC. Nieuwoudtville, Bokkeveld Escarpment.

Habitat: Dolerite flats.

Rationale: A range-restricted species, EOO 48 km^2. About 15% of the habitat has been transformed for wheat cultivation, but agriculture is no longer expanding in its habitat.

F **Pelargonium heterophyllum** Jacq.

Status: **CR** A2c; B1ab(ii,iii,v)+2ab(ii,iii,v)

N.A. Helme & D. Raimondo

Distribution: WC. Darling.

Habitat: Renosterveld on clay flats or low hills.

Rationale: A population reduction of > 80% is estimated based on habitat loss to wheat cultivation, vineyards and urban expansion over the past 90 years (generation length 30–40 years) and a single location remains, EOO and AOO < 10 km^2. This species continues to decline because of ongoing habitat loss.

F **Pelargonium leptum** L.Bolus

Status: **VU** D2

N.A. Helme & D. Raimondo

Distribution: WC. Olifants River Valley to Cape Flats.

Habitat: Pockets of shallow, sandy soil on the edges of sheets of exposed rocks.

Rationale: A naturally rare species known from fewer than five locations. Subpopulations are small, consisting of only a few scattered adult individuals and are potentially threatened by illegal collecting.

Pelargonium longicaule Jacq. var. **angustipetalum** C.Boucher

Status: **VU** D2

D. Raimondo

Distribution: WC. Piketberg.

Habitat: Well-drained soils derived from sandstone.

Rationale: One known location is potentially threatened by agriculture. The habitat is targeted for deciduous fruit cultivation.

Pelargonium nephrophyllum E.M.Marais

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

Distribution: WC. Matsikamma Mountains and Gifberg.

Habitat: Succulent karoo, on sandy and stony lower slopes and flats, which become temporarily inundated during infrequent heavy winter rainfall.

Rationale: EOO and AOO < 50 km^2. Two known locations are declining as a result of ongoing habitat loss for vineyard and wheat cultivation.

F **Pelargonium nummulifolium** Salisb.

Status: **Critically Rare**

N.A. Helme & D. Raimondo

Distribution: WC. Du Toit's Kloof Mountains.

Habitat: Rocky slopes at high altitude in montane fynbos.

Rationale: Known from one site in an inaccessible mountainous area.

F **Pelargonium ocellatum** J.J.A.van der Walt

Status: **Rare**

F. Cholo & D. Raimondo

Distribution: WC. Riviersonderend Mountains.

Habitat: Grows in shallow, well-drained, sandy soil on rocky north-facing slopes.

Rationale: Known from one site (EOO 10 km^2). No known threats.

F **Pelargonium ochroleucum** Harv. **Plate 67**

Status: **VU** B1ab(iii,iv,v)

J.H. Vlok & D. Raimondo

Distribution: EC WC. Great Fish River and Oudtshoorn.

Habitat: Deep loamy clays.

Rationale: EOO 10 500 km^2. Known from three disjunct locations. Two locations in the Grahamstown region are declining as a result of overgrazing. A subpopulation at Oudtshoorn has lost > 80% of its habitat to agriculture (wheat cultivation and ostrich farming) and road construction.

F **Pelargonium ovale** (Burm.f.) L'Hér. subsp. **hyalinum** Hugo

Status: **Rare**

D.A. Kamundi† & D. Raimondo

e**Distribution:** WC. From Gydo Pass near Ceres to Genadendal.

Habitat: Occasional in sandy open patches around restios, in dry river valleys.

Rationale: A habitat specialist known to occur at only a few sites in mountainous areas where it is not threatened.

F **Pelargonium petroselinifolium** G.Don

Status: **VU** D2

D. Raimondo, D.A. Kamundi† & R. Koopman

e**Distribution:** WC. Kouebokkeveld to Karoopoort.

Habitat: Montane fynbos or karroid vegetation.

Rationale: Fewer than five known locations are potentially threatened by agricultural expansion.

F **Pelargonium plurisectum** Salter

Status: **VU** B1ab(ii,iii,iv,v)

D. Raimondo & N.A. Helme

e**Distribution:** WC. Cape Peninsula to Bredasdorp.

Habitat: Shale flats.

Rationale: EOO 4 700 km^2. Fewer than 10 known locations remain after > 70% of the habitat has been transformed for agriculture and urban expansion and it continues to decline.

F **Pelargonium pubipetalum** E.M.Marais

Status: **VU** D2

N.A. Helme & D. Raimondo

e**Distribution:** NC. Namaqualand, Kamiesberg.

Habitat: Unknown, possibly renosterveld areas on granite flats, 1 200 m.

Rationale: One known location is potentially threatened by crop cultivation and overgrazing by livestock.

F **Pelargonium quarciticola** Meve & E.M.Marais

Status: **Rare**

D.A. Kamundi† & D. Raimondo

e**Distribution:** WC. Knersvlakte northeast and southeast of Bitterfontein.

Habitat: Succulent karoo shrubland.

Rationale: A range-restricted species, EOO < 500 km^2. Not known to be declining or threatened.

F **Pelargonium reflexum** (Andrews) Pers.

Status: **EN** A2ac; B1ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

e**Distribution:** NC. Bokkeveld Escarpment around Nieuwoudtville.

Habitat: Fynbos on rocky areas or sandy flats.

Rationale: EOO 25 km^2. Fewer than five locations remain after > 50% of the habitat has been transformed for rooibos tea cultivation over the past 10 years (generation length 10 years), and it continues to decline.

F **Pelargonium reniforme** Curtis subsp. **reniforme** **Plate 67**

Status: **DD**

J.E. Victor, A.P. Dold & A. de Castro

e**Distribution:** EC WC. Eastern Cape from Knysna to Mthatha.

Habitat: Grassland in a variety of habitats.

Rationale: This taxon is undergoing a decline as a result of medicinal harvesting, but sufficient data are not yet available to determine generation length and an overall population decline.

F **Pelargonium sidoides** DC.

Status: **Declining**

J.E. Victor, U. Feiter, A. de Castro, L. von Staden & D. Raimondo

Distribution: EC FS MP NW. From the Eastern Cape, through Lesotho and the Free State as far north as Lichtenburg in North West Province and Lydenburg district in Mpumalanga.

Habitat: Usually in short grassland, sometimes with occasional shrubs or trees, often in stony soils varying from clay-loam, shale or basalt.

Rationale: Very widespread (EOO 480 000 km^2). Tubers are harvested from export for the international medicinal trade. Although the plants coppice after harvesting, local declines occur when harvesting takes place in the absence of rainfall, and plants cannot recover.

Pelargonium suburbanum Clifford ex C.Boucher subsp. **suburbanum** **Plate 67**

Status: **VU** B1ab(ii,iii,v)

J.E. Victor & A.P. Dold

e**Distribution:** EC. Humansdorp to Port Elizabeth.

Habitat: Between low scrub and sand dunes on lowland flats in areas with an annual rainfall of 400–800 mm.

Rationale: EOO 2 400 km^2. Fewer than 10 locations remain after > 30% of the habitat of this taxon has been transformed for urban development and agriculture (over a period longer than three generations). Decline continues.

F **Pelargonium ternifolium** Vorster

Status: **NT** A2ac; B1ab(ii,iii,iv,v)

D. Raimondo & D.A. Kamundi†

e**Distribution:** WC. Moorreesburg to Stellenbosch.

Habitat: Dry renosterveld to wet fynbos over a wide range of altitudes.

Rationale: EOO 9 300 km^2. Less than 25 locations remain after at least 20% of the habitat has been transformed for wheat cultivation and vineyard expansion over the past 90 years (generation length 20–30 years). Habitat loss continues.

Pelargonium tongaense Vorster

Status: **Rare**

C.R. Scott-Shaw & L. von Staden

e**Distribution:** KZN. Tongaland.

Habitat: Dense, shady woodland in Sand Forest.

Rationale: A habitat specialist (EOO 2 000 km^2), known from six subpopulations. Although the habitat of this species is being degraded by subsistence farming, this species is still locally common so it is not considered threatened.

Pelargonium torulosum E.M.Marais

Status: **Rare**

D. Raimondo & D. Pillay

e**Distribution:** WC. Sutherland and Matjiesfontein.

Habitat: Arid areas in sandy soil under shrubs, rainfall 100–200 mm.

Rationale: A range-restricted species (EOO 74 km^2) that is not threatened.

Plate 67



J.H. Vlok

Pelargonium denticulatum Rare



J.H. Vlok

Pelargonium reniforme subsp. *reniforme* DD



J.H. Vlok

Pelargonium suburbanum subsp. *suburbanum* VU



J.H. Vlok

Pelargonium ochroleucum (leaves) VU



J.H. Vlok

Pelargonium ochroleucum (flowers) VU



J.H. Vlok

Pelargonium curviandrum VU

Plate 68



A.T.D. Abbott

Apodytes abbottii NT



M.T.P.A.

Streptocarpus decipiens Rare



M. Stalmans

Streptocarpus fasciatus VU



M. Lötter

Streptocarpus hilburtianus VU



P. Raal

Streptocarpus pogonites Rare

[F] **Pelargonium tripalmatum** E.M.Marais

Status: **Rare**

D.A. Kamundi† & D. Raimondo

[e]**Distribution:** NC. Richtersveld, Eksteenfontein.

Habitat: Succulent karoo shrubland.

Rationale: A range-restricted species (EOO 30 km^2) that is not threatened.

[F] **Pelargonium viciifolium** DC.

Status: **EN** A2ac; B1ab(ii,iii,iv,v)

D. Raimondo & N.A. Helme

[e]**Distribution:** WC. Malmesbury to Stellenbosch.

Habitat: Grassy renosterveld on shales on hillsides.

Rationale: A population reduction of > 50% is estimated based on habitat loss to wheat cultivation and vineyard and urban expansion over the past 60 years (generation length 30 years). EOO 3 950 km^2. Eight small, severely fragmented remaining subpopulations continue to decline because of ongoing habitat loss.

[F] **Pelargonium violiflorum** (Sweet) DC.

Status: **EN** B1ab(ii,iii,iv,v)

D. Raimondo & D.A. Kamundi†

[e]**Distribution:** WC. Worcester to Stormsvlei.

Habitat: Mountain renosterveld or karroid shrubland on shale or sandstone.

Rationale: EOO 300 km^2, AOO < 300 km^2. Six locations are known through herbarium records, but two are likely to be locally extinct owing to habitat loss. It continues to decline as a result of ongoing habitat loss to vineyard expansion.

[F] **Pelargonium woodii** R.Knuth

Status: **DD**

D. Raimondo & F. Cholo

[e]**Distribution:** KZN. Drakensberg mountain range.

Habitat: Unknown.

Rationale: A poorly known species, last collected in 1912 at an unspecified locality in the KwaZulu-Natal Drakensberg.

GESNERIACEAE

Streptocarpus Lindl.

[F] **Streptocarpus confusus** Hilliard subsp. **lebomboensis** Hilliard & B.L.Burtt

Status: **DD**

T.J. Edwards & D. Raimondo

Distribution: KZN. Mozambique, Swaziland and KwaZulu-Natal along the Lebombo Mountains.

Habitat: West-facing mountain slopes.

Rationale: Very few collections of this taxon are known. It occurs in a very poorly collected area and much of the inaccessible but likely habitat still has to be surveyed before it can be assigned to a threat category.

[F] **Streptocarpus cyaneus** S.Moore subsp. **longi-tommii** Weigend & T.J.Edwards

Status: **VU** D2

M. Lötter, J.E. Burrows & L. von Staden

[e]**Distribution:** MP. Long Tom Pass to Kaapsehoop.

Habitat: Afromontane forest margins and cliffs at very high altitudes, sometimes just below the snow line, in seepage areas.

Rationale: AOO < 20 km^2. Six known locations are potentially threatened by invading alien plants. Although it is unlikely that the rocky habitat of this taxon has been or will be converted to plantations, surrounding grassland areas have been extensively transformed and fragmented by plantations (67% transformation). Rocky areas in between plantations are particularly prone to invasion by pines and other alien plant species (e.g. wattles and a species of *Chromolaena*), as these areas are protected from grassland fires.

Streptocarpus decipiens Hilliard & B.L.Burtt **Plate 68**

Status: **Rare**

J. Truter, S.J. Smithies & F. Daniels

[e]**Distribution:** MP. Hebronberg and Pilgrim's Rest.

Habitat: Grows under shallow overhangs of sandstone outcrops on grass slopes, more rarely it grows in horizontal cracks towards the base of larger cliffs.

Rationale: A range-restricted (EOO 320 km^2) habitat specialist that occurs in areas protected from the predominant cause of habitat loss in the area: Forestry plantations.

[F] **Streptocarpus denticulatus** Turrill

Status: **VU** D2

M. Lötter, J. Truter & J.E. Victor

[e]**Distribution:** MP. Dullstroom and Elandsfontein River Valley.

Habitat: Ravines.

Rationale: Fewer than five known locations are potentially threatened by invading alien plants.

[F] **Streptocarpus fasciatus** T.J.Edwards & Kunhardt **Plate 68**

Status: **VU** D2

M. Lötter, J.E. Burrows & L. von Staden

[e]**Distribution:** MP. Nelspruit to Kaapmuiden.

Habitat: Shady woodland, among granite boulders.

Rationale: One known location is potentially threatened by invading alien plants and habitat degradation as a result of deforestation for subsistence use: this shade-dependent species might be affected if its woodland habitat is cleared of woody species.

[F] **Streptocarpus fenestra-dei** Weigend & T.J.Edwards

Status: **VU** D2

M. Lötter, J.E. Burrows & L. von Staden

[e]**Distribution:** MP. God's Window to Bourke's Luck mine.

Habitat: Shallow soils in rocky areas in forested gullies.

Rationale: Two known locations are potentially threatened by harvesting for horticultural purposes and trampling by tourists.

Streptocarpus floribundus Weigend & T.J.Edwards

Status: **VU** D2

J. Truter, S.J. Smithies & F. Daniels

[e]**Distribution:** KZN. Kranskop.

Habitat: Scarp forest, on dolerite cliffs, 900–1 100 m.

Rationale: Two known locations are potentially threatened by habitat degradation as a result of deforestation for subsistence use and grazing by goats and cattle.

Streptocarpus formosus (Hilliard & B.L.Burtt) T.J.Edwards

Status: **Rare**

C.R. Scott-Shaw, J.E. Victor & L. von Staden

Distribution: EC KZN. Southern KwaZulu-Natal and northern Pondoland, from the Umzinto district southwards to the Mzamba River.

Habitat: Restricted to Natal Group and Msikaba Formation sandstones, in shaded areas in forested ravines and scarp forest.

Rationale: EOO 565 km^2. Locally common within a restricted, specialised habitat. Possibly threatened by forest degradation at two sites in the northern part of the range, but most subpopulations occur in inaccessible sites or are protected within reserves.

F **Streptocarpus hilburtianus** T.J.Edwards **Plate 68**

Status: **VU** D2

M. Lötter, J.E. Burrows & L. von Staden

Distribution: MP. Mount Anderson.

Habitat: Afromontane grassland on lithosols above cliffs, in very exposed positions, sparingly shaded by rock ledges and associated scrub, 2 000 m and above.

Rationale: Two known locations are potentially threatened by invading alien plants and mining.

Streptocarpus kentaniensis L.L.Britten & Story

Status: **VU** D2

J.E. Victor, E.J. van Jaarsveld & A.P. Dold

Distribution: EC. Kentani and Kei Mouth.

Habitat: Dry forest, among moss and lichen on rocks.

Rationale: Three known locations are potentially threatened by habitat degradation as a result of deforestation for subsistence use.

Streptocarpus latens Hilliard & B.L.Burtt

Status: **Rare**

J. Truter & F. Daniels

Distribution: MP. Steenkampsberg.

Habitat: Mossy, moist rock crevices, 2 225 m.

Rationale: A range-restricted (EOO < 150 km^2) habitat specialist that is not threatened as its habitat is unsuitable for forestry plantations.

F **Streptocarpus lilliputana** D.U.Bellstedt & T.J.Edwards

Status: **VU** D2

J.E. Victor

Distribution: EC. Pondoland, Lupatana Gorge and Ntsubane Plateau.

Habitat: Rock seepages in deep shade.

Rationale: Three known locations are potentially threatened by habitat degradation as a result of deforestation for subsistence use.

F **Streptocarpus longiflorus** (Hilliard & B.L.Burtt) T.J.Edwards

Status: **VU** D2

J. Truter, J.E. Victor & L. von Staden

Distribution: LM. Summit of Blouberg.

Habitat: Exposed sites among rocks in northern escarpment afromontane fynbos and mistbelt grasslands above 1 900 m.

Rationale: One known location is potentially threatened by habitat degradation as a result of overgrazing and too frequent fires.

F **Streptocarpus makabengensis** Hilliard

Status: **VU** D1

L. von Staden & P.J.D. Winter

Distribution: LM. Makgabeng Mountain.

Habitat: Steep upper slopes and cliffs, in moist areas under overhanging rocks in the mistbelt, southern aspects, 1 220 m.

Rationale: A range-restricted species endemic to a rare, specialised habitat (EOO < 0.01 km^2). Known from two subpopulations and less than 1 000 plants.

Streptocarpus modestus L.L.Britten

Status: **Rare**

J. Truter, S.J. Smithies & F. Daniels

Distribution: EC. Mkambati to Magwa Gorge.

Habitat: Wedged in crevices of rocky cliff faces along the lips of some of the forested gorges in Pondoland.

Rationale: A range-restricted Pondoland endemic (EOO < 500 km^2) that is not threatened because of the inaccessibility of its habitat.

F **Streptocarpus molweniensis** Hilliard subsp. **eshowicus** Hilliard & B.L.Burtt

Status: **VU** D2

C.M. Gibbon, J. Truter & J.E. Victor

Distribution: KZN. Eshowe.

Habitat: Coastal scarp forest at high altitude, in moist areas in crevices on banks.

Rationale: Two known locations are potentially threatened by urban expansion.

F **Streptocarpus molweniensis** Hilliard subsp. **molweniensis**

Status: **VU** D2

J.E. Victor

Distribution: KZN. Eskotene Kloof near the Molweni River.

Habitat: Scarp forests in kloofs.

Rationale: Three known locations are potentially threatened by urban expansion.

F **Streptocarpus montigena** L.L.Britten

Status: **Rare**

J.E. Victor & J. Truter

Distribution: EC. Eastern Cape, Winterberg and Elandsberg.

Habitat: On narrow ledges of cliffs and forested gorges, 1 525 m.

Rationale: A habitat specialist known from three collecting records. Not threatened because of the inaccessibility of its habitat.

F **Streptocarpus occultis** Hilliard

Status: **VU** D2

M. Lötter, J. Truter & L. von Staden

Distribution: MP. Ermelo to Swaziland border.

Habitat: Grassland, on granite outcrops or boulders.

Rationale: Four known locations are potentially threatened by invading alien plants and inappropriate fire management.

Streptocarpus pogonites Hilliard & B.L.Burtt **Plate 68**

Status: **Rare**

M. Lötter & J.E. Victor

Distribution: MP. Barberton Mountains.

Habitat: Wedged in the crevices of bare rock.
Rationale: A range-restricted species occurring only in a specialised habitat. Not threatened because of the inaccessibility of its habitat.

Streptocarpus porphyrostachys Hilliard
Status: **NT** D2
C.R. Scott-Shaw & J.E. Victor
e**Distribution:** EC KZN. Umtamvuna River to Lupatana River.
Habitat: Scarp forest, on damp rock faces in gorges and along the lips of the gorges under moist rock overhangs.
Rationale: A range-restricted habitat specialist (AOO < 35 km^2), known from fewer than 10 locations and potentially threatened by habitat degradation as a result of deforestation for subsistence use.

F **Streptocarpus sp. nov.**
Voucher: *Edwards, Hughes & Moeller 3241* NU
Status: **EN** B1ab(iii,v)
T.J. Edwards & D. Raimondo
e**Distribution:** MP. Mariepskop to Blyde.
Habitat: Ecotone between grassland and dry mistbelt forest and in south-facing grassland areas.
Rationale: EOO < 500 km^2. Three known locations remain after much of the habitat has been converted to forestry plantations. It continues to decline because of alien plants that invade the habitat.

F **Streptocarpus sp. nov.**
Voucher: *Edwards, Edwards & Styles 3231* NU
Status: **VU** D1
T.J. Edwards & D. Raimondo
e**Distribution:** EC. Pondoland.
Habitat: Pondoland scarp forest.
Rationale: Known from one small patch of scarp forest in the Msikaba Nature Reserve, where less than 1 000 mature individuals occur.

Streptocarpus wendlandii Spreng.
Status: **Rare**
J. Truter & F. Daniels
e**Distribution:** KZN. Ngoye Forest.
Habitat: Scarp forest 300–500 m, grows on steep earth banks but is occasionally epiphytic.
Rationale: A range-restricted species (EOO < 200 km^2), occurring within a protected area, therefore not threatened.

GREYIACEAE

Greyia Hook. & Harv.

Greyia flanaganii Bolus
Status: **Rare**
J.E. Victor & A.P. Dold
e**Distribution:** EC. Queenstown and Komga.
Habitat: Exposed rocky slopes in thicket.
Rationale: Occurs as scattered individuals, known from 5–10 subpopulations, and has no known threats.

GRUBBIACEAE

Grubbia P.J.Bergius

Grubbia rourkei Carlquist
Status: **Rare**
D. Pillay
e**Distribution:** WC. Kogelberg.
Habitat: Fynbos, on damp sandstone slopes at high altitudes.
Rationale: A high-altitude habitat specialist known from fewer than five sites within a protected area.

GUNNERACEAE

Gunnera L.

F **Gunnera perpensa** L.
Status: **Declining**
V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter, A.M. Ngwenya & A.P. Dold
Distribution: EC FS G KZN LM MP NW WC. Western Cape to Ethiopia.
Habitat: Damp marshy area and vleis from coast to 2 400 m.
Rationale: Large volumes of this species are traded in traditional medicine markets and declines in availability and local extirpations have been noted, but it is widespread, somewhat resilient to harvesting and tends to grow back after the roots have been removed. However, given the high volumes traded, successive harvesting will have an impact on the population in conjunction with the degradation and decline of its habitat.

HYDROSTACHYACEAE

Hydrostachys Thouars

F **Hydrostachys polymorpha** Klotzsch ex A.Br.
Status: **VU** D2
E. Sieben, L. von Staden & D. Raimondo
Distribution: KZN. Several rivers in the KwaZulu-Natal Midlands. Also occurs in the Kunene River on Namibia-Angola border and elsewhere in southern and central Africa as far north as the Congo.
Habitat: Grows on submerged rocks in clear, fast-flowing perennial streams, rapids and waterfalls.
Rationale: A habitat specialist with an AOO < 10 km^2 in South Africa. It is potentially threatened by habitat degradation due to sedimentation and reduced water flow as a result of extraction of water. The South African subpopulations are isolated from the rest of the global population, and the national assessment is not downgraded.

ICACINACEAE

Apodytes E.Mey. ex Arn.

F **Apodytes abbottii** Potgieter & A.E.van Wyk **Plate 68**
Status: **NT** B1ab(iii,v)+2ab(iii,v)
L. von Staden & A.T.D. Abbott
e**Distribution:** EC KZN. Oribi Gorge to Port St Johns.
Habitat: Pondoland scarp forest, in forest margins and fire protected crevices and rock cliff faces above forested gorges.
Rationale: A range-restricted species (EOO 900 km^2, AOO < 900 km^2) that occurs in a highly threatened habitat. There are more than 10 locations where the number of mature individuals is declining because of too frequent and intense fires and harvesting for firewood and building materials.

Apodytes geldenhuysii A.E.van Wyk & Potgieter

Status: **Rare**

C.J. Geldenhuys & J.E. Victor

e**Distribution:** WC. Stellenbosch to Hermanus.

Habitat: Margins of afromontane forest.

Rationale: A range-restricted (EOO < 500 km^2) habitat specialist. Most subpopulations occur in protected areas.

LAMIACEAE

Plectranthus L'Hér.

F **Plectranthus brevimentum** T.J.Edwards

Status: **Critically Rare**

P.A. Manyama

e**Distribution:** EC. Lupatana River Gorge.

Habitat: Steep sandstone gorges.

Rationale: Restricted to a single river gorge, in an inaccessible habitat where it is unlikely to be threatened.

Plectranthus dolomiticus Codd

Status: **Critically Rare**

P.A. Manyama

e**Distribution:** LM. Penge Valley.

Habitat: Dolomite endemic, on cliffs.

Rationale: Known from a single site, no serious threats to its inaccessible cliff habitat.

Plectranthus ernstii Codd Plate 69

Status: **NT** D2

C.R. Scott-Shaw, E.J. van Jaarsveld & J.E. Victor

e**Distribution:** EC KZN. Oribi Gorge to Mkambati.

Habitat: Scarp Forest, in humus-rich pockets of soil in rock crevices on south-facing cliffs.

Rationale: Fewer than 10 known locations are potentially threatened by invading alien plants.

F **Plectranthus esculentus** N.E.Br.

Status: **DD**D

L. von Staden & D. Styles

Distribution: KZN LM MP. Widely cultivated, but natural range is poorly known.

Habitat: Natural habitat is not well known, possibly sandstone grasslands and the edges of dry woodland.

Rationale: Cultivated as a food crop extensively in the past, but cultivation has declined in favour of more successful domesticated crops. With the decline in cultivation it now appears that this species is exceptionally rare in the wild, and its natural distribution within South Africa is very poorly understood. What appears to be a wild population was recently discovered in threatened grasslands near Durban, but the full extent of the range is at present too poorly known to be able to place this species in a threatened category.

F **Plectranthus hilliardiae** Codd subsp. **australis** Van Jaarsv. & A.E.van Wyk Plate 69

Status: **VU** D2

P.A. Manyama

e**Distribution:** EC. Lusikisiki to Lupatana Gorge.

Habitat: Occurs along forest margins and streambanks.

Rationale: Fewer than five known locations are potentially threatened by expanding forest plantations, deforestation of its forest habitat for subsistence use and agriculture.

F **Plectranthus mzimvubensis** Van Jaarsv. Plate 69

Status: **Rare**

P.A. Manyama

e**Distribution:** EC. Mzimvubu River, upstream from Port St Johns.

Habitat: Savanna vegetation on south-facing Ecca Group shale cliff faces.

Rationale: Known from one small population. May occur elsewhere in similar habitats within the river valley. Not threatened.

Plectranthus oertendahlii T.C.E.Fr.

Status: **Rare**

C.R. Scott-Shaw & D. Raimondo

e**Distribution:** EC KZN. Port Shepstone to Umtamvuna.

Habitat: Scarp forest in wooded river valleys near the coast.

Rationale: A range-restricted species (EOO 500 km^2) that is not declining.

Plectranthus oribiensis Codd

Status: **Rare**

E.J. van Jaarsveld & L. Potter

e**Distribution:** KZN. Oribi Gorge to Umtamvuna River.

Habitat: Pondoland scarp forest, on forest margins and wooded kloofs.

Rationale: A range-restricted Pondoland endemic (EOO < 485 km^2), known two sites, both within protected areas. Not threatened.

F **Plectranthus porcatus** Van Jaarsv. & P.J.D.Winter Plate 69

Status: **VU** D2

P.A. Manyama, L. von Staden & P.J.D. Winter

e**Distribution:** LM. Sekhukhuneland, northern Leolo Mountains.

Habitat: Dry savanna, among boulders on southwest-facing, rocky norite slopes.

Rationale: One known location is potentially threatened by habitat degradation, mining and harvesting for medicinal purposes.

Plectranthus praetermissus Codd

Status: **VU** D2

J.E. Victor & E. Cloete

e**Distribution:** EC. Port St Johns to Ntsubane.

Habitat: Shaded areas on the floor of coastal subtropical forest.

Rationale: Five known locations are potentially threatened by the degradation of the forest habitat through deforestation for subsistence use and invasion by alien plants.

F **Plectranthus stylesii** T.J.Edwards

Status: **Critically Rare**

P.A. Manyama

e**Distribution:** EC. Msikaba River Gorge.

Habitat: Pondoland scarp forest on Msikaba Formation Sandstone.

Rationale: Known from one site. Not threatened because of the inaccessibility of its habitat.

F **Plectranthus venteri** Van Jaarsv. & Hankey Plate 69

Status: **Rare**

J.E. Victor, P.J.D. Winter & S.J. Siebert

e**Distribution:** LM. Sekhukhuneland, Leolo Mountains.

Habitat: Among norite boulders, usually in shallow soil and rock pockets.
Rationale: A range-restricted species (EOO 150 km^2) known from fewer than 10 sites. The habitat is inaccessible and not threatened.

Rotheca Raf.

[F] **Rotheca pilosa** (H.Pearson) P.P.J.Herman & Retief
Status: **DD**D
D. Raimondo, P.A. Manyama & D.A. Kamundi†
[e]**Distribution:** EC. Kentani.
Habitat: Unknown.
Rationale: Known from two herbarium specimens collected between 1900 and 1911 in Kentani. This area is now severely degraded and this species is likely to be threatened but not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Salvia L.

[F] **Salvia obtusata** Thunb.
Status: **VU** B1ab(ii,iii,iv,v)
D. Raimondo & A.P. Dold
[e]**Distribution:** EC. Port Elizabeth to Grahamstown.
Habitat: Grassland.
Rationale: EOO 2 300 km^2. The remaining 6–10 locations are declining because of ongoing habitat loss to urban expansion around Coega, and coastal development east of Port Elizabeth.

[F] **Salvia repens** Burch. ex Benth. var. **keiensis** Hedge
Status: **DD**D
D. Raimondo & A.P. Dold
[e]**Distribution:** EC. Mount Fletcher to Komga.
Habitat: Grassland.
Rationale: Known from three disjunct records, last collected in 1962. Much of its range has been severely degraded by overgrazing. Field surveys in this poorly explored part of the country are required before the conservation status of this taxon can be determined.

[F] **Salvia schlechteri** Briq.
Status: **DD**D
D. Raimondo, P.F. Matlamela & D.A. Kamundi†
[e]**Distribution:** EC. Xobo Valley, Transkei.
Habitat: Coastal grasslands.
Rationale: Last collected in 1960, it is likely to be threatened by overgrazing and expanding rural settlements, but this species is too poorly known to determine its threat status.

[F] **Salvia thermarum** Van Jaarsv.
Status: **VU** D2
N.A. Helme, E.J. van Jaarsveld & D. Raimondo
[e]**Distribution:** WC. Worcester, Badsberg.
Habitat: North-facing slopes in fynbos amongst quartzitic sandstone rocks and soil.
Rationale: One known location is potentially threatened by spreading alien invasive hakeas.

Satureja L.

[F] **Satureja compacta** Killick
Status: **Rare**
D. Raimondo, P.A. Manyama & D.A. Kamundi†
[e]**Distribution:** KZN. KwaZulu-Natal Drakensberg Mountains.
Habitat: Montane grassland, 2 300 m.
Rationale: A range-restricted species (EOO 350 km^2), known from three subpopulations. No known threats.

Satureja grandibracteata Killick
Status: **Rare**
C.R. Scott-Shaw & D. Raimondo
[e]**Distribution:** KZN. KwaZulu-Natal Drakensberg Mountains, around Cathedral Peak.
Habitat: Montane Grassland, 2 000 m.
Rationale: A range-restricted Drakensberg endemic that has no known threats.

Stachys L.

[F] **Stachys rivularis** J.M.Wood & M.S.Evans
Status: **DD**D
C.R. Scott-Shaw, I.M. Johnson, D. Raimondo & L. von Staden
[e]**Distribution:** KZN. Mooi River and Lions River districts, KwaZulu-Natal Midlands.
Habitat: Montane grasslands, 1 500 m.
Rationale: A poorly known species that was last collected in the 1960s from a very small area in the KwaZulu-Natal Midlands. It is likely to be threatened by forestry, agriculture and urban development, but not enough is known about this species to determine its status.

Syncolostemon E.Mey. ex Benth.

Syncolostemon bolusii (N.E.Br.) D.F.Otieno
Status: **Rare**
J.E. Victor & C.R. Scott-Shaw
[e]**Distribution:** KZN. Drakensberg Mountains, Giant's Castle to Cathkin Peak.
Habitat: Subalpine grassland, 2 000–3 000 m.
Rationale: Known from a restricted range (EOO < 200 km^2) but locally common in the Giant's Castle area. Occurs within a protected area and is not threatened.

[F] **Syncolostemon incanus** (Codd) D.F.Otieno **Plate 69**
Status: **EN** A2c
L. von Staden
[e]**Distribution:** MP. Kaapsehoop.
Habitat: Montane grasslands, in shallow sandy soils among outcrops of Black Reef Quartzite, 1 800 m.
Rationale: EOO 25 km^2. A population reduction of at least 50% over the past 100 years (generation length > 30 years) is estimated based on a 76% habitat loss to forestry plantations and local declines at two of three known locations.

[F] **Syncolostemon latidens** (N.E.Br.) Codd
Status: **VU** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)
C.R. Scott-Shaw, I.M. Johnson, D. Raimondo & L. von Staden
[e]**Distribution:** KZN. Greytown to Kranskop.
Habitat: Rocky grasslands, where grasslands border with thornveld or forest, 900–1 100 m.
Rationale: EOO 730 km^2, and because of its habitat specificity, AOO is estimated to be < 20 km^2. Seven known locations are declining because of ongoing habitat loss, mainly due to expanding forestry plantations and invasion by alien plants.

Syncolostemon ramosus (Codd) D.F.Otieno

Status: **DD**D

J.E. Victor & C.R. Scott-Shaw

e**Distribution:** KZN. Lebombo Mountains and Mkuze Game Reserve.

Habitat: Savanna, in closed woodland.

Rationale: The distribution and population status of this species are not known well enough to determine its conservation status.

F **Syncolostemon ramulosus** E.Mey. ex Benth. Plate 69

Status: **VU** D2

T.J. Edwards & D. Raimondo

e**Distribution:** EC KZN. Umtamvuna River to Mtentu River.

Habitat: Pondoland coastal grassland, on sheets of exposed bedrock with only shallow pockets of soil within crevices. Also occurs on forest margins, restricted to Msikaba Formation Sandstone, 200–500 m.

Rationale: Four known locations are potentially threatened by grazing by livestock outside reserves.

Syncolostemon rugosifolius (M.Ashby) D.F.Otieno

Status: **Rare**

P.J.D. Winter & J.E. Victor

e**Distribution:** LM. South of Lekgalameetse Nature Reserve.

Habitat: Quartzite rocks.

Rationale: A range-restricted species (EOO < 500 km^2) known from two sites and not threatened.

Syncolostemon stalmansii (A.J.Paton & K.Balkwill) D.F.Otieno Plate 69

Status: **Rare**

M. Lötter, J.E. Burrows & J.E. Victor

Distribution: MP. Barberton to Swaziland border.

Habitat: Barberton Montane Grassland.

Rationale: EOO 188 km^2. Most of the range of this species falls within the Songimvelo Nature Reserve, so it is not threatened.

Tetradenia Benth.

Tetradenia barberae (N.E.Br.) Codd

Status: **Rare**

E.J. van Jaarsveld & L. Potter

e**Distribution:** EC. Mbashe River to Kei River.

Habitat: Thicket in dry, rocky river valleys.

Rationale: Occurs as small, scattered subpopulations over a wide range. Its habitat is fairly inaccessible to livestock, therefore considered rare but not threatened.

F **Tetradenia tuberosa** T.J.Edwards

Status: **Rare**

T.J. Edwards & D. Raimondo

e**Distribution:** KZN. KwaZulu-Natal Midlands around Richmond.

Habitat: Valley bushveld on steep slopes and in river gorges.

Rationale: A range-restricted species (EOO 45 km^2) that is not threatened.

Thorncroftia N.E.Br.

Thorncroftia longiflora N.E.Br.

Status: **Rare**

E.J. van Jaarsveld, L. von Staden & L. Potter

Distribution: KZN MP. Barberton to northern KwaZulu-Natal.

Habitat: Rocky hillsides, in pockets of humus on rock slabs, 1 200 m.

Rationale: This rare and probably overlooked species was known for a very long time only from the area around the type locality northeast of Barberton. A few recent collections have shown that the range extends through Swaziland into northern KwaZulu-Natal. It occurs as localised subpopulations in a rocky habitat that is not threatened.

F **Thorncroftia lotterii** T.J.Edwards

Status: **VU** D2

M. Lötter, J.E. Burrows & L. von Staden

e**Distribution:** MP. Ugutugulu Gorge below the Shiyalongubu Dam.

Habitat: Rocky areas on forest margins that are protected from fire.

Rationale: EOO and AOO < 1.6 km^2. One known location is potentially threatened by habitat degradation as a result of deforestation for subsistence use and invasion by alien plants.

Thorncroftia media Codd

Status: **Critically Rare**

J.E. Victor

e**Distribution:** LM. Drakensberg Mountains west of Trichardtsdal.

Habitat: Afromontane forest in sandstone outcrops.

Rationale: Known from a single site. Not threatened.

Thorncroftia thorncroftii (S.Moore) Codd

Status: **VU** D2

M. Lötter, J.E. Burrows & L. von Staden

Distribution: MP. Barberton to Pigg's Peak.

Habitat: Barberton montane grassland, quartzitic soils. Restricted to rocky outcrops, which may be because these areas are fire refugia, 1 525 m.

Rationale: AOO < 20 km^2. The habitat of this species has been severely fragmented and degraded by forestry plantations and although not currently declining, this species is potentially threatened by alien plants that typically invade fragments between plantations.

LAURACEAE

Cryptocarya R.Br.

F **Cryptocarya latifolia** Sond.

Status: **Declining**

V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya

e**Distribution:** EC KZN. Port St Johns to Zululand.

Habitat: Evergreen forests along streams and rivers, coastal forests and coastal plateaus.

Rationale: Population decline over the last three generations (120 years) estimated to be ± 20%, due to bark harvesting and habitat destruction. The decline is expected to continue. However, the species is considered to be resilient and survives in some degraded watercourses, and population reduction is not expected to exceed 30% over three generations.

F **Cryptocarya myrtifolia** Stapf

Status: **VU** A2cd

V.L. Williams, D. Raimondo, A.P. Dold, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya

e**Distribution:** EC KZN. Scattered from Port St Johns to Zululand.

Plate 69


A.T.D. Abbott

Plectranthus hilliardiae subsp. *australis* VU


R. Heydenrych

Plectranthus porcatus VU


A.T.D. Abbott

Syncolostemon ramulosus VU


M. Lötter

Syncolostemon incanus EN


A.T.D. Abbott

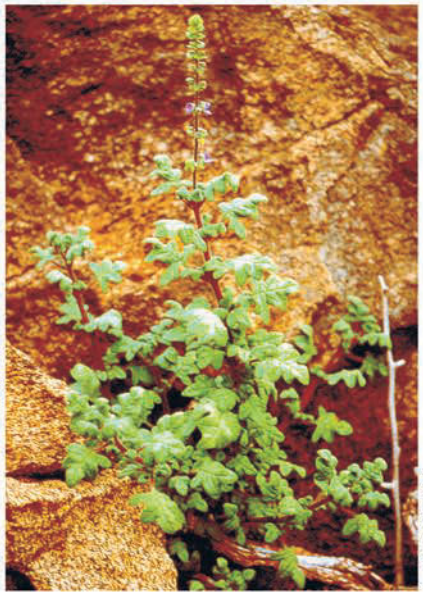
Plectranthus ernstii NT


M. Lötter

Syncolostemon stalmansii Rare


E. van Jaarsveld

Plectranthus mzimvubensis Rare


E. van Jaarsveld

Plectranthus venteri Rare

Plate 70



P. Wragg

Turraea pulchella VU



C. Paterson-Jones

Lobelia valida VU



N.A. Helme

Lobelia eurypoda var. *fissurarum* Rare



H. Erhardt

Anisodontea racemosa VU



N.A. Helme

Monopsis variifolia EN



N.A. Helme

Anisodontea dissecta CR

Habitat: Evergreen, mistbelt and scarp forests, on steep slopes and valley bottoms, close to waterfalls and streams.

Rationale: We estimate that there has been a population reduction of > 30% over the last three generations (150 years) due to bark harvesting, deforestation and habitat loss for urban expansion in the greater Durban area.

[F] **Cryptocarya transvaalensis** Burtt Davy

Status: **Declining**

V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya

Distribution: LM MP. Occurs along the eastern escarpment, from Swaziland to the Wolkberg Mountains and also the Soutpansberg Mountains, and northwards to tropical Africa.

Habitat: Limited to afromontane forests up to 1 700 m.

Rationale: Due to the patchy distribution of the species and the recent exploitation of some subpopulations in Mpumalanga for bark harvesting, an overall continuing decline in the species is suspected, but population reduction is unlikely to exceed 30% over three generations.

Cryptocarya wyliei Stapf

Status: **NT** B1ab(iii,v)

L. von Staden & A.T.D. Abbott

[e] **Distribution:** EC KZN. Pondoland, from Ntsubane to Oribi Gorge. Scattered subpopulations occur further north in KwaZulu-Natal as far as Ngoye and Nkandla.

Habitat: Scarp forest. Occurs on forest margins, in fringes of riverine forest, thicket and coastal bush.

Rationale: EOO 19 600 km^2. More than 10 locations remain in a highly threatened and restricted habitat. There is a continuing decline in quality and extent of habitat and number of mature individuals as a result of too frequent and intense fires, crop cultivation, forestry, urban expansion and invasion by alien plants.

Dahlgrenodendron J.J.M.van der Merwe & A.E.van Wyk

Dahlgrenodendron natalense (J.H.Ross) J.J.M.van der Merwe & A.E.van Wyk **Plate 52**

Status: **EN** C2a(i)

L. von Staden & A.T.D. Abbott

[e] **Distribution:** EC KZN. Pondoland, from Mkambati to Umtamvuna, with isolated occurrences at Umdoni Park, Pinetown and Ozwatini. Possibly extinct at Ngoye.

Habitat: Scarp forest, most typically on Natal Group and Msikaba Formation sandstones, but also on granite. Usually near streams.

Rationale: A rare tree occurring in isolated forest fragments in KwaZulu-Natal, but more abundant in Pondoland forests. Subpopulations in the northern parts of the range are small and not viable, some consisting of a single individual. These are declining as a result of failed reproduction. Even in healthier subpopulations in the Pondoland region, reproduction occurs mainly through coppicing and seedlings are extremely rare. Pondoland subpopulations contain up to 40–50 mature individuals, and the total population is estimated to be less than 1 000 mature individuals.

Ocotea Aubl.

Ocotea bullata (Burch.) Baill.

Status: **EN** A2bd

V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter, A.M. Ngwenya & A.P. Dold

[e] **Distribution:** EC KZN LM MP WC. Widespread in South Africa from the Cape Peninsula to the Wolkberg Mountains in Limpopo.

Habitat: High, cool, evergreen afromontane forests.

Rationale: The species was heavily exploited for the timber industry in the past, and more recently for bark for the traditional medicine trade. Despite its wide, but disjunct, distribution, subpopulations in at least 53% of its range have been heavily exploited, rendering them extinct, near-extinct, rare, scarce or fragmented. We estimate a minimum of 50% population reduction in the last 240 years (generation length 80 years).

Ocotea kenyensis (Chiov.) Robyns & R.Wilczek

Status: **VU** D1

V.L. Williams & D. Raimondo

Distribution: EC KZN LM MP. Eastern Cape through KwaZulu-Natal, Mpumalanga and Limpopo Provinces and into Swaziland, Zimbabwe, Mozambique, Tanzania and Kenya.

Habitat: Scarp and mistbelt forest.

Rationale: A naturally rare species in South Africa, with probably less than 1 000 mature plants. No bark harvesting or population decline has been observed. The species has not been assessed globally, but it is recorded as being Critically Endangered in Zimbabwe because of habitat destruction by forestry plantations. The South African population is unlikely to be significantly affected by dispersal from other regional subpopulations, especially since the natural habitat is highly fragmented, and the national assessment is not downgraded.

LOBELIACEAE

Cyphia P.J.Bergius

Cyphia bolusii E.Phillips

Status: **VU** D2

M. Lötter, D. McMurtry & D. Raimondo

Distribution: MP. Barberton to Mbabane (Swaziland).

Habitat: Serpentine soils.

Rationale: Two known subpopulations in South Africa are potentially threatened by mining and alien plants that invade the habitat. Six subpopulations in Swaziland are likely to be declining as a result of ongoing degradation of habitat due to invasion by alien plants and overgrazing and are unlikely to have significant dispersal effects on the South African population.

Cyphia corylifolia Harv.

Status: **DD**D

C.R. Scott-Shaw & J.E. Victor

[e] **Distribution:** KZN LM. KwaZulu-Natal Midlands, Nkandla and Sekhukhuneland.

Habitat: Mistbelt forest margins and scrub.

Rationale: Known from three herbarium collections made before 1940. Distribution and population status are too poorly known to determine its threat status.

[F] **Cyphia latipetala** C.Presl in Eckl. & Zeyh.

Status: **DD**D

D. Raimondo, P.A. Manyama & D.A. Kamundi†

[e]**Distribution**: WC. Palmiet River.

Habitat: Unknown.

Rationale: Known only from the type collection from the 1800s. Not enough is known about the distribution, specific habitat or population status of this species to determine its threat status.

Cyphia longiflora Schltr.

Status: **NT** B1ab(ii,iii,iv,v)

D. Raimondo

[e]**Distribution**: NC. Namaqualand, Kamiesberg to Eksteenfontein.

Habitat: Deep sands in mountain renosterveld.

Rationale: EOO 9 300 km^2. Known from nine locations but suspected to occur at 10–20 locations. Declining as a result of habitat loss to crop cultivation on the Kamiesberg.

Cyphia longilobata E.Phillips

Status: **DD**D

J.E. Victor & D. Raimondo

[e]**Distribution**: WC. Oudtshoorn, Cango Caves.

Habitat: Unknown.

Rationale: Known only from the type, collected in 1941. This species is too poorly known to determine its threat status.

Cyphia oligotricha Schltr.

Status: **VU** D2

D. Raimondo

[e]**Distribution**: WC. Knersvlakte.

Habitat: Seasonally waterlogged valleys and floodplains, in sandy soil.

Rationale: EOO < 170 km^2. Four known locations are potentially threatened by agriculture.

Cyphia ranunculifolia E.Wimm.

Status: **Critically Rare**

D. Raimondo

[e]**Distribution**: WC. Pakhuis Pass, northern Cederberg.

Habitat: Cracks in rock slab.

Rationale: Known from one subpopulation. Occurs in a rocky habitat within a protected area and is not threatened.

Cyphia salteri E.Wimm.

Status: **DD**D

D. Raimondo

[e]**Distribution**: WC. Vanrhynsdorp.

Habitat: Unknown.

Rationale: Only known from the type, collected in 1932. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Lobelia L.

[F] **Lobelia ardisiandroides** Schltr.

Status: **Rare**

D. Raimondo

[e]**Distribution**: EC WC. Riviersonderend Mountains and Langkloof.

Habitat: Sheltered rocks at high altitude.

Rationale: A high-altitude habitat specialist that occurs as scattered populations, but is not threatened.

Lobelia barkerae E.Wimm.

Status: **CR** PE

D. Raimondo

[e]**Distribution**: WC. Potberg, Albertsdal.

Habitat: Ferricrete fynbos.

Rationale: This species is known from only one location, where it was last collected in 1947. Its habitat has been largely transformed for crop cultivation, and habitat remnants are heavily infested with invasive alien plants.

[F] **Lobelia comptonii** E.Wimm.

Status: **Rare**

N.A. Helme & D. Raimondo

[e]**Distribution**: WC. Cederberg.

Habitat: Fynbos, in sites sheltered by rocks at medium to high altitude.

Rationale: A range-restricted species (EOO < 250 km^2) that occurs within a protected area and is not threatened.

Lobelia dasyphylla E.Wimm.

Status: **DD**D

J.E. Victor

[e]**Distribution**: WC. Langeberg Mountains near Suurbraak.

Habitat: Fynbos, on middle to upper sandstone slopes.

Rationale: A poorly known species, known from one herbarium record collected in 1893.

[F] **Lobelia eckloniana** (C.Presl) A.DC.

Status: **Rare**

N.A. Helme & D. Raimondo

[e]**Distribution**: WC. Cape Peninsula.

Habitat: Damp rocks on sandstone slopes in fynbos.

Rationale: A range-restricted species to the Cape Peninsula (EOO 53 km^2). Its entire range falls within the Table Mountain National Park where it is not threatened.

[F] **Lobelia eurypoda** E.Wimm. var. **fissurarum** E.Wimm. **Plate 70**

Status: **Rare**

N.A. Helme

[e]**Distribution**: WC. Seweweekspoort, Klein Swartberg.

Habitat: Upper sandstone slopes in rock crevices.

Rationale: A rare, range-restricted taxon (EOO < 30 km^2). It occurs in rocky habitats and is not threatened.

Lobelia hypsibata E.Wimm.

Status: **Rare**

D. Raimondo

[e]**Distribution**: WC. Langeberg Mountains, Tradouw Pass.

Habitat: Rocky sandstone slopes in fynbos.

Rationale: A rare, range-restricted species (EOO < 200 km^2) that is not threatened.

Lobelia laurentioides Schltr.

Status: **DD**D

J.E. Victor

[e]**Distribution**: WC. Bain's Kloof to Caledon.

Habitat: Rocky slopes in fynbos.

Rationale: A poorly known taxon known from very few herbarium specimens, most of which were collected before 1960.

[F] **Lobelia muscoides** Cham.

Status: **Rare**
N.A. Helme
[e]**Distribution:** WC. Langeberg.
Habitat: Partially shaded, damp areas on upper sandstone fynbos slopes.
Rationale: A range-restricted species (EOO < 20 km^2), known from three subpopulations protected within the Marloth Nature Reserve where it is not threatened.

Lobelia nugax E.Wimm.

Status: **DD**D
P.B. Phillipson & J.E. Victor
[e]**Distribution:** WC. Skurweberg in the Kouebokkeveld Mountains.
Habitat: Unknown.
Rationale: Known only from the type collection, made in 1897. This species is too poorly known to determine its status.

[F] **Lobelia trullifolia** Hemsl. subsp. **delicatula** (Compton) Thulin

Status: **Rare**
M. Lötter, J.E. Burrows & L. von Staden
Distribution: MP. Swaziland and Graskop.
Habitat: Damp, sheltered areas among rocks.
Rationale: Known from one subpopulation in South Africa where it is not threatened. There are three records of this taxon from Swaziland, but the status in Swaziland is unknown.

Lobelia valida L.Bolus **Plate 70**

Status: **VU** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)
D. Raimondo
[e]**Distribution:** WC. De Hoop to Still Bay.
Habitat: Coastal limestone hills.
Rationale: EOO 460 km^2, AOO < 460 km^2. Fewer than 10 known locations are declining as a result of alien plants that inviade the habitat and coastal development.

Lobelia zwartkopensis E.Wimm.

Status: **CR** PE
J.E. Victor & A.P. Dold
[e]**Distribution:** EC. Port Elizabeth, Swartkops River.
Habitat: Albany Alluvial Vegetation.
Rationale: Known only from two collections, presumably made at the same site in the early 1800s. Probably extinct as a result of urban development.

Monopsis Salisb.

Monopsis kowynensis E.Wimm.

Status: **VU** D2
J.E. Burrows, S.M. Burrows, M. Lötter & J.E. Victor
[e]**Distribution:** MP. Graskop.
Habitat: Mistbelt grassland.
Rationale: Three known locations are potentially threatened by alien plants that invade the habitat.

[F] **Monopsis variifolia** (Sims) Urb. **Plate 70**

Status: **EN** A2bc; B1ab(iii)+2ab(iii)
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Porterville to Wolseley.
Habitat: Renosterveld, in wet clays.
Rationale: A population reduction of at least 50% is estimated based on a > 60% habitat loss to wheat cultivation and vineyards over the past 100 years (generation length 50 years). EOO 205 km^2, AOO < 205 km^2. Habitat quality at three known remaining locations continues to decline because of invasion by alien plants.

Wimmerella L.Serra, M.B.Crespo & Lammers

Wimmerella bifida (Thunb.) L.Serra, M.B.Crespo & Lammers

Status: **DD**D
J.E. Victor
[e]**Distribution:** WC. Gifberg.
Habitat: Unknown.
Rationale: Last collected in 1911, this species is too poorly known to determine its status.

[F] **Wimmerella frontidentata** (E.Wimm.) L.Serra, M.B.Crespo & Lammers

Status: **Rare**
D. Raimondo, P.A. Manyama & D.A. Kamundi†
[e]**Distribution:** WC. Anysberg.
Habitat: Shady rocks, 1 000–1 600 m.
Rationale: A rare, range-restricted species (EOO < 300 km^2) that has no known threats.

[F] **Wimmerella hedyotidea** (Schltr.) L.Serra, M.B.Crespo & Lammers

Status: **DD**D
D. Raimondo, P.A. Manyama & D.A. Kamundi†
[e]**Distribution:** WC. Bain's Kloof.
Habitat: Sandstone slopes, 1 000–2 000 m.
Rationale: Known only from one record, collected in 1896. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Wimmerella longitubus (E.Wimm.) L.Serra, M.B.Crespo & Lammers

Status: **DD**D
J.E. Victor
[e]**Distribution:** WC. Langeberg Mountains near Riversdale.
Habitat: Unknown.
Rationale: Known from a few old herbarium collections.

LYTHRACEAE

Nesaea Kunth

Nesaea alata Immelman

Status: **Rare**
D. Pillay & L. von Staden
Distribution: LM MP. Limpopo and southeastern Mpumalanga lowveld. Also northeastern Swaziland and possibly Mozambique.
Habitat: Edges of shallow pans in low-lying areas.
Rationale: EOO 3 000–5 000 km^2. Known from only three sites. Much of the range falls within the Kruger National Park, where it is unlikely to be threatened.

Nesaea wardii Immelman

Status: **VU** D2
J.E. Victor & A.E. van Wyk
[e]**Distribution:** KZN. Maputaland.
Habitat: Wetlands.
Rationale: Fewer than five known locations are potentially threatened by wetland destruction.

MALPIGHIACEAE

Acridocarpus Guill. & Perr.

[FS] **Acridocarpus natalitius** A.Juss.

Status: **Declining**

V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter, A.M. Ngwenya & A.P. Dold

Distribution: EC KZN LM MP. Eastern Cape to Limpopo Province, and Swaziland and southern Mozambique.

Habitat: Subtropical forest, forest margins, sand forest and bushveld.

Rationale: The roots of this species are harvested for traditional medicine, and it is declining in northern KwaZulu-Natal, but there are no signs of destructive harvesting in the Eastern Cape. We suspect that the overall population has declined by less than 20%.

MALVACEAE

Abutilon Mill.

[F] **Abutilon flanaganii** A.Meeuse

Status: **DD**D

F. Daniels

[e]**Distribution:** EC. Komga.

Habitat: Unknown.

Rationale: Known only from one record, collected in 1889. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Anisodontea C.Presl

Anisodontea dissecta (Harv.) Bates **Plate 70**

Status: **CR** B2ab(iii,v); C2a(i)

D. Raimondo & N.A. Helme

[e]**Distribution:** WC. Bredasdorp and Swellendam.

Habitat: Shale, clay soil.

Rationale: EOO < 1 600 km^2, AOO < 10 km^2. Five small, severely fragmented subpopulations each consisting of less than 50 plants remain after > 70% of the habitat has been transformed for crop cultivation. The total population of this palatable species is suspected to be less than 250 plants and it continues to decline because of overgrazing.

Anisodontea gracilis Bates

Status: **DD**D

F. Daniels & O.A. Leistner

[e]**Distribution:** WC. Cederberg, Matjiesrivier.

Habitat: Rocky slopes.

Rationale: Known only from the type, collected in 1944. This species is too poorly known to determine its status.

Anisodontea malvastroides (Baker f.) Bates

Status: **Rare**

J.E. Victor & A.P. Dold

[e]**Distribution:** EC. Escarpment ranges of Graaff-Reinet and Middelburg.

Habitat: Arid escarpments.

Rationale: Occurs as scattered subpopulations. Not threatened.

Anisodontea procumbens (Harv.) Bates

Status: **Rare**

F. Daniels & O.A. Leistner

[e]**Distribution:** WC. Ceres, Worcester and Robertson.

Habitat: Seasonally wet places in succulent karoo vegetation.

Rationale: A habitat specialist that occurs as small, localised subpopulations. Not threatened.

Anisodontea pseudocapensis Bates

Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v)

N.A. Helme, F. Daniels & O.A. Leistner

[e]**Distribution:** WC. Riversdale to Gourits River.

Habitat: Stony clay slopes.

Rationale: EOO and AOO < 500 km^2. Fewer than five known locations are declining as a result of habitat loss to crop cultivation and grazing and trampling by livestock.

Anisodontea racemosa (Harv.) Bates **Plate 70**

Status: **VU** A2a; D2

D. Raimondo, D.A. Snijman & E. Marinus

[e]**Distribution:** WC. Nieuwoudtville to Clanwilliam.

Habitat: South-facing slopes on rocky outcrops or on dolerite sills.

Rationale: This large, showy species, which is unlikely to be overlooked, is known from only three locations, one of which is now locally extinct because of overgrazing. It is inferred that this represents a 30% reduction in the population over the past 25 years (generation length 30 years). Decline is not continuing, but overgrazing remains a potential threat.

Anisodontea theronii Bates

Status: **DD**D

F. Daniels & O.A. Leistner

[e]**Distribution:** WC. Calitzdorp.

Habitat: Arid kloof.

Rationale: Known only from the type, collected in 1956. This species is too poorly known to determine its status.

Grewia L.

Grewia pondoensis Burret

Status: **NT** B1ab(iii,v)+2ab(iii,v)

L. von Staden & A.T.D. Abbott

[e]**Distribution:** EC KZN. Oribi Gorge to Port St Johns.

Habitat: Pondoland scarp forest on Msikaba Formation Sandstone, in forest margins, cliffs and rocky places, 100–500 m.

Rationale: EOO 2 800 km^2, AOO < 50 km^2. Known from more than 10 locations, and subpopulations are not severely fragmented. The quality and extent of the habitat of this species and number of mature individuals are declining as a result of too frequent and intense grassland fires, harvesting for firewood and building materials, and invasion by alien plants.

Hermannia L.

Hermannia cordifolia Harv.

Status: **DD**D

D. Gwynne-Evans & D. Raimondo

[e]**Distribution:** WC. Piketberg.

Habitat: Unknown.

Rationale: Only two collections are known, and this species was last recorded before 1940. Its specific habitat and locations are not known. One collection was made at an unspecified locality near Kapteinskloof, an area where significant amounts of habitat have been converted to fruit orchards. This species may be very threatened.

Hermannia disticha Schrad.

Status: **Rare**

D. Gwynne-Evans & L. Potter

e**Distribution:** WC. Montagu and Koo Valley.

Habitat: Rocky kloofs.

Rationale: A rare, range-restricted species (EOO 56 km^2) that is not threatened as its habitat is inaccessible and nonarable.

Hermannia helicoidea I.Verd.

Status: **DD**D

D. Gwynne-Evans & D. Raimondo

e**Distribution:** WC. Pakhuis and Olifants River Mountains.

Habitat: Unknown.

Rationale: Last collected in 1940, the exact habitat and locations are unknown. Owing to high levels of ongoing habitat loss within the range of this species, it is likely to be threatened.

Hermannia hispidula Rchb.f.

Status: **VU** D2

D. Gwynne-Evans & L. Potter

e**Distribution:** WC. Piketberg.

Habitat: Mountain slopes at the foot of sandstone ridges, in humus-rich pockets of sandy soil.

Rationale: Fewer than five known locations are potentially threatened by grazing by livestock and by fruit cultivation.

Hermannia micrantha Adamson

Status: **Rare**

D. Gwynne-Evans & D. Raimondo

e**Distribution:** WC. Cape Peninsula.

Habitat: Dry southern and western slopes of Table Mountain, generally on lower slopes.

Rationale: EOO < 20 km^2. Five subpopulations are known, but two are likely to be locally extinct as a result of urban expansion of Cape Town. The remaining subpopulations are protected in the Table Mountain National Park and further decline is unlikely.

F **Hermannia muirii** Pillans

Status: **VU** B1ab(iii)+2ab(iii)

D. Raimondo & D. Gwynne-Evans

e**Distribution:** WC. Still Bay to Gouritsmond.

Habitat: Sandy valleys between limestone ridges.

Rationale: EOO 275 km^2, AOO < 275 km^2. Habitat quality at fewer than 10 known locations is declining because of invasion by alien plants.

Hermannia pillansii Compton

Status: **Critically Rare**

J.E. Victor & L. von Staden

e**Distribution:** WC. Witteberg near Laingsburg.

Habitat: Fynbos, on high-altitude, arid sandstone slopes above 1 300 m.

Rationale: A range-restricted habitat specialist (EOO 37 km^2), known from one subpopulation. Not threatened because of the inaccessibility of its habitat.

Hermannia procumbens Cav. subsp. **myrrhifolia** (Thunb.) De Winter

Status: **EN** B1ab(ii,iii,iv,v)

D. Gwynne-Evans & D. Raimondo

e**Distribution:** WC. Malmesbury to Clanwilliam and Saldanha Bay to Lambert's Bay.

Habitat: Sands associated with granite outcrops.

Rationale: EOO < 2 000 km^2. Several small, severely fragmented subpopulations remain after most of the habitat of this taxon has been transformed for urban and agricultural expansion. Habitat loss as a result of crop cultivation and coastal development continues.

Hermannia procumbens Cav. subsp. **procumbens**

Status: **CR** B1ab(ii,iii,iv,v)

D. Gwynne-Evans & D. Raimondo

e**Distribution:** WC. Cape Peninsula and Bokbaai.

Habitat: Coastal sands.

Rationale: EOO < 100 km^2. Two small, severely fragmented subpopulations are declining as a result of urban and coastal development.

Hermannia repetenda I.Verd.

Status: **DD**D

J.E. Victor, L. Potter & A.P. Dold

e**Distribution:** EC WC. Clanwilliam and Graaff-Reinet.

Habitat: Shale slopes.

Rationale: This taxon exhibits an unusual disjunction between the Clanwilliam and Graaff-Reinet. Further collections are required to adequately understand its distribution and population status.

Hermannia rugosa Adamson

Status: **VU** B1ab(ii,iii,iv,v)

D. Gwynne-Evans & D. Raimondo

e**Distribution:** WC. Cape Peninsula to Paarl.

Habitat: Shale and granite slopes in renosterveld.

Rationale: EOO < 3 500 km^2. Fewer than 10 locations remain and continue to decline because of ongoing habitat loss to urban expansion, crop cultivation and invasion by alien plants.

Hermannia sandersonii Harv.

Status: **VU** B1ab(iii,v)

D. Raimondo

e**Distribution:** KZN. Camperdown, New Hanover, Pietermaritzburg, Durban, Umgeni and Glenside on the Noodsberg.

Habitat: Natal Group Sandstone, on steep slopes in silty sand.

Rationale: EOO 640 km^2. Fewer than 10 known locations of this palatable species continue to decline because of overgrazing by livestock. More than 30% of its habitat has been lost to commercial forestry plantations and crop cultivation, but generation length is unknown.

F **Hermannia violacea** (Burch. ex DC.) K.Schum.

Status: **Rare**

C.L. Bredenkamp, J.E. Victor & D. Raimondo

e**Distribution:** EC. Bruintjieshoogte to the Amathole Mountains.

Habitat: Forest margins.

Rationale: A habitat specialist, known from three sites within a range of 2 500 km^2. It is likely that a few more undiscovered subpopulations exist.

Melhania Forssk.

Melhania polygama I.Verd.

Status: **Rare**

J.E. Victor

e**Distribution:** KZN. Umfolozi Game Reserve.

Habitat: Grassy hill slopes.

Rationale: A range-restricted species (EOO < 100 km^2) with no known threats.

Sterculia L.

Sterculia alexandri Harv.

Status: **Rare**

J.E. Victor, A.E. van Wyk & E.J. van Jaarsveld

e**Distribution:** EC. Groendal Nature Reserve to Kouga Dam.

Habitat: Sandstone slopes in fynbos.

Rationale: A range-restricted, but locally common species (EOO 480 km^2), known from five subpopulations.

MELIACEAE

Turraea L.

Turraea pulchella (Harms) T.D.Penn. **Plate 70**

Status: **VU** A2c; B1ab(ii,iii,iv,v)

C.R. Scott-Shaw & L. von Staden

e**Distribution:** EC KZN. First collected near Kentani, but never found there again. Currently known from around Durban and near the Umtamvuna River in southern KwaZulu-Natal.

Habitat: Sandstone grasslands, often near the boundary with thicket or valley bushveld above river gorges, or on top of sandstone plateau, 300–650 m.

Rationale: A population reduction of > 30% is estimated based on 30–50% habitat loss over the past 100 years (generation length estimated as ± 40 years). Current EOO 2 800–6 500 km^2, but this estimate is very uncertain and could also be as much as 18 000 km^2 if more subpopulations are found in the poorly explored Pondoland area. There is a continuing decline in quality of habitat, number of mature individuals, locations and subpopulations mainly as a result of urban expansion and woody encroachment of its grassland habitat. Remaining subpopulations are severely fragmented.

Turraea streyi F.White & Styles

Status: **CR** PE

L. von Staden

e**Distribution:** KZN. St-Michaels-on-Sea.

Habitat: Coastal grassland, in partial shade in and around the margins of scrub forest and bush clumps, 30–100 m.

Rationale: Two known wild subpopulations disappeared as a result of dense invasive alien encroachment, and one introduced subpopulation of three individuals remains near the type locality. More than 80% of its coastal habitat has been transformed as a result of sugarcane cultivation, coastal development and invasion by alien plants. There is little hope that it could be found elsewhere in the former range.

MENYANTHACEAE

Nymphoides Ség.

F **Nymphoides forbesiana** (Griseb.) Kuntze

Status: **DD**D

E. Sieben & D. Raimondo

Distribution: KZN. Widespread in tropical Africa, from the Ivory Coast to Sudan, and southwards to Angola and South Africa. The distribution of this species in South Africa is unknown.

Habitat: Temporary pools, ponds and rivers up to 1 660 m.

Rationale: No data available for this species in South Africa.

Villarsia Vent.

F **Villarsia goldblattiana** Ornduff

Status: **VU** D2

J.E. Victor & D. Raimondo

e**Distribution:** WC. Cape Peninsula.

Habitat: Wet soil and marshes.

Rationale: Very restricted range (EOO < 200 km^2) and limited habitat (AOO < 10 km^2) with ± 10 locations known. Potentially threatened by invading alien plants.

MESEMBRYANTHEMACEAE

Acrodon N.E.Br.

F **Acrodon deminutus** Klak **Plate 71**

Status: **VU** D2

C. Klak, N.A. Helme, D. Raimondo & J.E. Victor

e**Distribution:** WC. Bredasdorp.

Habitat: Clay with overlying quartz pebbles in renosterveld.

Rationale: Four known locations are potentially threatened by trampling and grazing by livestock.

F **Acrodon parvifolius** R.du Plessis **Plate 71**

Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v)

C. Klak, N.A. Helme & D. Raimondo

e**Distribution:** WC. Hawston to Bot River and Shaw's Pass.

Habitat: Silcrete and quartz patches over clays in areas of sparse vegetation cover.

Rationale: EOO 154 km^2, AOO < 154 km^2. Six small, severely fragmented subpopulations remain after most of the habitat has been transformed by urban development, wheat cultivation, invasion by alien plants and road construction and maintenance, and decline continues.

F **Acrodon purpureostylus** (L.Bolus) Burgoyne

Status: **EN** B1ab(ii,iii,iv,v)

J.H. Vlok, P.M. Burgoyne, C. Klak & D. Raimondo

e**Distribution:** WC. Bonnievale to Robertson and McGregor.

Habitat: Dry gravel loams, often stony slopes or flats on shale.

Rationale: EOO 2 500 km^2. Eight small, severely fragmented subpopulations remain on remnants of natural habitat after most of the habitat has been transformed for the cultivation of wheat. Habitat loss to expanding vineyards is causing a continuing decline.

F **Acrodon quarcicola** H.E.K.Hartmann **Plate 71**

Status: **EN** B1ab(ii,iii,iv)

C. Klak, N.A. Helme & D. Raimondo

e**Distribution:** WC. Cape Agulhas.

Habitat: Quartzitic slopes.

Rationale: EOO < 1 500 km^2. Four known locations continue to decline owing to urban development, invasion by alien plants and crop cultivation.

F **Acrodon subulatus** (Mill.) N.E.Br. **Plate 71**

Status: **EN** B1ab(iii); C2a(i)

N.A. Helme, D. Raimondo & C. Klak

e**Distribution:** WC. Bot River to Hermanus.

Habitat: Renosterveld, on shale-derived clays and exposed shales.

Rationale: EOO < 2 000 km^2. Five known locations continue to decline because of invasion by alien plants, crop cultivation and habitat degradation due to trampling by

livestock. Subpopulations are typically small, ranging from 20–100 mature individuals. The total population consists of less than 270 individuals.

Aloinopsis Schwantes

Aloinopsis rubrolineata (N.E.Br.) Schwantes

Status: **Rare**

J.E. Victor & D. Raimondo

e**Distribution:** EC. Graaff-Reinet.

Habitat: Unknown.

Rationale: A poorly known succulent, collected only twice before. It is probably naturally rare and overlooked.

Antimima N.E.Br. emend. Dehn

F **Antimima androsacea** (Marloth & Schwantes) H.E.K.Hartmann

Status: **Critically Rare**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

e**Distribution:** NC. Sutherland, Roggeveld Escarpment.

Habitat: Rocky slopes, 1 200–1 800 m.

Rationale: A range-restricted species (EOO 10 km^2), known from one site where it is not threatened.

F **Antimima aristulata** (Sond.) Chess. & Gideon F.Sm.

Status: **VU** B1ab(ii,iii,iv,v)

D. Raimondo, C. Klak & N.A. Helme

e**Distribution:** WC. Cape Peninsula to Yzerfontein and Moorreesburg.

Habitat: Shallow shale or granite soils.

Rationale: EOO < 5 800 km^2. A formerly common species that has lost > 80% of its habitat to wheat cultivation, vineyards and urban development. Less than 20 severely fragmented remaining subpopulations continue to decline because of ongoing habitat loss to vineyards and urban expansion on the northern outskirts of Cape Town.

F **Antimima biformis** (N.E.Br.) H.E.K.Hartmann

Status: **Rare**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

e**Distribution:** WC. Barrydale.

Habitat: Shale-sandstone crevices in Succulent Karoo vegetation, 190–300 m.

Rationale: A range-restricted (EOO 50 km^2) habitat specialist occurring in sites where it is protected from the impact of grazing by livestock and crop cultivation.

F **Antimima condensa** (N.E.Br.) H.E.K.Hartmann

Status: **Rare**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

e**Distribution:** WC. Little Karoo, Montagu.

Habitat: Open places in fynbos on decomposed Witteberg quartzite, 500–1 100 m.

Rationale: A range-restricted species (EOO < 500 km^2) known from fewer than five sites. Occurs in a habitat that is not threatened.

F **Antimima emarcescens** (L.Bolus) H.E.K.Hartmann

Status: **Rare**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

e**Distribution:** NC. Sutherland, Roggeveld Escarpment.

Habitat: Loam between rocks, often in shrubby vegetation, 1 200–1 400 m.

Rationale: A range-restricted species (EOO < 500 km^2) that occurs as sparsely scattered individuals in the shelter of bushes. Not threatened.

F **Antimima fergusoniae** (L.Bolus) H.E.K.Hartmann

Status: **Rare**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

e**Distribution:** WC. Laingsburg.

Habitat: Gravel slopes, 200–1 000 m.

Rationale: A range-restricted species (EOO < 500 km^2) with no known threats.

F **Antimima hamatilis** (L.Bolus) H.E.K.Hartmann

Status: **VU** D2

C. Klak & D. Raimondo

e**Distribution:** WC. Worcester.

Habitat: Karroid hills and plains.

Rationale: Three known locations are potentially threatened by vineyard and urban expansion.

Antimima lawsonii (L.Bolus) H.E.K.Hartmann

Status: **Rare**

C. Klak & D. Raimondo

e**Distribution:** NC. Kimberley district.

Habitat: Limestone soils.

Rationale: A habitat specialist known from three sites. Not threatened.

Antimima leipoldtii (L.Bolus) H.E.K.Hartmann

Status: **VU** B1ab(ii,iii,iv,v)

C. Klak & D. Raimondo

e**Distribution:** WC. Worcester to Robertson.

Habitat: Mainly on loamy flats or on gentle quartzitic slopes.

Rationale: EOO 2 200 km^2. Six known locations are declining because of ongoing habitat loss to vineyards.

F **Antimima limbata** (N.E.Br.) H.E.K.Hartmann

Status: **EN** B1ab(ii,iii,v)

N.A. Helme, C. Klak & D. Raimondo

e**Distribution:** WC. Langebaan to St Helena.

Habitat: Granite rocks.

Rationale: EOO < 560 km^2. Several small, severely fragmented subpopulations remain on isolated granite outcrops surrounded by agriculture and urban areas and continue to decline because of ongoing habitat loss.

F **Antimima lodewykii** (L.Bolus) H.E.K.Hartmann

Status: **Rare**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

e**Distribution:** NC. Kamieskroon.

Habitat: Granite and quartzite crevices, 200–400 m.

Rationale: A rare habitat specialist occurring in sites protected from the impact of grazing by livestock and crop cultivation.

F **Antimima lokenbergensis** (L.Bolus) H.E.K.Hartmann

Status: **Rare**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

e**Distribution:** NC. Bokkeveld Escarpment.

Habitat: Sandstone pavements, 800–1 500 m.

Rationale: A range-restricted species (EOO 320 km^2) with no known threats.

[F] **Antimima mucronata** (Haw.) H.E.K.Hartmann

Status: **VU** B1ab(iii)

N.A. Helme, C. Klak & D. Raimondo

[e]**Distribution:** WC. Moorreesburg, Hopefield, Malmesbury and Vredenburg.

Habitat: Well-drained, clay, stony soils in open patches amongst shrubs.

Rationale: EOO < 3 000 km^2. Fewer than 10 locations remain after at least 94% of the habitat has been transformed for the cultivation of wheat. Further habitat loss to agriculture is causing a continuing decline.

[F] **Antimima nordenstamii** (L.Bolus) H.E.K.Hartmann

Status: **Rare**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

[e]**Distribution:** WC. Vanrhynsdorp, Hol River near Vredendal.

Habitat: Quartz ridges, 200–400 m.

Rationale: A range-restricted species (EOO < 300 km^2) that occurs in a habitat where it is likely to be safe from the impact of agriculture and livestock.

[F] **Antimima piscodora** (L.Bolus) H.E.K.Hartmann

Status: **DD**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

[e]**Distribution:** NC WC. Prince Albert.

Habitat: Unknown.

Rationale: A poorly known species. Insufficient data on its distribution, specific habitat and population status prevent an assessment of its threat status.

[F] **Antimima subtruncata** (L.Bolus) H.E.K.Hartmann

Status: **DD**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

[e]**Distribution:** NC. Calvinia and Sutherland.

Habitat: Shale soils with high loam contents, in shrub associations with only few succulents.

Rationale: Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Argyroderma N.E.Br.

[F] **Argyroderma framesii** L.Bolus subsp. **hallii** (L.Bolus) H.E.K.Hartmann

Status: **Rare**

P.M. Burgoyne

[e]**Distribution:** WC. Koekenaap to Vanrhynsdorp.

Habitat: Quartz patches.

Rationale: A rare, range-restricted taxon (EOO 483 km^2) known from only a few collections.

Argyroderma subalbum (N.E.Br.) N.E.Br. **Plate 71**

Status: **Rare**

E.J. van Jaarsveld, L. Potter & D. Raimondo

[e]**Distribution:** WC. Knersvlakte.

Habitat: Quartz patches.

Rationale: A range-restricted species (EOO < 300 km^2) that is not threatened.

Argyroderma testiculare (Aiton) N.E.Br.

Status: **Rare**

D. Raimondo & E.J. van Jaarsveld

[e]**Distribution:** WC. Knersvlakte.

Habitat: Quartz patches.

Rationale: A rare, range-restricted species (EOO < 300 km^2) that is not threatened.

[F] **Argyroderma theartii** Van Jaarsv.

Status: **Rare**

P.A. Manyama & P.M. Burgoyne

[e]**Distribution:** WC. Northern Knersvlakte.

Habitat: Gentle hill slopes, in quartz gravel.

Rationale: A range-restricted habitat specialist (EOO 30 km^2), known from two subpopulations. It has no known threats.

Astridia Dinter

Astridia herrei L.Bolus

Status: **Rare**

J.E. Victor

[e]**Distribution:** NC. Richtersveld.

Habitat: Central Richtersveld Mountain Shrubland.

Rationale: A range-restricted species (EOO < 20 km^2), known from three subpopulations. No known threats.

Astridia speciosa L.Bolus

Status: **Rare**

J.E. Victor

[e]**Distribution:** NC. Richtersveld.

Habitat: Central Richtersveld Mountain Shrubland.

Rationale: A range-restricted species (EOO less than 500 km^2), known from only three subpopulations, but not threatened.

Astridia vanheerdei L.Bolus

Status: **Rare**

J.E. Victor

Distribution: NC. Richtersveld to southern Namibia.

Habitat: Dolomite outcrops.

Rationale: Known from three sites, one of which is in South Africa. No threats are affecting the South African subpopulation.

Bergeranthus Schwantes

Bergeranthus addoensis L.Bolus

Status: **VU** B1ab(iii)

A.P. Dold, J.E. Victor & L. von Staden

[e]**Distribution:** EC. Between Port Elizabeth, Uitenhage, Kirkwood and Darlington Dam.

Habitat: Mesic and xeric succulent thicket, 10–400 m.

Rationale: EOO 1 817 km^2. Habitat at 8–10 known locations is declining as a result of urban and industrial expansion of Port Elizabeth and Uitenhage, overgrazing and invasion by alien plants.

Bergeranthus albomarginatus A.P.Dold & S.A.Hammer

Status: **VU** D2

A.P. Dold & J.E. Victor

[e]**Distribution:** EC. Fort Beaufort, Kat River Dam.

Habitat: Valley thicket on exposed intrusive dolerite sill, 800 m.

Rationale: Part of the population at a single known location declined when the Kat River Dam was constructed and some of the habitat was flooded. Although no longer declining, additional construction around the dam remains a potential threat.

Bergeranthus artus L.Bolus

Status: **VU** D2
A.P. Dold & J.E. Victor

eDistribution: EC. Queenstown to Elliot.
Habitat: Rocky dolerite and sandstone outcrops, 1 400–1 600 m.
Rationale: Two known locations are potentially threatened by grazing and trampling by livestock.

Bergeranthus nanus A.P.Dold & S.A.Hammer

Status: **VU** D2
A.P. Dold & J.E. Victor

eDistribution: EC. Graaff-Reinet to the area between Somerset East and Cradock.
Habitat: Nama-Karoo and montane grassland.
Rationale: Two known locations are potentially threatened by grazing and trampling by livestock.

Bijlia N.E.Br.

Bijlia tugwelliae (L.Bolus) S.A.Hammer

Status: **VU** A2c; B1ab(iii,v)+2ab(iii,v)
J.H. Vlok & D. Raimondo

eDistribution: WC. Gamka Dam and Prince Albert.
Habitat: Quartzitic sandstone.
Rationale: We suspect that a 30% reduction in the population has taken place over the past 90 years (generation length ± 30 years) as a result of urban expansion around Prince Albert and grazing by livestock throughout its range. EOO 370 km^2, AOO < 370 km^2. The remaining 5–10 locations continue to decline because of ongoing overgrazing.

Braunsia Schwantes

Braunsia stayneri (L.Bolus) L.Bolus

Status: **Rare**
C. Klak & D. Raimondo

eDistribution: WC NC. Between Ceres, Sutherland and Calvinia.
Habitat: Sandstone slopes.
Rationale: A range-restricted species (EOO < 350 km^2), known from two subpopulations. No known threats.

Braunsia vanrensburgii (L.Bolus) L.Bolus

Status: **Rare**
N.A. Helme, D.I.W. Euston-Brown & D. Raimondo

eDistribution: WC. De Hoop Nature Reserve to Wydgelegen.
Habitat: Limestone ridges in fynbos.
Rationale: A range-restricted (EOO < 100 km^2) habitat specialist with a known population of ± 2 000 mature individuals that is not threatened.

Brianhuntleya Chess., S.A.Hammer & I.Oliv.

[F] **Brianhuntleya intrusa** (Kensit) Chess., S.A.Hammer & I.Oliv.

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)
C. Klak & D. Raimondo

eDistribution: WC. Robertson.
Habitat: Pebbly clays on gentle, south-facing karroid scrubland.
Rationale: EOO and AOO < 500 km^2. Fewer than five remaining locations continue to decline because of ongoing habitat loss to expanding vineyards and olive orchards.

Brownanthus Schwantes

[F] **Brownanthus fraternus** Klak

Status: **EN** B1ab(iii,v)
C. Klak & J.E. Victor

eDistribution: WC. Bot River to Swellendam.
Habitat: Renosterveld, clay with overlying quartz pebbles.
Rationale: EOO < 2 500 km^2. Five locations are known. One location is threatened by alien *Eucalyptus* invasion from a nearby plantation, and the others are declining because of grazing and trampling by livestock.

Brownanthus glareicola Klak

Status: **VU** D2
C. Klak & D. Raimondo

eDistribution: WC. Vanrhynsdorp.
Habitat: Flat to gently sloping patches of quartz gravel on clay.
Rationale: Two known locations are potentially threatened by overgrazing and trampling, crop cultivation and mining.

[F] **Brownanthus lignescens** Klak

Status: **VU** D1+2
C. Klak, D. Raimondo & J.E. Victor

eDistribution: NC. Springbok.
Habitat: Shale, gentle slopes covered in quartz.
Rationale: Less than 300 mature individuals occurring at two known locations are potentially threatened by mining and road construction.

Carpobrotus N.E.Br.

[F] **Carpobrotus muirii** (L.Bolus) L.Bolus

Status: **NT** B1ab(ii,iii)+2ab(ii,iii)
P.M. Burgoyne & F. Daniels

eDistribution: WC. Still Bay to De Hoop and Riversdale.
Habitat: Lowland areas, primarily within 10 km of the coast.
Rationale: EOO 840 km^2, AOO < 840 km^2. The 10–15 locations are declining as a result of ongoing habitat loss to coastal development, wheat cultivation and invasion by alien plants.

Caryotophora Leistner

Caryotophora skiatophytoides Leistner

Status: **EN** D
P.M. Burgoyne & J.E. Victor

eDistribution: WC. Agulhas Plain.
Habitat: Lowland coastal fynbos, on sandy flats.
Rationale: Three known subpopulations of this rare, range-restricted species (EOO < 30 km^2) are all small, typically with less than 50 plants. The population, which consists of no more than 150 mature individuals, is not declining, but is potentially threatened by invading alien plants.

Cephalophyllum N.E.Br.

[F] **Cephalophyllum diversiphyllum** (Haw.) H.E.K.Hartmann

Status: **NT** B1ab(ii,iii,iv,v)
N.A. Helme, C. Klak & D. Raimondo

eDistribution: WC. Bredasdorp to Mossel Bay.
Habitat: Coastal renosterveld or fynbos.
Rationale: EOO < 12 200 km^2. The 12 known locations are declining because of ongoing habitat loss to wheat cultivation, invasion by alien plants and coastal development.

Cephalophyllum fulleri L.Bolus

Status: **Rare**

C. Klak & D. Raimondo

e**Distribution:** NC. Pofadder.

Habitat: Quartz pebble fields overlying sandstone or dolomite.

Rationale: A habitat specialist known from three subpopulations, but is not threatened.

F **Cephalophyllum parviflorum** L.Bolus

Status: **CR** B2ab(ii,iii,iv,v)

C. Klak & D. Raimondo

e**Distribution:** WC. Saldanha to Milnerton.

Habitat: Rock outcrops on renosterveld flats.

Rationale: This species has a very restricted habitat (AOO < 10 km^2) and five subpopulations were known. Three are now locally extinct and the remaining two are severely fragmented and continue to decline because of ongoing habitat loss to agriculture and urban development.

Cephalophyllum parvulum (Schltr.) H.E.K.Hartmann

Status: **EX**

P.M. Burgoyne & J.E. Victor

e**Distribution:** WC. Clanwilliam.

Habitat: Likely to have occurred on shale or sandy flats.

Rationale: Last recorded in 1896. Much of the Clanwilliam area has been developed for urban or agricultural use or was inundated by the Clanwilliam Dam.

Cephalophyllum pulchellum L.Bolus

Status: **VU** D2

C. Klak & D. Raimondo

e**Distribution:** WC. Knersvlakte.

Habitat: Quartz patches.

Rationale: Fewer than five known locations are potentially threatened by mining and grazing by livestock.

Cephalophyllum pulchrum L.Bolus

Status: **VU** D2

C. Klak & D. Raimondo

e**Distribution:** WC. Southern Knersvlakte.

Habitat: Succulent karoo in alluvial soils, in washes or on banks of seasonal rivers.

Rationale: Fewer than five known locations are potentially threatened by mining and grazing by livestock.

Cephalophyllum rostellum (L.Bolus) H.E.K.Hartmann

Status: **EN** B1ab(ii,iv,v)+2ab(ii,iv,v)

C. Klak, N.A. Helme & D. Raimondo

e**Distribution:** WC. Paternoster to Langebaan.

Habitat: Coastal areas, on limestone and very occasionally on granites.

Rationale: EOO and AOO < 200 km^2. Ten small, severely fragmented subpopulations remain after ± 30% of the habitat has been transformed by coastal and industrial development over the past 10 years. Ongoing habitat loss is causing a continuing decline.

Cephalophyllum staminodiosum L.Bolus

Status: **Rare**

C. Klak & D. Raimondo

e**Distribution:** WC. Knersvlakte.

Habitat: Quartz patches.

Rationale: A range-restricted species (EOO < 500 km^2) that is not threatened.

Cephalophyllum tetrastichum H.E.K.Hartmann

Status: **VU** D2

P.M. Burgoyne, C. Klak & J.E. Victor

e**Distribution:** NC. Port Nolloth.

Habitat: Sandy areas between rocks in the surf spray zone.

Rationale: One known location is potentially threatened by mining.

Chasmatophyllum Dinter & Schwantes

Chasmatophyllum braunsii Schwantes

Status: **DD**D

L. von Staden

e**Distribution:** NC WC. Laingsburg and Victoria West.

Habitat: Nama-Karoo.

Rationale: A poorly known species, only three records exist. Specific habitat, local abundance and extent of the range not known.

Chasmatophyllum maninum L.Bolus

Status: **DD**D

J.E. Victor

e**Distribution:** EC. Middelburg.

Habitat: Unknown.

Rationale: A poorly known species. More data on distribution, ecology and population status are required before its status can be determined.

F **Chasmatophyllum rouxii** L.Bolus

Status: **DD**D

P.M. Burgoyne & F. Daniels

e**Distribution:** NC. Britstown.

Habitat: Unknown.

Rationale: A very poorly known species, with only a few old herbarium records available.

Chasmatophyllum willowmorense (L.Bolus) L.Bolus

Status: **Rare**

D. Raimondo

e**Distribution:** EC. Willowmore.

Habitat: Quartzite and shale colluviums in renosterveld-valley bushveld transition.

Rationale: A range-restricted species (EOO < 500 km^2) that occurs as localised subpopulations, but is not threatened.

Cheiridopsis N.E.Br.

F **Cheiridopsis amabilis** S.A.Hammer

Status: **Rare**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

e**Distribution:** NC. Northern Namaqualand.

Habitat: Steep quartz slopes.

Rationale: A habitat specialist, known from fewer than five subpopulations, but is not threatened.

F **Cheiridopsis campanulata** G.Will.

Status: **Rare**

D. Raimondo & F. Cholo

e**Distribution:** NC. Richtersveld northwest of Steinkopf.

Habitat: Rough quartz flats in full sun towards mountain summit on southwestern aspects.
Rationale: A range-restricted species (EOO < 500 km²) that is not threatened.

Cheiridopsis delphinoides S.A.Hammer

Status: **VU** D2
C. Klak & J.E. Victor
[e]**Distribution:** NC. Bulletrap, in the Springbok region.
Habitat: Restricted to a peculiar whitish powdery formation derived from Nama shales.
Rationale: One known location is potentially threatened by trampling and overgrazing.

[F] Cheiridopsis glomerata S.A.Hammer

Status: **Rare**
C. Klak, D. Raimondo & P.M. Burgoyne
[e]**Distribution:** NC. Namaqualand, mountains northeast of Kleinsee.
Habitat: Quartz flats.
Rationale: A range-restricted (EOO < 100 km²) habitat specialist that is not threatened.

Cheiridopsis pearsonii N.E.Br.

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)
C. Klak & D. Raimondo
[e]**Distribution:** NC. Namaqualand, Kamiesberg.
Habitat: Moist, sandy soils (possibly in riverine habitats) derived from granite in renosterveld.
Rationale: EOO an AOO < 100 km². Five known locations continue to decline as a result of expanding cereal crop cultivation, overgrazing and illegal collecting for the specialist succulent horticultural trade.

Cheiridopsis peculiaris N.E.Br.

Status: **CR** B1ab(ii,iii,v)+2ab(ii,iii,v)
C. Klak & J.E. Victor
[e]**Distribution:** NC. Steinkopf.
Habitat: Gravels and shales derived from metamorphic rocks of the Namaqualand Complex.
Rationale: EOO and AOO < 10 km². The population at one known location is declining because of infrastructure development, illegal collecting for the specialist succulent horticultural trade and trampling and grazing by goats.

[F] Cheiridopsis purpurea L.Bolus

Status: **Rare**
D. Raimondo & F. Cholo
[e]**Distribution:** NC. Richtersveld, Karagab.
Habitat: Crevices of quartzitic bands in sandstone, 300 m.
Rationale: A rare, range-restricted (EOO < 500 km²) habitat specialist that is not threatened.

[F] Cheiridopsis rostrata (L.) N.E.Br.

Status: **VU** B1ab(ii,iii,iv,v)
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Lambert's Bay to Yzerfontein and inland to Redelinghuys and Hopefield.
Habitat: Limestone and granite outcrops.
Rationale: EOO 3 500 km². There are 10 known locations. Subpopulations on the Vredenburg Peninsula are declining as a result of urban and industrial expansion.

Cheiridopsis rudis L.Bolus

Status: **DD**
P.M. Burgoyne & J.E. Victor
[e]**Distribution:** NC. Richtersveld.
Habitat: Probably grows on rocky soils derived from granite.
Rationale: Known only from the type, collected in 1932.

Cheiridopsis umdausensis L.Bolus

Status: **VU** D2
J.E. Victor & C. Klak
[e]**Distribution:** NC. Steinkopf.
Habitat: Flat, quartz-strewn hilltops and granitic upper western slopes.
Rationale: One known location is potentially threatened by overgrazing and trampling by goats.

Cheiridopsis velox S.A.Hammer

Status: **VU** D2
C. Klak & J.E. Victor
[e]**Distribution:** NC. Richtersveld.
Habitat: Quartz-covered slopes.
Rationale: One known location is potentially threatened by overgrazing and trampling by goats.

Circandra N.E.Br.

Circandra serrata (L.) N.E.Br.

Status: **CR** B1ab(iii,v)+2ab(iii,v)
C. Klak, A.B. Low & D. Raimondo
[e]**Distribution:** WC. Tulbagh to Villiersdorp.
Habitat: Shale-sandstone transition areas at ± 500 m.
Rationale: Last collected in 1913 and thought to be extinct because of the extensive habitat loss to vineyard and fruit orchard cultivation, but recently rediscovered in Tulbagh. Current EOO and AOO < 10 km². Habitat quality at the only known location is declining because of invasion by alien plants, and the site is earmarked for development of holiday accommodation.

Cleretum N.E.Br.

Cleretum lyratifolium Ihlenf. & Struck

Status: **Rare**
P.M. Burgoyne & J.E. Victor
[e]**Distribution:** WC. Roggeveld.
Habitat: Succulent karoo veld on shale-derived soils.
Rationale: A range-restricted species (EOO < 500 km²) that is not threatened.

Conophytum N.E.Br.

Conophytum achabense S.A.Hammer

Status: **VU** D2
S.A. Hammer & J.E. Victor
[e]**Distribution:** NC. Namiesberge, near Pofadder.
Habitat: Thin scree in quartz outcrops on rocky, west-facing slopes.
Rationale: One known location is potentially threatened by mining.

Conophytum acutum L.Bolus

Status: **VU** D2
S.A. Hammer & J.E. Victor
[e]**Distribution:** WC. Bitterfontein.
Habitat: Quartz patches.

Rationale: A range-restricted species (EOO < 375 km^2, AOO < 10 km^2) that has lost some habitat to infrastructure development, but habitat loss is not continuing. Two known locations are potentially threatened by harvesting for the specialist succulent horticultural trade, grazing by livestock and infrastructure maintenance.

Conophytum armianum S.A.Hammer

Status: **NT** D2

S.A. Hammer & J.E. Victor

e**Distribution:** NC. Umdaus, north of Steinkopf.

Habitat: Deposits of quartzite or feldspar rubble, usually buried amongst stones.

Rationale: Seven known locations are potentially threatened by mining and trampling and overgrazing by livestock.

Conophytum auriflorum Tischer subsp. **auriflorum** Plate 72

Status: **Rare**

S.A. Hammer & J.E. Victor

e**Distribution:** NC. Komaggas.

Habitat: Quartzitic outcrops.

Rationale: A range-restricted (EOO < 100 km^2) habitat specialist that is not threatened.

F **Conophytum auriflorum** Tischer subsp. **turbiniforme** (Rawé) S.A.Hammer

Status: **Rare**

S.A. Hammer, J.E. Victor & D. Raimondo

e**Distribution:** NC. Springbok.

Habitat: Edge of steep quartz cliffs.

Rationale: A range-restricted taxon (EOO < 40 km^2) known from a single site where it is not threatened because of the inaccessibility of its habitat.

F **Conophytum bachelorum** S.A.Hammer

Status: **VU** D1+2

J.E. Victor & P.G. Desmet

e**Distribution:** NC. Port Nolloth.

Habitat: Rocky outcrops.

Rationale: Less than 1 000 plants occur at one known location where it is potentially threatened by illegal collecting for the specialist succulent horticultural trade.

Conophytum blandum L.Bolus

Status: **NT** D2

S.A. Hammer & J.E. Victor

e**Distribution:** NC. Northwestern Bushmanland.

Habitat: Crevices on tops of arid quartz hills.

Rationale: Between five and 10 locations are potentially threatened by grazing livestock and mining.

F **Conophytum bolusiae** Schwantes subsp. **bolusiae**

Status: **Rare**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

e**Distribution:** NC. East of Augrabies.

Habitat: Quartzite, plastered to tiered rocks, 500–750 m.

Rationale: A locally abundant, but range-restricted taxon (EOO 10 km^2) that is not threatened.

Conophytum burgeri L.Bolus Plate 72

Status: **EN** D

S.A. Hammer, J.E. Victor & D. Raimondo

e**Distribution:** NC. Aggeneys.

Habitat: Quartz-covered clays.

Rationale: Less than 250 plants occurring at a single site are potentially threatened by mining and illegal collecting for the specialist succulent horticultural trade.

Conophytum caroli Lavis

Status: **Rare**

D. Raimondo & S.A. Hammer

e**Distribution:** NC. Kliprand near Loeriesfontein.

Habitat: Calcrete soils.

Rationale: A range-restricted species (EOO < 500 km^2) that is not threatened.

Conophytum carpianum L.Bolus

Status: **Rare**

J.E. Victor

e**Distribution:** NC. Richtersveld.

Habitat: Grows in association with lichens on granite outcrops, usually in fissures or crevices of vertical rock faces.

Rationale: A range-restricted (EOO < 10 km^2) habitat specialist, known from two small subpopulations, but not threatened because of the inaccessibility of its habitat.

F **Conophytum chrisolum** S.A.Hammer

Status: **Critically Rare**

D. Raimondo & F. Cholo

e**Distribution:** NC. Richtersveld.

Habitat: Pans of thin quartz scree.

Rationale: A range-restricted habitat specialist, known from one site. It has no known threats.

Conophytum concavum L.Bolus

Status: **Rare**

D. Raimondo

e**Distribution:** NC. Namaqualand, Riethuis and Oubees.

Habitat: Salty quartz flats.

Rationale: A rare, range-restricted (EOO < 50 km^2) habitat specialist that is not threatened.

Conophytum concordans G.D.Rowley

Status: **Rare**

J.E. Victor & S.A. Hammer

e**Distribution:** NC. Bushmanland, Brakwater.

Habitat: Rocky outcrops.

Rationale: A range-restricted species (EOO < 100 km^2) that is not threatened because of the inaccessibility of its habitat.

F **Conophytum ectypum** N.E.Br. subsp. **cruciatum** S.A.Hammer

Status: **Critically Rare**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

e**Distribution:** NC. Steinkopf.

Habitat: Deeply shaded crevices, 650–850 m.

Rationale: Known from a single subpopulation but is not threatened.

Conophytum ernstii S.A.Hammer subsp. **ernstii**

Status: **Rare**

S.A. Hammer & D. Raimondo

e**Distribution:** NC. Richtersveld.

Habitat: Crevices of gneissic granite rocks, usually on south-facing slopes.

Rationale: A range-restricted taxon (EOO < 10 km^2) that is not threatened because of the inaccessibility of its habitat.

Conophytum frutescens Schwantes

Status: **Rare**

J.E. Victor

Distribution: NC. Komaggas to Kourkammaberg.

Habitat: Wet quartz hills.

Rationale: A locally abundant, but range-restricted species (EOO < 100 km²) that is not threatened.

F **Conophytum globosum** (N.E.Br.) N.E.Br.

Status: **Rare**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

Distribution: NC. Garies to Kotzesrus.

Habitat: Granite but also occurs on quartz, 300–580 m.

Rationale: A range-restricted species (EOO 200 km²) that is not threatened.

F **Conophytum hammeri** G.Will. & H.C.Kenn.

Status: **Critically Rare**

F. Cholo & D. Raimondo

Distribution: NC. Namaqualand, Vioolsdrif.

Habitat: Gentle gravel quartz slopes, 310–650 m.

Rationale: Known from one site where it is not threatened.

Conophytum hermarium (S.A.Hammer) S.A.Hammer

Status: **Rare**

D. Raimondo & S.A. Hammer

Distribution: NC. East of Springbok.

Habitat: Crevices in hard quartzite blocks.

Rationale: A locally abundant, but range-restricted habitat specialist (EOO < 50 km²) that is not threatened.

Conophytum herreanthus S.A.Hammer subsp. **herreanthus**

Status: **CR** PE

S.A. Hammer & J.E. Victor

Distribution: NC. Umdaus north of Steinkopf.

Habitat: Quartz patches.

Rationale: This taxon declined in the 1960s and 1970s as a result of collecting for the specialist succulent horticultural trade. It was known from two mature individuals in 1991 and in 1996. Only one plant survived but was badly damaged by livestock. No surveys have taken place since 1996, but this taxon is highly likely to be extinct.

F **Conophytum irmae** S.A.Hammer & Barnhill

Status: **Rare**

F. Cholo & D. Raimondo

Distribution: NC. Richtersveld, west of Anenousberg.

Habitat: Quartz faces or in shallow drifts, in pans of evenly graded detritus.

Rationale: A range-restricted species (EOO < 10 km²) that is not threatened.

F **Conophytum khamiesbergense** (L.Bolus) Schwantes **Plate 72**

Status: **VU** D2

D. Raimondo & S.A. Hammer

Distribution: NC. Namaqualand, Kamiesberg.

Habitat: Associated with lichens on granite domes at altitude in mountain renosterveld.

Rationale: Occurs in a very specific habitat (AOO < 20 km²). Potentially threatened by trampling by livestock and illegal collecting for the succulent horticultural trade.

F **Conophytum limpidum** S.A.Hammer

Status: **NT** D2

J.E. Victor & P.G. Desmet

Distribution: NC. Inselbergs in Bushmanland.

Habitat: Vertical crevices, generally in shaded situations.

Rationale: Fewer than 10 known locations are potentially threatened by mining.

F **Conophytum lithopsoides** L.Bolus subsp. **boreale** (L.Bolus) S.A.Hammer

Status: **DD**D

S.A. Hammer & J.E. Victor

Distribution: NC. Kakamas to Augrabies Falls.

Habitat: Unknown.

Rationale: Not recorded since 1936, but may still occur east of Augrabies.

F **Conophytum lithopsoides** L.Bolus subsp. **koubergense** (L.Bolus) S.A.Hammer

Status: **Rare**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

Distribution: NC. Southeast of Springbok.

Habitat: Small troughs or shaded crevices on quartzite koppies, 1 000–1 200 m.

Rationale: A range-restricted (EOO < 10 km²) habitat specialist that is not threatened.

F **Conophytum longibracteatum** L.Bolus

Status: **Rare**

D. Raimondo

Distribution: NC. Komaggas.

Habitat: Quartz pans, 300–780 m.

Rationale: This species has not been recorded since 1929, but five small subpopulations were recently rediscovered in an area of ± 10 km². It has no known threats.

F **Conophytum marginatum** Lavis subsp. **littlewoodii** (L.Bolus) S.A.Hammer

Status: **Rare**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

Distribution: NC. Northern Richtersveld and Sperrgebiet.

Habitat: Loose gravel.

Rationale: A range-restricted taxon (EOO < 500 km²) known from only three subpopulations, but not threatened.

F **Conophytum meyeri** N.E.Br.

Status: **Rare**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

Distribution: NC. Western Richtersveld, between Kleinsee and Lekkersing.

Habitat: Shaded kloofs, on quartzite or gneiss, 130–980 m.

Rationale: A rare and inconspicuous species. Last recorded in 1925, but probably still extant as there are no threatening processes that have an impact on the area where it was last collected.

F **Conophytum mirabile** A.R.Mitch. & S.A.Hammer

Status: **Critically Rare**

S.A. Hammer & D. Raimondo

Distribution: NC. Koeriesberg, east of Concordia.

Habitat: Steep rocky slopes.

Rationale: A range-restricted species known from a single site where it is not threatened.

Conophytum phoenicium S.A.Hammer

Status: **VU** D2

J.E. Victor

e**Distribution:** NC. Umdaus.

Habitat: Namaqualand Klipkoppe Shrubland.

Rationale: One known location at the side of a road is potentially threatened by road widening.

F **Conophytum piluliforme** (N.E.Br.) N.E.Br. subsp. **edwardii** (Schwantes) S.A.Hammer Plate 72

Status: **Rare**

D. Raimondo, P.F. Matlamela & J.H. Vlok

e**Distribution:** WC. Little Karoo, near Eierpoort.

Habitat: Quartzite rubble with a shale substrate, 500–650 m.

Rationale: A locally common, but range-restricted taxon (EOO 270 km^2) that is not threatened.

F **Conophytum ratum** S.A.Hammer Plate 72

Status: **VU** A4acde

J.E. Victor & P.G. Desmet

e**Distribution:** NC. Ghaamsberg near Aggeneys.

Habitat: Spongy quartz soil.

Rationale: This species had five known subpopulations, one of which is already locally extinct owing to succulent collecting over the past 20 years, and another is likely to decline to local extinction as a result of ongoing mining activities within the next 10 years. This will result in a population reduction of at least 40% within 30 years (generation length 10 years).

F **Conophytum reconditum** A.R.Mitch. subsp. **buysianum** (A.R.Mitch. & S.A.Hammer) S.A.Hammer

Status: **Rare**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

e**Distribution:** NC. Kliprand.

Habitat: Granite domes, chiefly between eroding plates but also at the edge of shallow sandy pans, 980–1 100 m.

Rationale: A rare, range-restricted (EOO 270 km^2) habitat specialist that is not threatened.

Conophytum regale Lavis

Status: **Critically Rare**

S.A. Hammer & D. Raimondo

e**Distribution:** NC. Springbok.

Habitat: Quartzite crevices in granite outcrops.

Rationale: A habitat specialist known to occur at one site where it is not threatened.

Conophytum roodiae N.E.Br. subsp. **sanguineum** (S.A.Hammer) T.Smale

Status: **VU** D2

S.A. Hammer & J.E. Victor

e**Distribution:** NC. Garies.

Habitat: Namaqualand Klipkoppe Shrubland.

Rationale: One known location is potentially threatened by grazing and trampling by livestock.

Conophytum schlechteri Schwantes

Status: **Critically Rare**

S.A. Hammer & J.E. Victor

e**Distribution:** NC. Between Port Nolloth and Steinkopf.

Habitat: Mud-filled rock crevices amongst very sparse Succulent Karoo shrubland.

Rationale: Known to occur at a single site where it is not threatened.

Conophytum semivestitum L.Bolus

Status: **EX**

J.E. Victor & P.G. Desmet

e**Distribution:** NC. Formerly occurred in the Oernoep Valley north of Steinkopf.

Habitat: Presumably grew on quartzite or feldspar.

Rationale: The only recorded subpopulation was possibly destroyed by feldspar mining activities or by road works.

Conophytum smorenskaduense de Boer

Status: **VU** D2

J.E. Victor & S.A. Hammer

e**Distribution:** NC. East of Springbok.

Habitat: Quartzite rubble.

Rationale: Two known locations are potentially threatened by trampling by livestock.

F **Conophytum subterraneum** T.Smale & T.Jacobs

Status: **Rare**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

e**Distribution:** NC. Northeastern Richtersveld.

Habitat: Quartz pebble deflation Eksteenfontein, 750–1 100 m.

Rationale: A range-restricted species (EOO < 10 km^2) that is not threatened.

Conophytum swanepoelianum Rawé subsp. **swanepoelianum**

Status: **Rare**

J.E. Victor & S.A. Hammer

e**Distribution:** NC. Bokkeveld Escarpment.

Habitat: Grows on flat moss- and lichen-covered sandstone outcrops.

Rationale: A range-restricted habitat specialist (EOO < 100 km^2) that grows in sites where it is protected from the impact of rooibos tea cultivation.

F **Conophytum tantillum** N.E.Br. subsp. **eenkokerense** (L.Bolus) S.A.Hammer

Status: **Rare**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

e**Distribution:** NC. Namaqualand, Eenriet.

Habitat: Quartzite outcrops.

Rationale: A range-restricted taxon (EOO < 5 km^2) that is not threatened.

F **Conophytum tantillum** N.E.Br. subsp. **inexpectatum** S.A.Hammer

Status: **Rare**

D. Raimondo, P.A. Manyama & D.A. Kamundi†

e**Distribution:** NC. Namaqualand, Umdaus.

Habitat: Quartzite or gneiss.

Rationale: A range-restricted (EOO 3 km^2), but locally dominant taxon that is not threatened.

F **Conophytum tantillum** N.E.Br. subsp. **tantillum**

Status: **Rare**

P.F. Matlamela & D.A. Kamundi†

e**Distribution:** NC. Geelvlei Plateau north of Steinkopf.

Habitat: South-facing quartzite cliffs, also in sandy troughs, 1 050–1 150 m.

Rationale: A range-restricted taxon (EOO < 10 km^2) that is not threatened.

Conophytum turrigerum (N.E.Br.) N.E.Br. **Plate 72**

Status: **Rare**

J.E. Victor, S.A. Hammer & D. Raimondo

e**Distribution:** WC. Swartland between Malmesbury, Paarl Mountain and Klipheuwel.

Habitat: Cracks and depressions in moss- and lichen-covered granite rocks where rainwater collects.

Rationale: A habitat specialist restricted to sites where it is protected from crop cultivation, the main cause of habitat loss in the Swartland.

F **Conophytum uviforme** (Haw.) N.E.Br. subsp. **subincanum** (Tischer) S.A.Hammer

Status: **VU** D2

S.A. Hammer & J.E. Victor

e**Distribution:** WC. Vanrhynsdorp.

Habitat: Seams or crevices in greyish limestone.

Rationale: One known location is potentially threatened by gypsum mining.

Conophytum vanheerdei Tischer

Status: **Rare**

J.E. Victor, S.A. Hammer & D. Raimondo

e**Distribution:** NC. East of Springbok.

Habitat: Exposed quartzite formations.

Rationale: A range-restricted species (EOO < 5 km^2) that is not threatened.

F **Conophytum velutinum** Schwantes subsp. **polyandrum** (Lavis) S.A.Hammer

Status: **Rare**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

e**Distribution:** NC. Kourkammaberg.

Habitat: Granite outcrops, 300–540 m.

Rationale: A locally common, but range-restricted taxon (EOO 6 km^2) that is not threatened.

Conophytum velutinum Schwantes subsp. **velutinum**

Status: **Rare**

J.E. Victor & S.A. Hammer

e**Distribution:** NC. Komaggas.

Habitat: Shaded places on granitic soils, or on exposed quartzite flats.

Rationale: EOO < 25 km^2. Only five subpopulations are known, but this taxon is not threatened.

Conophytum verrucosum (Lavis) G.D.Rowley

Status: **Rare**

J.E. Victor & D. Raimondo

e**Distribution:** NC. Kouberg and Maansepan.

Habitat: Quartz and calcrete.

Rationale: A range-restricted species (EOO 75 km^2) that is not threatened.

Corpuscularia Schwantes

F **Corpuscularia angustipetala** (Lavis) H.E.K.Hartmann

Status: **VU** D2

P.M. Burgoyne, J.E. Burrows, M. Lötter & J.E. Victor

e**Distribution:** MP. Steenkampsberg.

Habitat: Quartzite outcrops.

Rationale: Five known locations are potentially threatened by mining and the development of golf and housing estates.

F **Corpuscularia lehmannii** (Eckl. & Zeyh.) Schwantes

Status: **CR** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

D. Raimondo & N.A. Helme

e**Distribution:** EC. Coega to Port Elizabeth.

Habitat: Quartzite outcrops.

Rationale: EOO 70 km^2, AOO < 5 km^2. Six locations are known through herbarium records, but four are now locally extinct because of urban expansion of Port Elizabeth. Two remaining subpopulations are severely fragmented and continue to decline because of ongoing habitat loss. At one of the remaining locations near Coega > 60% of the habitat has been lost to mining over the past five years.

Cylindrophyllum Schwantes

F **Cylindrophyllum hallii** L.Bolus

Status: **VU** D2

D. Raimondo

e**Distribution:** NC. Loeriesfontein.

Habitat: Gravelly shale in Hantam karoo.

Rationale: Small, localised subpopulations of this palatable species at five locations are potentially threatened by grazing and trampling by livestock.

Delosperma N.E.Br. emend. Lavis

Delosperma alpinum (N.E.Br.) S.A.Hammer & A.P.Dold

Status: **Rare**

J.E. Victor & A.P. Dold

e**Distribution:** EC. Amathole Mountains.

Habitat: Bare faces of dolerite rock scree, in dense clumps of lichen/mosses.

Rationale: A habitat specialist known from three sites. Not threatened.

F **Delosperma annulare** L.Bolus

Status: **DD**D

L. von Staden

e**Distribution:** MP. Possibly the Steenkampsberg.

Habitat: Ledges on mountains above 2 000 m.

Rationale: The genus is currently under revision and all herbarium specimens need to be re-identified before the range of this species can be determined. The type specimen was collected from the Steenkampsberg in Mpumalanga. If the revision reveals that this species is endemic to high-altitude grasslands in Mpumalanga, it may be threatened, as this habitat type is under pressure from mining, invasion by alien plants and development.

F **Delosperma calitzdorpense** L.Bolus

Status: **EN** A2c; B1ab(iii,v)+2ab(iii,v)

J.H. Vlok & D. Raimondo

e**Distribution:** WC. Calitzdorp.

Habitat: Little Karoo shales in gannaveld and gravel apronveld.

Rationale: A population reduction of at least 50% is estimated based on habitat loss and degradation by ostrich farming and crop cultivation over the past 20 years (generation length ± 10 years). EOO 250 km^2, AOO 13 km^2. Two remaining locations continue to decline because of ongoing habitat degradation.

Delosperma clavipes Lavis

Status: **DD**D

D. Raimondo

Distribution: EC. Drakensberg Escarpment, Naude's Nek to Sani Pass.

Habitat: Rocky, flat summits.

Rationale: Known from three sites along the edge of the Drakensberg Escarpment (EOO 6 700 km^2). All collections are from South Africa, but this species is very likely to occur in Lesotho. Probably under-collected and possibly threatened as it is grazed by livestock. More field data are required before its status can be determined.

[F] **Delosperma deilanthoides** S.A.Hammer

Status: **VU** D2

M. Lötter, J.E. Burrows & L. von Staden

[e]**Distribution:** MP. Steenkampsberg.

Habitat: Shallow quartzitic soils in rocky outcrops, 2 000–2 250 m.

Rationale: Two known locations are potentially threatened by mining, infrastructure development and invasion by alien plants.

[F] **Delosperma gautengense** H.E.K.Hartmann

Status: **VU** D2

J.E. Victor & M.F. Pfab

[e]**Distribution:** G. Magaliesberg.

Habitat: Amongst rocks on south-facing slopes.

Rationale: Three of four known locations are potentially threatened by infrastructure development, overgrazing, invasion by alien plants and inappropriate fire management.

Delosperma guthriei Lavis

Status: **VU** D2

J.E. Victor & D. Raimondo

[e]**Distribution:** WC. Kleinmond to Hermanus.

Habitat: Coastal sands along rocky shores.

Rationale: Five known locations of this range-restricted species (EOO < 185 km^2) are potentially threatened by coastal development and invasion by alien plants.

Delosperma inaequale L.Bolus

Status: **DD**D

J.E. Victor

[e]**Distribution:** WC. Potberg.

Habitat: Unknown.

Rationale: Known from the type, collected in 1954. If this species occurs on the lower slopes of the Potberg it is likely to be threatened by invading alien plants and ostrich farming.

[F] **Delosperma katbergense** L.Bolus

Status: **Rare**

P.F. Matlamela & D.A. Kamundi†

[e]**Distribution:** EC. Hogsback to Katberg.

Habitat: Crevices of sandstone rocks, 1 200–1 700 m.

Rationale: A range-restricted species (EOO < 500 km^2) that occurs in a specialised habitat where it is protected from the impact of grazing and forestry.

Delosperma leendertziae N.E.Br.

Status: **NT** B1ab(iii)+2ab(iii)

J.E. Victor & M.F. Pfab

[e]**Distribution:** G MP NW. Magaliesberg.

Habitat: Steep, south-facing slopes of quartzite in mountain grassland.

Rationale: EOO 8 658 km^2, AOO 4–13 km^2. Habitat quality at more than 10 existing locations is declining because of soil erosion, invasion by alien plants and inappropriate fire management.

[F] **Delosperma macellum** (N.E.Br.) N.E.Br.

Status: **EN** D

J.E. Victor & M.F. Pfab

[e]**Distribution:** G. Vereeniging and Heidelberg.

Habitat: In loose gravel in open places near trees.

Rationale: A total population of 68 mature individuals occurs at two known locations.

Delosperma mariae L.Bolus

Status: **VU** D2

D. Raimondo & N.A. Helme

[e]**Distribution:** WC. Bredasdorp.

Habitat: Limestone outcrops.

Rationale: Two known locations are potentially threatened by coastal development, invasion by alien plants and inappropriate fire management.

[F] **Delosperma purpureum** H.E.K.Hartmann

Status: **EN** B1ab(iii)+2ab(iii)

J.E. Victor & M.F. Pfab

[e]**Distribution:** G. Witwatersrand.

Habitat: South-facing slopes, in shallow soils among crystalline or conglomerate quartzitic rocks, in sun or in partial shade, rarely in shade, in grassland with some trees.

Rationale: EOO 41 km^2, AOO 1–3 km^2. Four known locations continue to decline because of ongoing habitat loss and degradation as a result of urban expansion and invasion by alien plants.

[F] **Delosperma rileyi** L.Bolus

Status: **DD**D

P.M. Burgoyne

[e]**Distribution:** LM MP. Sekhukhuneland.

Habitat: Rocky grassland, 1 200–1 800 m.

Rationale: A poorly known species. Its threat status cannot be determined at present.

[F] **Delosperma saxicola** Lavis

Status: **Rare**

P.M. Burgoyne

[e]**Distribution:** EC. Humansdorp.

Habitat: Coastal cliffs.

Rationale: A range-restricted habitat specialist.

[F] **Delosperma zeederbergii** L.Bolus

Status: **DD**D

P.M. Burgoyne

[e]**Distribution:** MP. Lydenburg.

Habitat: Steep, rocky slopes, at around 1 500 m.

Rationale: A poorly known species, known only from the type collected in 1934.

Didymaotus N.E.Br.

Didymaotus lapidiformis (Marloth) N.E.Br.

Status: **VU** D2

P.M. Burgoyne & F. Daniels

[e]**Distribution:** WC. Southern Ceres Karoo.

Habitat: Associated with limestone soil on shale of the Ecca Group, overlain with windblown sand.
Rationale: Two known locations are potentially threatened by harvesting for the specialist succulent horticultural trade, quarrying and mining.

Dinteranthus Schwantes

Dinteranthus pole-evansii (N.E.Br.) Schwantes

Status: **VU** D1+2
P.M. Burgoyne & F. Daniels
[e]**Distribution:** NC. Upington to Prieska.
Habitat: Well-drained, sandy soils associated with quartz stones and pebbles.
Rationale: A population of less than 1 000 mature individuals occurring at two locations is potentially threatened by overgrazing.

[F] **Dinteranthus wilmotianus** L.Bolus

Status: **NT** B1ab(ii,iii,v)
P.M. Burgoyne, D. Raimondo & F. Daniels
Distribution: NC. Orange River basin, from Augrabies to Eendoorn near Warmbad in southern Namibia.
Habitat: Alluvial gravel soils.
Rationale: EOO < 10 000 km^2. Suspected to occur at 10–20 locations, declining as a result of crop cultivation and overgrazing by livestock.

Diplosoma Schwantes

Diplosoma luckhoffii (L.Bolus) Schwantes ex Ihlenf.

Plate 72

Status: **VU** D2
C. Klak & D. Raimondo
[e]**Distribution:** WC. Lutzville.
Habitat: Quartz patches.
Rationale: Four known locations are potentially threatened by mining, trampling by livestock and harvesting for the specialist succulent horticultural trade.

Diplosoma retroversum (Kensit) Schwantes

Plate 72

Status: **EN** B1ab(ii,iii)
C. Klak, E.J. van Jaarsveld & J.E. Victor
[e]**Distribution:** WC. Between Piketberg and Grey's Pass, Eendekuil and Piekenierskloof Pass.
Habitat: Malmesbury shales with overlying quartz pebbles.
Rationale: EOO < 3 000 km^2. Five small, severely fragmented subpopulations remain after most of the habitat has been transformed for wheat cultivation. Subpopulations near Eendekuil are declining as a result of ongoing habitat loss to housing development.

Disphyma N.E.Br.

[F] **Disphyma dunsdonii** L.Bolus

Status: **VU** A2c; B1ab(i,ii,iii,iv,v)
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Bredasdorp and Elim to Potberg.
Habitat: Ferricrete depressions filled with water in winter and spring, dry in summer.
Rationale: A population reduction of east 30% is estimated based on habitat loss to crop cultivation over the past 30 years (generation length ± 10 years). EOO 2 200 km^2. Fewer than 10 remaining locations continue to decline because of ongoing habitat loss to urban expansion around Bredasdorp, invasion by alien plants and crop cultivation.

Dorotheanthus Schwantes

Dorotheanthus apetalus (L.f.) N.E.Br.

Status: **VU** B1ab(ii,iii,iv,v)
C. Klak, E.J. van Jaarsveld & D. Raimondo
[e]**Distribution:** WC. Yzerfontein to Cape Agulhas.
Habitat: Coastal fynbos.
Rationale: EOO 7 086 km^2. Ten locations are known through herbarium records, two of which are now locally extinct owing to urban expansion. Seven of the remaining locations are declining because of ongoing habitat loss to urban expansion, crop cultivation and invasion by alien plants.

Dorotheanthus booysenii L.Bolus

Status: **Rare**
J.E. Victor
[e]**Distribution:** NC. Sutherland, Roggeveld Escarpment.
Habitat: Sandstone-shale transition soils.
Rationale: A range-restricted species (EOO < 500 km^2) that is not threatened.

[F] **Dorotheanthus clavatus** (Haw.) Struck

Status: **EN** B1ab(i,ii,iii,iv,v)
C. Klak & D. Raimondo
[e]**Distribution:** WC. Hopefield to Cape Flats.
Habitat: Seasonally wet sands.
Rationale: EOO 1 855 km^2. Only three of 10 known locations remain after most of the habitat has been transformed by crop cultivation and urban expansion. Decline is continuing because of invasion by alien plants and expanding agriculture.

Dorotheanthus maughanii (N.E.Br.) Ihlenf. & Struck

Status: **Rare**
J.E. Victor
[e]**Distribution:** NC. Calvinia.
Habitat: Dolerite hills in Hantam karoo vegetation.
Rationale: A range-restricted species (EOO < 200 km^2) that is not threatened.

Drosanthemum Schwantes

[F] **Drosanthemum anomalum** L.Bolus

Status: **VU** D2
C. Klak & D. Raimondo
[e]**Distribution:** WC. Montagu to Stormsvlei.
Habitat: Breede Shale Renosterveld.
Rationale: One known location is potentially threatened by vineyard and olive cultivation and by invading alien plants.

Drosanthemum austricola L.Bolus

Status: **VU** B1ab(iii,iv,v)
C. Klak & D. Raimondo
[e]**Distribution:** WC. Agulhas Plain.
Habitat: Low-lying areas in renosterveld and fynbos, often on silcrete or ferricrete outcrops.
Rationale: EOO < 7 200 km^2. Nine known locations are declining because of invasion by alien plants, coastal development and vineyard and protea cultivation.

Drosanthemum bellum L.Bolus

Status: **EN** B1ab(ii,iii,iv,v)

C. Klak & D. Raimondo

[e]**Distribution:** WC. Ceres to Worcester.

Habitat: On nutrient-poor, sandy, acidic soils derived from Witteberg quartzite in dry montane fynbos.

Rationale: EOO < 2 000 km^2. Five locations remain after a number of subpopulations were lost when the Brandvlei Dam was constructed. This species continues to decline because of ongoing habitat loss to vineyard expansion.

[F] **Drosanthemum calycinum** (Haw.) Schwantes

Status: **NT** B1ab(ii,iii,iv,v)

C. Klak & D. Raimondo

[e]**Distribution:** WC. Clanwilliam to Koeberg and Riversdale.

Habitat: Lowland shales.

Rationale: A formerly common and widespread species (EOO < 20 000 km^2). Altogether 16 locations remain after > 80% of the habitat has been transformed for wheat cultivation over the past 100 years. It continues to decline because of ongoing habitat loss to urban development, invasion by alien plants and crop cultivation.

[F] **Drosanthemum capillare** (Thunb.) Schwantes

Status: **DD**

P.M. Burgoyne & F. Daniels

[e]**Distribution:** EC. Swellendam to Humansdorp.

Habitat: Unknown.

Rationale: Known from two very old collections, last recorded in 1803.

[F] **Drosanthemum chrysum** L.Bolus

Status: **Rare**

D. Raimondo, P.A. Manyama & D.A. Kamundi†

[e]**Distribution:** WC. Laingsburg.

Habitat: Lower slopes, 750–1 100 m.

Rationale: A rare, range-restricted species (EOO < 500 km^2), known from fewer than 10 subpopulations.

[F] **Drosanthemum edwardsiae** L.Bolus

Status: **DD**

C. Klak & D. Raimondo

[e]**Distribution:** WC. Little Brak River and Mossel Bay.

Habitat: Lowland shales.

Rationale: Known from three collections made before 1938. This area has subsequently been transformed to agriculture and this species is likely to be highly threatened.

[F] **Drosanthemum flavum** (Haw.) Schwantes

Status: **EN** D

N.A. Helme, D. Raimondo & C. Klak

[e]**Distribution:** WC. Caledon to Bredasdorp, Genadendal and Bot River.

Habitat: Clay, shale, rocky slopes in renosterveld.

Rationale: A population of less than 250 mature individuals remains as small, isolated subpopulations of 10–15 plants on seven renosterveld fragments after > 75% of the habitat has been transformed for wheat cultivation, but it is not currently declining.

Drosanthemum hallii L.Bolus **Plate 74**

Status: **EN** B1ab(ii,iii,iv,v)

C. Klak & D. Raimondo

[e]**Distribution:** WC. Worcester.

Habitat: Stony slopes on shale-sandstone transition soils.

Rationale: EOO < 657 km^2. Three known locations are declining as a result of vineyard expansion and invasion by alien plants.

[F] **Drosanthemum hispifolium** (Haw.) Schwantes

Status: **VU** B1ab(ii,iii,iv,v)

C. Klak, D. Raimondo & J.E. Victor

[e]**Distribution:** WC. Clanwilliam to Koeberg.

Habitat: Lowland hills or flats in loamy shale.

Rationale: EOO 14 400 km^2. Eight locations remain after most of the habitat in the Olifants River Valley and Swartland has been transformed for crop cultivation. It continues to decline because of ongoing habitat loss to urban development, invasion by alien plants and agriculture.

[F] **Drosanthemum insolitum** L.Bolus

Status: **CR** PE

C. Klak & D. Raimondo

[e]**Distribution:** WC. Between Houwhoek and Caledon.

Habitat: Unknown.

Rationale: Known only from the type, collected in 1858. The area has now been extensively transformed for wheat cultivation and this species is probably extinct.

[F] **Drosanthemum lavisii** L.Bolus

Status: **EN** B1ab(ii,iii,iv,v); C2a(i)

C. Klak, N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Montagu, Bredasdorp to Albertinia.

Habitat: Ecotone between fynbos and renosterveld, 150–200 m.

Rationale: EOO < 5 000 km^2. The 13 small, severely fragmented subpopulations are declining as a result of crop cultivation and invasion by alien plants. Subpopulations typically consist of less than 30 mature individuals and the total population is suspected to be around 500 mature individuals.

[F] **Drosanthemum leptum** L.Bolus

Status: **Rare**

D. Raimondo, P.A. Manyama & D.A. Kamundi†

[e]**Distribution:** WC. Robertson.

Habitat: Rocky kloofs, 215–300 m.

Rationale: A range-restricted species (EOO < 500 km^2) that is not threatened.

[F] **Drosanthemum marinum** L.Bolus

Status: **NT** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

N.A. Helme, C. Klak & D. Raimondo

[e]**Distribution:** WC. Paternoster to Yzerfontein.

Habitat: Coastal rocks.

Rationale: EOO and AOO < 500 km^2. The 14 known locations continue to decline as a result of ongoing habitat loss to coastal development.

Drosanthemum micans (L.) Schwantes **Plate 74**

Status: **EN** B1ab(ii,iii,iv,v)

C. Klak & D. Raimondo

[e]**Distribution:** WC. Montagu and Worcester to Swellendam.

Habitat: Rocky alluvial terraces, gravels.

Rationale: EOO and AOO < 500 km^2. The 2–5 locations are declining because of habitat loss to vineyard expansion.

[F] **Drosanthemum pickhardii** L.Bolus

Status: **VU** D2

C. Klak & D. Raimondo

[e]**Distribution:** WC. Montagu.

Habitat: Shale lowlands.

Rationale: Three known locations are potentially threatened by vineyard expansion.

[F] **Drosanthemum prostratum** L.Bolus

Status: **DD**

P.M. Burgoyne & F. Daniels

[e]**Distribution:** WC. Piekenierskloof near Clanwilliam and Worcester.

Habitat: Unknown.

Rationale: A poorly known species collected twice at two disjunct sites. Its distribution, habitat and ecology are too poorly understood to determine its status.

[F] **Drosanthemum pulchellum** L.Bolus

Status: **VU** D2

C. Klak & D. Raimondo

[e]**Distribution:** WC. Clanwilliam.

Habitat: Arid fynbos, 100 m.

Rationale: Three known locations are potentially threatened by rooibos tea cultivation.

[F] **Drosanthemum quadratum** Klak

Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v)

C. Klak & D. Raimondo

[e]**Distribution:** WC. North of De Hoop Nature Reserve.

Habitat: Clay with overlying quartz pebbles, amongst renosterveld vegetation.

Rationale: EOO and AOO < 500 km^2. Four known locations continue to decline because of habitat loss to wheat cultivation and grazing and trampling by livestock.

[F] **Drosanthemum ramosissimum** (Schltr.) L.Bolus

Status: **Rare**

D. Raimondo, P.A. Manyama & D.A. Kamundi†

[e]**Distribution:** WC. Vanrhynsdorp, Knersvlakte.

Habitat: Sandy areas, 200–330 m.

Rationale: A range-restricted (EOO < 500 km^2) habitat specialist that is not threatened.

[F] **Drosanthemum striatum** (Haw.) Schwantes **Plate 74**

Status: **VU** B1ab(ii,iii,iv,v)

C. Klak & D. Raimondo

[e]**Distribution:** WC. Malmesbury and Worcester to Swellendam and Bredasdorp.

Habitat: Lowland renosterveld on shale.

Rationale: EOO < 5 800 km^2. Ten locations remain after much of the habitat has been transformed for wheat and vineyard cultivation. Habitat loss is continuing.

Drosanthemum thudichumii L.Bolus

Status: **EN** B1ab(ii,iii)+2ab(ii,iii)

C. Klak & D. Raimondo

[e]**Distribution:** WC. Worcester.

Habitat: Malmesbury shales.

Rationale: EOO and AOO < 20 km^2. Fewer than five remaining locations continue to decline because of habitat loss to quarrying, urban development and vineyard expansion.

[F] **Drosanthemum zygophylloides** (L.Bolus) L.Bolus

Status: **EN** B1ab(ii,iii,iv,v)

C. Klak & D. Raimondo

[e]**Distribution:** WC. Piketberg to Grey's Pass.

Habitat: Clay with overlying quartz pebbles.

Rationale: EOO < 2 700 km^2. Five severely fragmented remaining subpopulations continue to decline owing to habitat degradation and expanding crop cultivation. It is also potentially threatened by road widening.

Erepsia N.E.Br.

[F] **Erepsia aristata** (L.Bolus) Liede & E.K.Hartmann

Status: **Rare**

E.J. van Jaarsveld, C. Klak & L. Potter

[e]**Distribution:** EC. Uitenhage and Groendal.

Habitat: Sandstone outcrops above perennial streambeds, at 450 m.

Rationale: A rare, range-restricted (EOO < 100 km^2) habitat specialist known from only two subpopulations, but it is not threatened.

[F] **Erepsia babiloniae** Liede

Status: **VU** D2

N.A. Helme

[e]**Distribution:** WC. Babilonstoring.

Habitat: Rocky sandstone slopes in fynbos, 700–1 000 m.

Rationale: One known location is potentially threatened by alien pine and hakea invasion. Seen after fire.

Erepsia brevipetala L.Bolus

Status: **EN** B1ab(ii,iii,v)

N.A. Helme, C. Klak & D. Raimondo

[e]**Distribution:** WC. Piketberg to Hopefield.

Habitat: On white clay slopes near watercourses.

Rationale: EOO < 1 000 km^2. Three known locations remain after much of the habitat has been transformed for wheat cultivation. It continues to decline because of overgrazing and trampling by cattle, invasion by alien plants, dumping and erosion.

Erepsia dubia Liede

Status: **CR** D

J.H. Vlok, C. Klak & D. Raimondo

[e]**Distribution:** WC. Swellendam.

Habitat: Natural habitat unknown, recorded from disturbed places along roadsides.

Rationale: Known to have occurred at two locations, one now locally extinct owing to infrastructure development. One remaining subpopulation has 15 mature individuals.

Erepsia dunensis (Sond.) Klak

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

C. Klak, D. Raimondo & J.E. Victor

[e]**Distribution:** WC. Cape Town to Macassar.

Habitat: Limestone, close to the coast.

Rationale: EOO and AOO < 500 km^2. Five known locations are declining as a result of urban expansion and invasion by alien plants.

Erepsia forficata (L.) Schwantes

Status: **Rare**

E.J. van Jaarsveld & D. Raimondo

e**Distribution:** WC. Cape Peninsula, Table Mountain.

Habitat: Rocky cliffs and ridges.

Rationale: A locally common, but range-restricted endemic (EOO 150 km^2) of Table Mountain. It is not threatened.

Erepsia hallii L.Bolus

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

C. Klak, D. Raimondo & J.E. Victor

e**Distribution:** WC. Atlantis to Darling.

Habitat: Granite hills.

Rationale: EOO < 60 km^2, AOO < 10 km^2. Two known locations are declining because of invasion by alien plants and crop cultivation.

Erepsia insignis (Schltr.) Schwantes

Status: **Critically Rare**

C. Klak & D. Raimondo

e**Distribution:** WC. Observation Peak in the Bain's Kloof Mountains.

Habitat: Steep slopes on shale bands, 1 200–1 700 m.

Rationale: A range-restricted species (EOO < 10 km^2) and high-altitude habitat specialist known from one site where it is not threatened.

F **Erepsia oxysepala** (Schltr.) L.Bolus

Status: **VU** D2

N.A. Helme

e**Distribution:** WC. Villiersdorp to Riviersonderend Mountains.

Habitat: Montane fynbos on sandstone slopes, 200–1 400 m.

Rationale: Two known locations are potentially threatened by alien plants that invade the habitat.

Erepsia patula (Haw.) Schwantes

Status: **VU** B1ab(ii,iii,v)

C. Klak & D. Raimondo

e**Distribution:** WC. Wellington to Somerset West, including the Cape Peninsula.

Habitat: Shale slopes, 200–500 m.

Rationale: EOO < 3 500 km^2. Fewer than 10 locations remain after most of the habitat has been transformed for crop cultivation and urban expansion. Habitat loss continues. Other threats include alien plants that invade the habitat and too infrequent fires on the lower slopes of Lion's Head.

Erepsia pentagona (L.Bolus) L.Bolus

Status: **NT** B1ab(iii,v)

J.H. Vlok, C. Klak, D. Raimondo & J.E. Victor

e**Distribution:** WC. Robinson Pass to Garcia's Pass.

Habitat: Wet, montane fynbos and rocky outcrops, 500–1 000 m.

Rationale: EOO 3 000 km^2. Habitat quality at 15 known locations continues to decline because of unmanaged invasion by alien plants.

Erepsia pillansii (Kensit) Liede

Status: **VU** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

N.A. Helme, C. Klak & D. Raimondo

e**Distribution:** WC. Piketberg.

Habitat: Sandstone fynbos above 700 m.

Rationale: EOO and AOO < 900 km^2. Fewer than 10 locations are declining as a result of fruit, buchu and vineyard cultivation, invading alien pines, resort development, dam construction and too frequent fires.

Erepsia polita (L.Bolus) L.Bolus

Status: **EN** B1ab(i,ii,iii,iv,v)

C. Klak, J.H. Vlok & D. Raimondo

e**Distribution:** WC. Langeberg to Jonaskop in the Riviersonderend Mountains.

Habitat: Lower sandstone slopes, 350 m.

Rationale: EOO < 2 000 km^2. Four known locations are declining as a result of crop cultivation, lack of fire and trampling and grazing by livestock.

Erepsia polypetala (A.Berger & Schltr.) L.Bolus

Status: **CR** B1ab(iii)+2ab(iii)

C. Klak & D. Raimondo

e**Distribution:** WC. Bredasdorp.

Habitat: Moist coastal flats, in limestone fynbos.

Rationale: EOO < 10 km^2, AOO < 1 km^2. Habitat quality at one known location continues to decline because of invasion by alien plants.

Erepsia promontorii L.Bolus

Status: **CR** PE

C. Klak & D. Raimondo

e**Distribution:** WC. Cape Peninsula and Hermanus.

Habitat: Coastal lowlands.

Rationale: Formerly on the Cape Peninsula at Cape Point and Sea Point and also at Hermanus. It has not been found since 1950, despite many attempts to relocate it. Habitat still exists at Cape Point, and this species might still be rediscovered.

F **Erepsia ramosa** L.Bolus

Status: **VU** B1ab(ii,iii,v)

N.A. Helme & D. Raimondo

e**Distribution:** WC. Piketberg to Cape Flats.

Habitat: Shale flats in renosterveld.

Rationale: EOO < 6 500 km^2. A formerly very common species that has lost > 90% of its habitat to wheat cultivation. Remaining subpopulations are severely fragmented, occurring on isolated renosterveld remnants, and continue to decline because of urban expansion on the Cape Flats and at Malmesbury and Paarl.

F **Erepsia simulans** (L.Bolus) Klak

Status: **VU** D2

C. Klak & J.E. Victor

e**Distribution:** WC. Bredasdorp, farm Brandfontein.

Habitat: Coastal lowland sands.

Rationale: One known location is potentially threatened by invading alien plants.

Erepsia steytlerae L.Bolus

Status: **EN** B1ab(ii,iii)+2ab(ii,iii)

C. Klak & J.E. Victor

e**Distribution:** WC. Betty's Bay to Kleinmond.

Habitat: Marine cliffs.

Rationale: EOO and AOO < 20 km^2. Habitat at five known locations is declining as a result of coastal development.

Erepsia villiersii L.Bolus

Status: **CR** PE

C. Klak & D. Raimondo

e**Distribution:** WC. Villiersdorp.

Habitat: Gravel shale slopes.
Rationale: This species has lost most of its habitat to vineyard and orchard expansion. The three most recent collections from the 1980s were all from road verge fragments. It has not been collected for over 25 years and may be extinct.

Esterhuysenia L.Bolus

[F] **Esterhuysenia alpina** L.Bolus

Status: **Rare**
D. Raimondo & C. Klak
[e]**Distribution:** WC. Hex River Mountains.
Habitat: High-altitude rocky peaks.
Rationale: A high-altitude habitat specialist that is not threatened.

[F] **Esterhuysenia inclaudens** (L.Bolus) H.E.K.Hartmann

Status: **Rare**
D. Raimondo & C. Klak
[e]**Distribution:** WC. Kwadous and northern Hex River Mountains.
Habitat: Rocky upper slopes in fynbos.
Rationale: A range-restricted species (EOO 420 km^2) that is not threatened.

Faucaria Schwantes

Faucaria gratiae L.Bolus

Status: **Rare**
J.E. Victor & A.P. Dold
[e]**Distribution:** EC. Riebeek-East.
Habitat: Grassland with open patches of thicket.
Rationale: A range-restricted species (EOO < 200 km^2), known to occur on two farms. Not threatened.

[F] **Faucaria nemorosa** L.Bolus ex L.E.Groen

Status: **Critically Rare**
J.E. Victor & A.P. Dold
[e]**Distribution:** EC. Riebeek-East.
Habitat: Grassland with open patches of thicket.
Rationale: One known subpopulation occurs in a protected area on a game farm where it is not threatened.

[F] **Faucaria subintegra** L.Bolus

Status: **VU** D2
J.E. Victor & A.P. Dold
[e]**Distribution:** EC. Between Keiskamma and Chalumna Rivers.
Habitat: Grassland.
Rationale: Four known locations are potentially threatened by overgrazing and collecting for the specialist succulent horticultural trade.

Faucaria tigrina (Haw.) Schwantes

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)
J.E. Victor & A.P. Dold
[e]**Distribution:** EC. Grahamstown.
Habitat: Mainly on open, rocky patches, in a dark clayish soil with a low pH, in mountain renosterveld.
Rationale: EOO and AOO < 200 km^2. Four known locations remain after many subpopulations declined because of urban expansion around Grahamstown. It continues to decline owing to overgrazing and urban expansion.

Frithia N.E.Br.

Frithia humilis Burgoyne

Status: **EN** B1ab(i,ii,iii,iv,v
P.M. Burgoyne & S. Krynauw
[e]**Distribution:** G MP. Bronkhorstspruit to Middelburg.
Habitat: Very shallow soils derived from coarse sediments, Irrigasie Formation of the Ecca Group.
Rationale: EOO 3 000 km^2. Mature individuals at 11 severely fragmented subpopulations continue to decline because of expanding informal settlements, overgrazing, invasion by alien plants and harvesting for horticultural purposes. Potentially threatened by mining.

Frithia pulchra N.E.Br.

Status: **Rare**
M.F. Pfab & J.E. Victor
[e]**Distribution:** G NW. Magaliesberg.
Habitat: Coarse, shallow, quartzitic soils on sandstones.
Rationale: One large subpopulation spread over an area of ± 100 km^2 is known. This species is not threatened.

Gibbaeum (Haw.) N.E.Br.

[F] **Gibbaeum album** N.E.Br. **Plate 73**

Status: **CR** B1ab(iii,v)+2ab(iii,v)
J.H. Vlok, A.L. Schutte-Vlok & D. Raimondo
[e]**Distribution:** WC. Northern slopes of the Langeberg Mountains.
Habitat: White quartz patches overlying clay slopes.
Rationale: EOO < 5 km^2, AOO < 1 km^2. Two locations were known, but one declined because of road construction. The number of mature individuals at the remaining location is declining as a result of harvesting for the specialist succulent horticultural trade. It is also potentially threatened by trampling by livestock.

Gibbaeum angulipes (L.Bolus) N.E.Br.

Status: **VU** D2
J.H. Vlok & D. Raimondo
[e]**Distribution:** WC. Waterval to Muiskraal in the northern Langeberg.
Habitat: White quartz patches, on flats.
Rationale: AOO < 20 km^2. Six known locations are potentially threatened by trampling by livestock and game.

Gibbaeum dispar N.E.Br. **Plate 73**

Status: **VU** D2
C. Klak, J.H. Vlok & J.E. Victor
[e]**Distribution:** WC. Van Wyksdorp.
Habitat: Mixed quartz and shale on hilltops.
Rationale: One known location is potentially threatened by crop cultivation, mining, road construction, harvesting for the specialist succulent horticultural trade and grazing and trampling by livestock.

Gibbaeum esterhuyseniae L.Bolus

Status: **CR** B1ab(iii,v)+2ab(iii,v)
C. Klak, J.H. Vlok & J.E. Victor
[e]**Distribution:** WC. Stormsvlei.
Habitat: Shale overlying quartz.
Rationale: EOO and AOO < 10 km^2. Habitat at one known location continues to decline because of expanding forestry plantations and crop cultivation. It is also potentially threatened by trampling by ostriches.

[F] **Gibbaeum haaglenii** H.E.K.Hartmann **Plate 73**

Status: **EN** B1ab(iii,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Lower Breede River Valley.

Habitat: White quartz patches overlying shales.

Rationale: EOO < 700 km². A few small, severely fragmented subpopulations remain after most of the habitat has been transformed for wheat cultivation. Decline due to grazing and trampling by cattle and ostriches continues.

Gibbaeum nebrownii Tischer **Plate 73**

Status: **CR** B1ab(iii,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Eierpoort to Dammetjies, south of Anysberg.

Habitat: Shale bands on hill slopes.

Rationale: EOO < 20 km². Two small, severely fragmented subpopulations are declining because of ongoing loss of habitat quality as a result of trampling by large concentrations of game and collecting for the specialist succulent horticultural trade.

Gibbaeum pachypodium (Kensit) L.Bolus **Plate 73**

Status: **CR** B1ab(iii,v)+2ab(iii,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Ladismith.

Habitat: Exposed enon over shale.

Rationale: EOO and AOO < 2 km². A population of 500–2 000 mature individuals remains at one location after part of the population declined as a result of road construction. Remaining individuals are declining because of trampling by livestock.

[F] **Gibbaeum petrense** (N.E.Br.) Tischer **Plate 73**

Status: **VU** B1ab(iii,v)+2ab(iii,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Northern slopes of the Langeberg.

Habitat: White quartz patches overlying clay slopes on shale ridges.

Rationale: EOO and AOO < 10 km². Fewer than 10 locations remain after habitat was lost to road construction. Habitat quality and number of mature individuals continue to decline because of trampling by livestock.

[F] **Gibbaeum pilosulum** (N.E.Br.) N.E.Br. **Plate 73**

Status: **VU** B1ab(iii,v)+2ab(iii,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. South of Touwsberg.

Habitat: Brackish quartz in low-lying areas.

Rationale: EOO and AOO < 100 km². Habitat quality and number of mature individuals at 10 known locations continue to decline because of trampling and grazing by livestock.

Gibbaeum schwantesii Tischer **Plate 73**

Status: **VU** D2

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Northern slopes of the Langeberg.

Habitat: Loamy renosterveld soils.

Rationale: Two known locations, ± 1 km apart, are potentially threatened by soil erosion and trampling by livestock.

[F] **Gibbaeum velutinum** (L.Bolus) Schwantes **Plate 73**

Status: **VU** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. West of Barrydale, from Springfontein to Soutkloof.

Habitat: Bare shale ridges.

Rationale: EOO and AOO < 100 km². Fewer than 10 known locations continue to decline because of habitat loss to urban expansion around Barrydale, quarrying and trampling by livestock.

Glottiphyllum Haw. ex N.E.Br.

[F] **Glottiphyllum carnosum** N.E.Br. **Plate 76**

Status: **EN** B1ab(ii,iii,iv,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Eastern Little Karoo between Calitzdorp and Oudtshoorn.

Habitat: Gravel flats.

Rationale: EOO 550 km². Habitat quality at four known locations continues to decline owing to the impact of ostrich farming.

[F] **Glottiphyllum cruciatum** (Haw.) N.E.Br. **Plate 76**

Status: **EN** D

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Oudtshoorn.

Habitat: Transition between gravel apronveld and gannaveld amongst small shrubs on sandy loam.

Rationale: Less than 250 mature individuals remain on a 1 ha road reserve after all other suitable habitat has been degraded by ostrich farming.

[F] **Glottiphyllum fergusoniae** L.Bolus **Plate 76**

Status: **NT** B1ab(iii,v)+2ab(iii,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Bellair Dam to Barrydale.

Habitat: Crevices of shales and quartz.

Rationale: EOO 500 km², AOO < 500 km². Four locations are known, but there are likely to be up to 10 others in unexplored areas of the range of this species. Its habitat continues to decline as a result of overgrazing and trampling by livestock.

[F] **Glottiphyllum linguiforme** (L.) N.E.Br. **Plate 76**

Status: **VU** B1ab(iii,v)+2ab(iii,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Oudtshoorn.

Habitat: Ecotones between spekboomveld and apronveld.

Rationale: EOO 300 km², AOO < 300 km². Habitat quality at 10 known locations is declining because of grazing, trampling and soil erosion caused by ostrich farming.

[F] **Glottiphyllum regium** N.E.Br. **Plate 76**

Status: **EN** B1ab(iii,v)+2ab(iii,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Calitzdorp.

Habitat: Ecotones between apronveld and gannaveld.

Rationale: EOO 20 km², AOO < 20 km². Habitat quality at five known locations is declining because of grazing, trampling and soil erosion caused by ostrich farming.

[F] **Glottiphyllum salmii** (Haw.) N.E.Br.

Status: **VU** B1ab(iii,v)+2ab(iii,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** EC. Eastern Little Karoo between Willowmore and Toorwater Springs.

Plate 71



D. Kirkwood

Acrodon parvifolius EN



C. Paterson-Jones

Acrodon subulatus EN



N.A. Helme

Acrodon deminutus VU



C. Paterson-Jones

Argyroderma subalbum Rare



N.A. Helme

Acrodon quarcicola EN



C. Paterson-Jones

Monilaria pisiformis EN

Plate 72



D. Raimondo

Diplosoma retroversum EN



N.A. Helme

Diplosoma luckhoffii VU



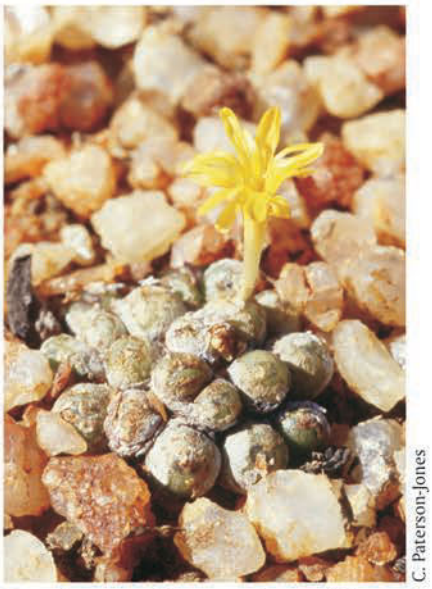
N.A. Helme

Conophytum khamiesbergense VU



C. Burgers

Conophytum turrigerum Rare



C. Paterson-Jones

Conophytum auriflorum subsp. *auriflorum* Rare



C. Paterson-Jones

Conophytum burgeri EN



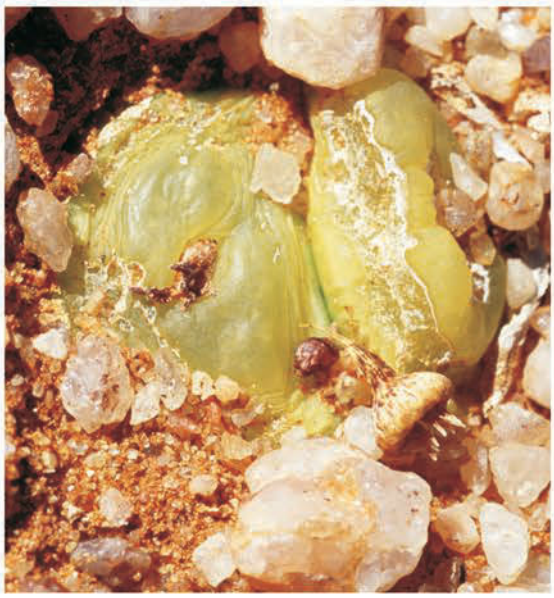
J.H. Vlok

Conophytum piluliforme subsp. *edwardii* Rare



C. Paterson-Jones

Lithops olivacea VU



C. Paterson-Jones

Conophytum ratum VU

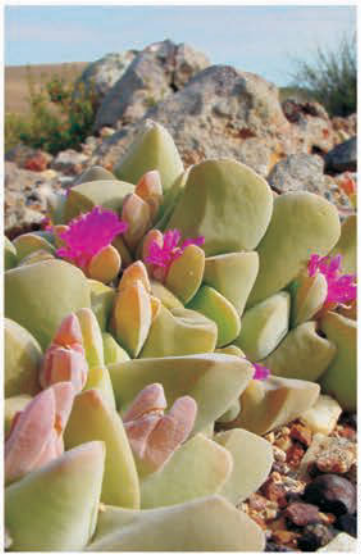
Plate 73


J.H. Vlok

Gibbaeum dispar VU


J.H. Vlok

Gibbaeum petrense VU


J.H. Vlok

Gibbaeum haaglenii EN


J.H. Vlok

Gibbaeum pachypodium CR


J.H. Vlok

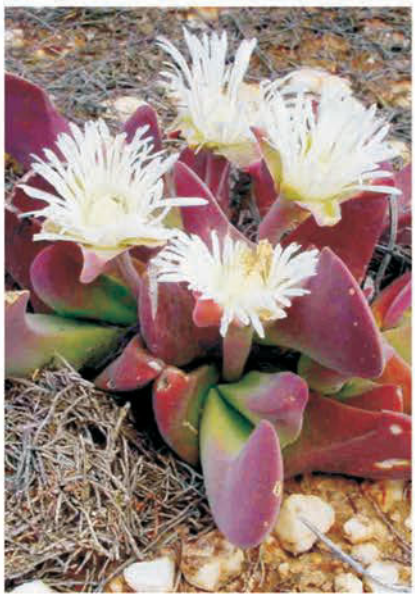
Gibbaeum nebrownii CR


J.H. Vlok

Gibbaeum velutinum VU


J.H. Vlok

Gibbaeum pilosulum VU


J.H. Vlok

Gibbaeum schwantesii VU


J.H. Vlok

Gibbaeum album CR

Plate 74



C. Paterson-Jones

Lampranthus aureus EN



N.A. Helme

Lampranthus fergusoniae VU



N.A. Helme

Lampranthus stanfordiae EN



N.A. Helme

Drosanthemum striatum VU



J.H. Vlok

Drosanthemum micans EN



N.A. Helme

Drosanthemum hallii EN

Plate 75


N.A. Helme

Lampranthus vernalis NT


N.A. Helme

Lampranthus ceriseus VU


N.A. Helme

Lampranthus immelmaniae EN


N.A. Helme

Lampranthus tenuifolius CR


N.A. Helme

Lampranthus explanatus EN


N.A. Helme

Lampranthus bicolor VU


N.A. Helme

Lampranthus debilis EN


C. Paterson-Jones

Lampranthus glaucus VU

Plate 76


J.H. Vlok

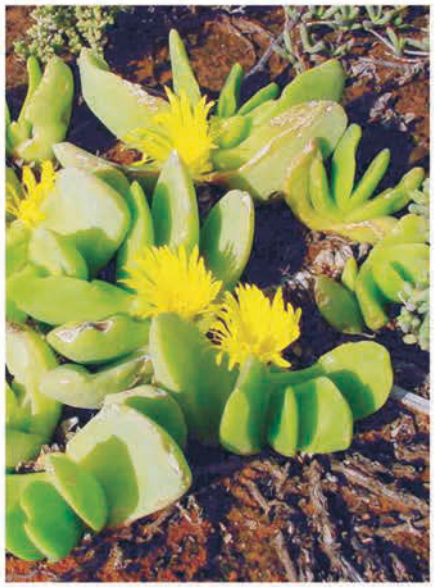
Glottiphyllum suave NT


J.H. Vlok

Glottiphyllum cruciatum EN


J.H. Vlok

Glottiphyllum regium EN


J.H. Vlok

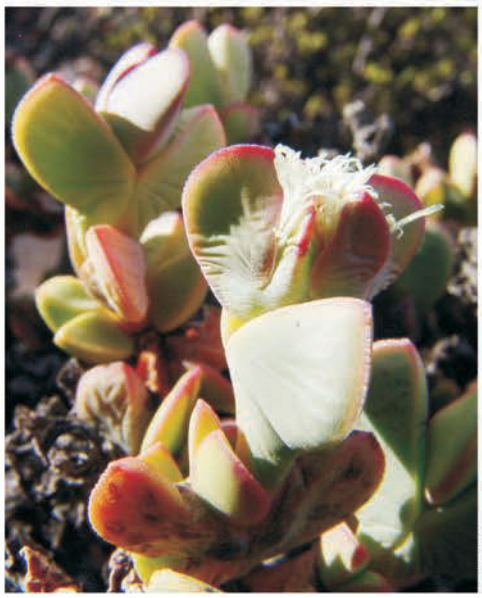
Glottiphyllum carnosum EN


J.H. Vlok

Glottiphyllum linguiforme VU


J.H. Vlok

Glottiphyllum fergusoniae NT


J.H. Vlok

Zeuktophyllum suppositum EN

Habitat: Transition from apronveld to gwarrieveld.
Rationale: EOO 300 km², AOO < 300 km². Two locations are known, but the habitat of this species is poorly explored and there are likely to be up to 10 locations. Habitat quality and number of mature individuals are declining as a result of grazing, trampling and soil erosion caused by stock and ostrich farming.

[F] **Glottiphyllum suave** N.E.Br. **Plate 76**

Status: **NT** B1ab(iii,v)
J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Western parts of the Little Karoo.
Habitat: Apronveld.
Rationale: EOO 2 000 km². An estimated 20 locations are declining because of overgrazing and trampling by livestock, game and ostriches.

Hereroa (Schwantes) Dinter & Schwantes

[F] **Hereroa concava** L.Bolus

Status: **DD**D
P.M. Burgoyne & F. Daniels

[e]**Distribution:** WC. Beaufort West.
Habitat: Unknown.
Rationale: A poorly known species, last collected in the 1930s.

Jacobsenia L.Bolus & Schwantes emend. Ihlenf.

Jacobsenia hallii L.Bolus

Status: **VU** D2
C. Klak & D. Raimondo

[e]**Distribution:** WC. Komkans and Koekenaap.
Habitat: Deep, sandy soils in succulent karoo shrubland.
Rationale: Two known locations are potentially threatened by habitat loss to vineyard and tomato cultivation and mining.

[F] **Jacobsenia vaginata** (L.Bolus) Ihlenf.

Status: **VU** D2
C. Klak & D. Raimondo

[e]**Distribution:** NC. Komaggas.
Habitat: Quartz patches.
Rationale: Part of the habitat at one known location declined as a result of quarrying. The population is not declining at present but continued quarrying and trampling by livestock are potential threats.

Jordaaniella H.E.K.Hartmann

Jordaaniella clavifolia (L.Bolus) H.E.K.Hartmann

Status: **VU** D2
P.M. Burgoyne & D. Raimondo

[e]**Distribution:** NC. Kleinsee to Hondeklip Bay.
Habitat: Recent calcareous sands in West Coast strandveld and succulent karoo.
Rationale: Two, possibly three, locations are potentially threatened by diamond mining.

Jordaaniella uniflora (L.Bolus) H.E.K.Hartmann

Status: **NT** B1ab(ii,iii,iv,v)
D. Raimondo, P.M. Burgoyne & J.E. Victor

[e]**Distribution:** NC. Between Kleinsee and Hondeklip Bay.
Habitat: Open patches amongst shrubs.
Rationale: EOO 3 000 km². An estimated 15–20 locations are declining as a result of habitat loss to diamond mining.

Khadia N.E.Br.

Khadia alticola Chess. & H.E.K.Hartmann

Status: **Rare**
J.E. Victor

[e]**Distribution:** KZN MP. Steenkampsberg, Utrecht and Wakkerstroom.
Habitat: Montane grassland in shallow, sandy, humus-rich soil pockets and crevices between rock plates above 2 000 m.
Rationale: A high-altitude habitat specialist. Not threatened because of the inaccessibility of its habitat.

Khadia beswickii (L.Bolus) N.E.Br.

Status: **VU** B1ab(iii,v)+2ab(iii,v)
J.E. Victor & M.F. Pfab

[e]**Distribution:** G. Nigel.
Habitat: Open shallow soil over rocks in grassland.
Rationale: EOO 475 km², AOO 3–7 km². Ten known locations are declining as a result of habitat loss to urban and infrastructure development, invasion by alien plants, mining and collecting for the specialist succulent horticultural trade.

[F] **Khadia borealis** L.Bolus

Status: **Rare**
P.M. Burgoyne

[e]**Distribution:** LM. Soutpansberg summit, from Lejuma to Mavhode.
Habitat: Mountain summits, dry grasslands or savanna, in crevices of quartzitic rocks.
Rationale: EOO 900 km². Locally common in suitable habitat, but available habitat is restricted. More than 10 subpopulations are known.

[F] **Khadia carolinensis** (L.Bolus) L.Bolus

Status: **VU** A3c
M. Lötter, J.E. Burrows, P.M. Burgoyne & L. von Staden

[e]**Distribution:** MP. Carolina and Belfast.
Habitat: Well-drained, sandy loam soils among rocky outcrops, or at the edge of sandstone sheets, highveld grassland, 1 700 m.
Rationale: Coal reserves are found underneath the sandstones on which this species is found. Coal mining has had a small impact to date, but over the last five years many new applications for coal mining have been received. Should these applications be granted (and many more are likely to be submitted within the next few years), the habitat will be severely affected by opencast mining. We estimate that up to 45% of the range (EOO) of this species could be destroyed within the next 10–20 years should the current applications be approved.

Lampranthus N.E.Br.

[F] **Lampranthus acrosepalus** (L.Bolus) L.Bolus

Status: **VU** D2
C. Klak & D. Raimondo

[e]**Distribution:** WC. Piketberg.
Habitat: Sandy plateaus and gentle slopes.
Rationale: Three locations remain after some habitat has been transformed to fruit orchards. Although no longer declining, agriculture remains a potential threat.

[F] **Lampranthus amabilis** L.Bolus

Status: **EN** B1ab(iii,v)+2ab(iii,v)

C. Klak & D. Raimondo

[e]**Distribution**: WC. Lower southern slopes of Potberg Mountain.

Habitat: Shale bands.

Rationale: EOO 35 km^2, AOO < 35 km^2. Occurs at three locations, two of which are outside the Potberg Nature Reserve and threatened by coastal development and trampling by livestock. It is also declining as a result of habitat degradation caused by invasion by alien plants at all three locations.

Lampranthus amoenus (Salm-Dyck ex DC.) N.E.Br.

Status: **EN** B1ab(ii,iii,iv,v)

D. Raimondo

[e]**Distribution**: WC. Cape Flats to Malmesbury.

Habitat: Low-lying sandy flats in Atlantis Sand Fynbos.

Rationale: EOO 2 000 km^2. A few small, severely fragmented subpopulations remain after most of the habitat has been transformed by urban expansion and crop cultivation. It continues to decline, mainly because of dense invasions of alien plants in habitat remnants.

[F] **Lampranthus antonii** L.Bolus

Status: **CR** D

C. Klak & D. Raimondo

[e]**Distribution**: WC. Citrusdal, Suurvlakte.

Habitat: Sandstone soils above 500 m.

Rationale: The only known population of this rare species has less than 50 plants and is threatened by forestry.

[F] **Lampranthus aureus** (L.) N.E.Br. **Plate 74**

Status: **EN** B1ab(ii,iii)

C. Klak & D. Raimondo

[e]**Distribution**: WC. Tulbagh, Langebaan to Cape Peninsula.

Habitat: Deep sandy soils in lowland fynbos.

Rationale: EOO < 2 000 km^2. Habitat at five known locations is declining because of crop cultivation, urban expansion and invasion by alien plants.

[F] **Lampranthus bicolor** (L.) N.E.Br. **Plate 75**

Status: **VU** B1ab(i,ii,iii,iv,v)

C. Klak & D. Raimondo

[e]**Distribution**: WC. Cape Flats and Cape Peninsula to Hermanus and Struisbaai.

Habitat: Sandy soils close to coast, below 500 m.

Rationale: EOO < 3 600 km^2. Known from five locations, but suspected to occur at a few more. It has declined on the Cape Flats because of urban expansion. Elsewhere in the range there is a continuing decline because of coastal development, crop cultivation and invasion by alien plants.

[F] **Lampranthus brownii** (Hook.f.) N.E.Br.

Status: **DD**

C. Klak, D. Raimondo & P.A. Manyama

[e]**Distribution**: WC. Unknown.

Habitat: Unknown.

Rationale: Known only from the type, collected at an unspecified locality. Distribution uncertain and ecology unknown.

[F] **Lampranthus caudatus** L.Bolus

Status: **EN** B1ab(iii)

C. Klak & D. Raimondo

[e]**Distribution**: WC. Agulhas.

Habitat: Limestone fynbos.

Rationale: EOO < 400 km^2. Habitat quality at two known locations is declining because of invasion by alien plants. It is also potentially threatened by inappropriate fire management.

[F] **Lampranthus ceriseus** (L.Bolus) L.Bolus **Plate 75**

Status: **VU** B1ab(ii,iii,iv,v)

C. Klak & D. Raimondo

[e]**Distribution**: WC. Agulhas Plain to Riversdale.

Habitat: Coastal limestone fynbos.

Rationale: EOO < 8 000 km^2. Fewer than 10 known locations are declining as a result of habitat loss to crop cultivation, coastal development and invasion by alien plants.

[F] **Lampranthus coccineus** (Haw.) N.E.Br.

Status: **CR** D

C. Klak & D. Raimondo

[e]**Distribution**: WC. Darling.

Habitat: Lowland shale in seasonally moist sites.

Rationale: One subpopulation of less than 50 mature individuals survives in a small private nature reserve after most of the habitat has been transformed for the cultivation of wheat. It is not declining at present, but is potentially threatened by grazing and trampling by livestock and invasion by alien plants.

[F] **Lampranthus curviflorus** (Haw.) H.E.K.Hartmann

Status: **DD**

C. Klak, D. Raimondo & P.A. Manyama

[e]**Distribution**: Unknown.

Habitat: Unknown.

Rationale: Known only from the type, collected at an unspecified locality in South Africa. Distribution uncertain and ecology unknown.

[F] **Lampranthus curvifolius** (Haw.) N.E.Br.

Status: **VU** D2

C. Klak & D. Raimondo

[e]**Distribution**: WC. Cape Peninsula.

Habitat: Granite slopes.

Rationale: Two known locations are potentially threatened by invading alien plants.

[F] **Lampranthus debilis** (Haw.) N.E.Br. **Plate 75**

Status: **EN** B1ab(ii,iii,iv,v)

D. Raimondo & C. Klak

[e]**Distribution**: WC. Cape Flats to Bredasdorp.

Habitat: Seasonally wet flats.

Rationale: EOO < 5 000 km^2. Altogether 15 subpopulations are known through herbarium records, but five are now locally extinct because of urban expansion on the Cape Flats. The remaining 10 known subpopulations are severely fragmented and continue to decline as a result of invasion by alien plants, crop cultivation in the Bredasdorp region and further urban expansion on the Cape Flats and around Bredasdorp.

[F] **Lampranthus dilutus** N.E.Br.

Status: **EN** B1ab(i,ii,iii,iv,v)

C. Klak & D. Raimondo

[e]**Distribution**: WC. Tulbagh to Somerset West.

Habitat: Flat gravelly shales.

Rationale: EOO < 4 500 km^2. Four locations remain after > 94% of the habitat has been transformed for

the cultivation of wheat and urban expansion. Decline continues—a subpopulation was lost to a housing estate development in Malmesbury in 2005. This species is also threatened by overgrazing, inappropriate fire management, crop cultivation and further urban development.

[F] **Lampranthus diutinus** (L.Bolus) N.E.Br.

Status: **EN** B1ab(ii,iii,iv,v)

C. Klak & D. Raimondo

[e]Distribution: WC. Mossel Bay to Riversdale.

Habitat: Coastal sands.

Rationale: EOO 3 200 km^2. The 5–7 severely fragmented subpopulations are declining because of ongoing habitat loss to coastal development, invading alien plants and crop cultivation.

[F] **Lampranthus dregeanus** (Sond.) N.E.Br.

Status: **VU** D2

C. Klak & D. Raimondo

[e]Distribution: WC. Tulbagh to Wellington.

Habitat: Shale-sandstone transitions, 350 m.

Rationale: Most of the habitat in the Tulbagh Valley has been transformed for wheat cultivation, vineyard expansion and forestry plantations, and a few subpopulations remain on fragments (AOO < 10 km^2) along the foot of the Elandsberg. Habitat loss is not continuing, but invading alien plants, housing and agricultural development are potential threats.

[F] **Lampranthus dubitans** (L.Bolus) L.Bolus

Status: **DD**

C. Klak, D. Raimondo & P.A. Manyama

[e]Distribution: WC. Worcester.

Habitat: Unknown.

Rationale: Not enough is known about the distribution, specific habitat or population status of this species to determine its threat status.

Lampranthus explanatus (L.Bolus) N.E.Br. Plate 75

Status: **EN** A4c

C. Klak, N.A. Helme & D. Raimondo

[e]Distribution: WC. Darling to Cape Peninsula to Struisbaai.

Habitat: Lowland sands within 20 km of the coast.

Rationale: A formerly common species that is now locally extinct at > 50% of known locations because of habitat loss to crop cultivation, invasion by alien plants and coastal development over the past 120 years. Decline is continuing. Generation length 15 years. We estimate a further 50% population reduction to be reached by 2020, based on past rates of decline since 1975.

[F] **Lampranthus fergusoniae** (L.Bolus) L.Bolus Plate 74

Status: **VU** B1ab(ii,iii,iv,v)

N.A. Helme, C. Klak & D. Raimondo

[e]Distribution: WC. Danger Point to Still Bay.

Habitat: Calcareous soils often associated with limestone dunes.

Rationale: EOO 7 700 km^2. Five known locations continue to decline as a result of coastal development and related changes in fire frequency, invasion by alien plants and crop cultivation.

Lampranthus filicaulis (Haw.) N.E.Br.

Status: **VU** A2c

N.A. Helme, C. Klak & D. Raimondo

[e]Distribution: WC. Tulbagh to Cape Flats to Bot River.

Habitat: Seasonally wet alluvial sands overlying koffieklip.

Rationale: A population reduction of 30% is suspected to have occurred over the past 45 years (generation length 15–20 years), based on the rate of population decline observed over the past 10 years. Crop cultivation has caused extensive habitat loss in the past, and housing development is causing an ongoing loss of remaining habitat.

[F] **Lampranthus foliosus** L.Bolus

Status: **EN** B1ab(ii,iii,iv,v)

C. Klak, N.A. Helme & D. Raimondo

[e]Distribution: WC. Mossel Bay to Gansbaai.

Habitat: Limestone pavements.

Rationale: EOO < 1 200 km^2. Four known locations are declining as a result of coastal development and invasion by alien plants.

Lampranthus fugitans L.Bolus

Status: **VU** D2

P.M. Burgoyne & F. Daniels

[e]Distribution: EC KZN. Pondoland, Port Edward to Mkambati.

Habitat: Open areas between grassland, on soils derived from Msikaba Sandstone.

Rationale: Three known locations are potentially threatened by overgrazing and trampling and resultant soil erosion.

[F] **Lampranthus glaucus** (L.) N.E.Br. Plate 75

Status: **VU** B1ab(i,ii,iii,iv,v)

C. Klak & D. Raimondo

[e]Distribution: NC WC. Nieuwoudtville to Cape Flats.

Habitat: Seasonally waterlogged acid sands.

Rationale: EOO < 20 000 km^2. Altogether 11 locations are known through herbarium records, but four are now locally extinct as a result of urban expansion on the Cape Flats and habitat loss to wheat cultivation elsewhere in the range. Habitat at seven remaining locations continue to decline because of urban expansion, especially in the Durbanville area, as well as invasion by alien grass.

[F] **Lampranthus glomeratus** (L.) N.E.Br.

Status: **EN** B1ab(iii,v)+2ab(iii,v)

D. Raimondo & C. Klak

[e]Distribution: WC. Cape Peninsula and Cape Flats.

Habitat: Sandy flats and lower slopes in fynbos.

Rationale: This species is now locally extinct at nine out of 11 known locations because of urban expansion and invasion by alien plants. Current EOO 95 km^2, AOO < 95 km^2. Habitat quality at two remaining locations continues to decline owing to dense invasions of alien plants.

[F] **Lampranthus gracilipes** (L.Bolus) N.E.Br.

Status: **Rare**

C. Klak, D. Raimondo & P.A. Manyama

[e]Distribution: WC. Piketberg.

Habitat: Shady rock crevices, 300–980 m.

Rationale: A range-restricted species (EOO 450 km^2) with no known threats.

[F] **Lampranthus hallii** L.Bolus

Status: **VU** D2

C. Klak & D. Raimondo

[e]Distribution: WC. Langeberg Mountains.

Habitat: Steep rocky slopes in fynbos.

Rationale: Two known locations are potentially threatened by alien plants that invade the habitat.

[F] **Lampranthus holensis** L.Bolus

Status: **VU** D2

C. Klak & D. Raimondo

[e]**Distribution:** WC. Knersvlakte.

Habitat: Shale slopes with quartz pebbles in succulent karoo.

Rationale: Three known locations are potentially threatened by mining and agriculture.

[F] **Lampranthus imbricans** (Haw.) N.E.Br.

Status: **DD**D

C. Klak, D. Raimondo & P.A. Manyama

[e]**Distribution:** WC. Unknown.

Habitat: Unknown.

Rationale: Known only from the type, collected at an unspecified locality. Distribution uncertain and ecology unknown.

[F] **Lampranthus immelmaniae** (L.Bolus) N.E.Br. **Plate 75**

Status: **EN** B1ab(i,ii,iii,iv,v)

C. Klak, N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Yzerfontein and Mamre to Redelinghuys.

Habitat: Deep coastal sands.

Rationale: EOO 3 500 km^2. Five locations remain after much of the habitat has been transformed for the cultivation of wheat and potatoes. It continues to decline as a result of invasion by alien plants, housing development and ongoing expansion of crop cultivation.

[F] **Lampranthus inaequalis** (Haw.) N.E.Br.

Status: **DD**D

C. Klak, D. Raimondo & P.A. Manyama

[e]**Distribution:** WC. Unknown.

Habitat: Unknown.

Rationale: Known only from the type, collected at an unspecified locality. Distribution uncertain and ecology unknown.

[F] **Lampranthus inconspicuus** (Haw.) Schwantes

Status: **DD**D

C. Klak, D. Raimondo & P.A. Manyama

[e]**Distribution:** WC. Unknown.

Habitat: Unknown.

Rationale: Known only from the type, collected at an unspecified locality. Distribution uncertain and ecology unknown.

[F] **Lampranthus intervallaris** L.Bolus

Status: **DD**D

C. Klak, D. Raimondo & P.A. Manyama

[e]**Distribution:** WC. Clanwilliam.

Habitat: Rocky slopes, 800–1 150 m.

Rationale: Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

[F] **Lampranthus lavisii** (L.Bolus) L.Bolus

Status: **DD**D

C. Klak, D. Raimondo & P.A. Manyama

[e]**Distribution:** EC. Humansdorp.

Habitat: Unknown, but occurs at ± 100–400 m.

Rationale: Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

[F] **Lampranthus leptaleon** (Haw.) N.E.Br.

Status: **EN** B2ab(ii,iii,iv,v)

C. Klak & D. Raimondo

[e]**Distribution:** WC. Tulbagh to Cape Town, Somerset West to Hermanus.

Habitat: Seasonally wet flats in renosterveld.

Rationale: Five locations remain on small habitat fragments after most of the habitat has been transformed for the cultivation of wheat and vineyards. AOO < 20 km^2. Available habitat continues to decline as a result of urban development, invasion by alien plants and crop cultivation. One subpopulation at Gordon's Bay was lost in 2004 when a site was illegally cleared for a housing development.

[F] **Lampranthus obconicus** (L.Bolus) L.Bolus

Status: **DD**D

C. Klak, D. Raimondo & P.F. Matlamela

[e]**Distribution:** NC. Calvinia.

Habitat: Sandy areas, 820–1 500 m.

Rationale: Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

[F] **Lampranthus pakhuisensis** (L.Bolus) L.Bolus

Status: **DD**D

P.A. Manyama & D.A. Kamundi†

[e]**Distribution:** WC. Clanwilliam.

Habitat: Sandstone slopes.

Rationale: Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

[F] **Lampranthus pauciflorus** (L.Bolus) N.E.Br.

Status: **EN** B1ab(ii,iii,iv,v)

C. Klak & D. Raimondo

[e]**Distribution:** WC. Mossel Bay to Plettenberg Bay.

Habitat: Coastal slopes.

Rationale: EOO 1 270 km^2. Four known locations remain after most of the habitat has been transformed for coastal development. Habitat loss continues, especially around Plettenberg Bay, Mossel Bay and Knysna.

Lampranthus peacockiae (L.Bolus) L.Bolus

Status: **VU** B1ab(ii,iii,iv,v)

C. Klak & D. Raimondo

[e]**Distribution:** WC. Tulbagh, Darling to Cape Peninsula.

Habitat: Flats or lower slopes of hills, often on granite or shale-derived soils.

Rationale: EOO < 1 400 km^2. Eight locations remain on small fragments after most of the habitat has been transformed for wheat cultivation and it continues to decline as a result of invasion by alien plants, urban expansion and trampling by livestock.

[F] **Lampranthus peersii** (L.Bolus) N.E.Br.

Status: **DD**D

C. Klak & D. Raimondo

[e]**Distribution:** WC. Graafwater.

Habitat: Deep sands.

Rationale: Known from the 1923 type collection from an area threatened by expanding potato cultivation. Taxonomic status is uncertain.

[F] **Lampranthus procumbens** Klak

Status: **VU** D2

C. Klak & D. Raimondo

[e]**Distribution**: NC. Namaqualand, Koingnaas.

Habitat: Coastal fynbos.

Rationale: Known from one location in a area owned by De Beers. The area is currently a private nature reserve, but mining remains a potential threat.

[F] **Lampranthus profundus** (L.Bolus) H.E.K.Hartmann

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

C. Klak & D. Raimondo

[e]**Distribution**: WC. Piketberg.

Habitat: Lower slopes and flats in fynbos-renosterveld transition.

Rationale: EOO 220 km^2, AOO < 220 km^2. Five known locations continue to decline as a result of ongoing habitat loss to crop cultivation.

Lampranthus promontorii (L.Bolus) N.E.Br.

Status: **Rare**

C. Klak & D. Raimondo

[e]**Distribution**: WC. Southern parts of the Cape Peninsula.

Habitat: Sandstone fynbos, on lower slopes.

Rationale: A range-restricted Peninsula endemic (EOO < 300 km^2). Most subpopulations are protected within the Table Mountain National Park.

[F] **Lampranthus purpureus** L.Bolus

Status: **DD**D

C. Klak, D. Raimondo & P.F. Matlamela

[e]**Distribution**: WC. Clanwilliam.

Habitat: Hill slopes, 300–600 m.

Rationale: Known only from the type collection. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Lampranthus reptans (Aiton) N.E.Br.

Status: **EN** B1ab(iii)

C. Klak, E.J. van Jaarsveld & D. Raimondo

[e]**Distribution**: WC. Darling to Cape Flats.

Habitat: Seasonally wet acid sands.

Rationale: EOO < 5 000 km^2. Fewer than 10 severely fragmented remaining subpopulations continue to decline as a result of ongoing habitat loss to crop cultivation, urban expansion and invading alien plants.

[F] **Lampranthus rupestris** (L.Bolus) N.E.Br.

Status: **CR** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

C. Klak & D. Raimondo

[e]**Distribution**: WC. Perdeberg, northwest of Paarl.

Habitat: Lower granite slopes on small rocky outcrops.

Rationale: EOO and AOO < 5 km^2. One known location remains after > 80% of the lower slopes of the Perdeberg has been transformed for the cultivation of vineyards and fruit orchards. It continues to decline owing to ongoing habitat loss to agriculture and invasive alien plants.

Lampranthus rustii (A.Berger) N.E.Br.

Status: **DD**D

J.E. Victor & D. Raimondo

[e]**Distribution**: WC. Riversdale and Seweweekspoort Mountain.

Habitat: Sandstone slopes.

Rationale: Last collected in 1935. Although there are 14 herbarium records of this species, none have detailed locality descriptions. The distribution, specific habitat and current population status are too poorly known to determine its status.

Lampranthus scaber (L.) N.E.Br.

Status: **EN** B2ab(i,ii,iii,iv,v)

C. Klak & D. Raimondo

[e]**Distribution**: WC. Tulbagh to Cape Flats and Piketberg.

Habitat: Renosterveld, seasonally wet flats on clay.

Rationale: Only small fragments of the habitat of this species remain after extensive transformation for the cultivation of wheat and vineyards. AOO < 20 km^2. Only five of 14 known locations remain, and habitat loss to urban development, invading alien plants and crop cultivation continues.

Lampranthus schlechteri (Zahlbr.) L.Bolus

Status: **CR** B1ab(iii)+2ab(iii); C2a(i,ii); D

C. Klak & J.E. Victor

[e]**Distribution**: WC. Pniel, Stellenbosch.

Habitat: Lower slopes in sandstone fynbos.

Rationale: EOO and AOO < 2 km^2. Previously known from the Groot Drakenstein, Wemmershoek and Franschhoek areas, but lost most of its habitat to afforestation and vineyards and was thought to be extinct. It was rediscovered in 2001 and is now known from one location where there are fewer than 10 mature individuals. It is threatened by too frequent fires and the potential expansion of a nearby housing development.

Lampranthus sociorum (L.Bolus) N.E.Br.

Status: **VU** B1ab(i,ii,iii,iv,v)

C. Klak & D. Raimondo

[e]**Distribution**: WC. Cape Flats to Darling and Malmesbury.

Habitat: Renosterveld, on shale on flats and lower slopes of hills.

Rationale: EOO < 2 400 km^2. Fewer than 10 locations remain after most of the habitat has been transformed for wheat cultivation and vineyards. It continues to decline because of ongoing habitat loss to agriculture, urban expansion and invasive alien plants.

[F] **Lampranthus staminodiosus** (L.Bolus) Schwantes

Status: **DD**D

C. Klak, D. Raimondo & P.F. Matlamela

[e]**Distribution**: WC. Clanwilliam.

Habitat: Unknown.

Rationale: Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

[F] **Lampranthus stanfordiae** L.Bolus **Plate 74**

Status: **EN** B1ab(ii,iii,v)

N.A. Helme, C. Klak & D. Raimondo

[e]**Distribution**: WC. Yzerfontein to Redelinghuys.

Habitat: Well-drained acid sands in fynbos.

Rationale: EOO 4 900 km^2. A rare species known to occur at only three locations. It is declining as a result of ongoing habitat loss to invading alien plants, agriculture and coastal development.

[F] **Lampranthus stenopetalus** (L.Bolus) N.E.Br.

Status: **VU** B1ab(i,ii,iii,iv,v)

C. Klak & D. Raimondo

[e]**Distribution:** WC. Graafwater to Cape Flats and Villiersdorp.

Habitat: Lowland sand fynbos.

Rationale: EOO 11 500 km^2. Seven locations remain after > 50% of known subpopulations have now become locally extinct because of urban expansion on the Cape Flats. It continues to decline owing to habitat loss to invading alien plants, further urban development, and potato and wheat cultivation, especially around Graafwater.

Lampranthus stenus (Haw.) N.E.Br.

Status: **EN** B1ab(ii,iii,iv,v)

C. Klak, E.J. van Jaarsveld & L. Potter

[e]**Distribution:** WC. Malmesbury to Cape Peninsula and East to Bredasdorp.

Habitat: Coastal acid sands.

Rationale: EOO < 2 000 km^2. Seven known locations are declining as a result of ongoing habitat loss to crop cultivation, coastal development and invasion by alien plants.

[F] **Lampranthus stephanii** (Schwantes) Schwantes

Status: **DD**D

C. Klak, D. Raimondo & P.F. Matlamela

[e]**Distribution:** WC. Unknown.

Habitat: Unknown.

Rationale: Known only from the type collection from an unspecified locality. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

[F] **Lampranthus subaequalis** (L.Bolus) L.Bolus

Status: **DD**D

C. Klak, D. Raimondo & P.F. Matlamela

[e]**Distribution:** WC. Uniondale.

Habitat: Unknown.

Rationale: Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

[F] **Lampranthus sublaxus** (L.Bolus) L.Bolus

Status: **DD**D

C. Klak, D. Raimondo & P.F. Matlamela

[e]**Distribution:** NC. Calvinia.

Habitat: Unknown.

Rationale: Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Lampranthus tenuifolius (L.) N.E.Br. **Plate 75**

Status: **CR** A2c; B2ab(ii,iii,v); C1

N.A. Helme, C. Klak & D. Raimondo

[e]**Distribution:** WC. Malmesbury to Struisbaai.

Habitat: Deep, neutral to alkaline sands.

Rationale: This species formerly occurred on the Cape Flats, but > 80% of known subpopulations in this area are now locally extinct as a result of habitat loss to crop cultivation and urban expansion over the past 60 years (generation length 20 years). Recent surveys located only four locations between the Cape Peninsula and Struisbaai, but two of them have been lost to coastal development since 2002, resulting in a 25% decline in the population in less than one generation. Two small, severely fragmented subpopulations remain, one at Cape Point consisting of less than 50 plants, the other near Struisbaai with ± 80 plants. AOO < 10 km^2. Habitat loss continues owing to invasion by alien plants and ongoing coastal development.

Lampranthus vanzijliae (L.Bolus) N.E.Br.

Status: **EX**

C. Klak & J.E. Victor

[e]**Distribution:** WC. Worcester.

Habitat: Unknown.

Rationale: Known from the type, collected in 1921. Despite much collecting in the area since then, it has never been recorded again and much of the potential habitat has now been transformed by crop cultivation and urban development.

[F] **Lampranthus verecundus** (L.Bolus) N.E.Br.

Status: **DD**D

C. Klak, D. Raimondo & P.F. Matlamela

[e]**Distribution:** WC. Riversdale.

Habitat: Unknown.

Rationale: Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

[F] **Lampranthus vernalis** (L.Bolus) L.Bolus **Plate 75**

Status: **NT** A2ac; B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

N.A. Helme, C. Klak & D. Raimondo

[e]**Distribution:** WC. Yzerfontein to Saldanha.

Habitat: Coastal areas, on limestone.

Rationale: A population reduction of 20–25% is estimated based on habitat loss to coastal development around Saldanha, Jacobsbaai, Paternoster, St Helena, Langebaan and Yzerfontein over the past 25 years (generation length 10 years). EOO and AOO < 100 km^2. The 15 known locations continue to decline because of ongoing habitat loss.

[F] **Lampranthus woodburniae** (L.Bolus) N.E.Br.

Status: **DD**D

C. Klak, D. Raimondo & P.F. Matlamela

[e]**Distribution:** WC. Worcester.

Habitat: Unknown.

Rationale: Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

[F] **Lampranthus wordsworthiae** (L.Bolus) N.E.Br.

Status: **DD**D

C. Klak, D. Raimondo & P.F. Matlamela

[e]**Distribution:** WC. Caledon.

Habitat: Unknown.

Rationale: Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

[F] **Lampranthus zeyheri** (Salm-Dyck) N.E.Br.

Status: **DD**D

C. Klak, D. Raimondo & P.F. Matlamela

[e]**Distribution:** EC. Uitenhage.

Habitat: Unknown.

Rationale: Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Leipoldtia L.Bolus

[F] **Leipoldtia frutescens** (L.Bolus) H.E.K.Hartmann
Status: **VU** B1ab(ii,iii,v)
C. Klak & D. Raimondo
[e]**Distribution**: NC. Northern coastal Namaqualand.
Habitat: Arid granite slopes.
Rationale: EOO 1 700 km^2. A locally common species known to occur at five locations but there are likely to be more in poorly explored parts of the range. It is declining because of ongoing habitat loss to mining.

[F] **Leipoldtia klaverensis** L.Bolus
Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v)
C. Klak & D. Raimondo
[e]**Distribution**: WC. Klawer.
Habitat: Arid gravel slopes.
Rationale: EOO and AOO < 280 km^2. Habitat at two known locations continues to decline as a result of vineyard expansion.

Lithops N.E.Br.

Lithops aucampiae L.Bolus subsp. **euniceae** (de Boer) D.T.Cole
Status: **VU** D2
J.E. Victor & S.A. Hammer
[e]**Distribution**: NC. Hopetown.
Habitat: Fine-grained, brown sandstone with some amygdaloidal lava.
Rationale: Two known locations are potentially threatened by habitat degradation as a result of dumping.

Lithops coleorum S.A.Hammer & Uijs
Status: **VU** D1+2
J.E. Victor, L. von Staden & D.T. Cole
[e]**Distribution**: LM. Lephalale.
Habitat: Wedged among sandstone rubble on an eroding conglomerate hillock.
Rationale: Some 400–500 mature individuals are known to occur at a single location where they are potentially threatened by collecting for the specialist succulent horticultural trade.

Lithops dinteri Schwantes subsp. **frederici** (D.T.Cole) D.T.Cole
Status: **VU** D2
J.E. Victor & S.A. Hammer
[e]**Distribution**: NC. Pella.
Habitat: Einiqua Plains Desert.
Rationale: One known location is potentially threatened by harvesting for the succulent horticultural trade.

Lithops divergens L.Bolus
Status: **NT** D2
J.E. Victor
[e]**Distribution**: NC WC. Loeriesfontein and Vanrhynsdorp.
Habitat: Arid clay flats and slopes.
Rationale: The 5–10 locations are potentially threatened by harvesting for the specialist succulent horticultural trade.

Lithops dorotheae Nel
Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)
J.E. Victor, S.A. Hammer & P.G. Desmet
[e]**Distribution**: NC. Pella to Pofadder.
Habitat: Fine-grained, sheared, feldspathic quartzite.
Rationale: EOO and AOO < 25 km^2. The number of mature individuals at five known locations is declining because of harvesting for the specialist succulent horticultural trade.

[F] **Lithops geyeri** Nel
Status: **Rare**
J.E. Victor
[e]**Distribution**: NC. Vioolsdrif.
Habitat: Quartzite mixed with schist, gneiss or calcrete.
Rationale: A range-restricted species (EOO < 500 km^2) that is not threatened.

Lithops helmutii L.Bolus
Status: **VU** D2
J.E. Victor
[e]**Distribution**: NC. Steinkopf.
Habitat: Succulent karoo shrubland.
Rationale: One known location is potentially threatened by harvesting for the specialist succulent horticultural trade.

[F] **Lithops lesliei** (N.E.Br.) N.E.Br. subsp. **burchellii** D.T.Cole
Status: **NT** D2
J.E. Victor
[e]**Distribution**: NC. Kimberley.
Habitat: Calcareous, well-drained soil in areas that receive 250–400 mm rainfall per year.
Rationale: Fewer than 10 locations are potentially threatened by harvesting for the medicinal plant trade.

Lithops lesliei (N.E.Br.) N.E.Br. subsp. **lesliei**
Status: **NT** A4acd
V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter, A.M. Ngwenya & L. Mills
Distribution: FS G LM MP NC NW. Douglas in the Northern Cape Province to central Limpopo Province and southeastern Botswana.
Habitat: Primarily in arid grasslands, usually in rocky places, growing under the protection of forbs and grasses.
Rationale: We estimate a 15% population reduction due to persistent and destructive harvesting for the medicinal plant trade and as a result of urban expansion and agriculture over the past 10 years (generation length five years). A further decline of at least 10% is expected over the next five years if current rates of harvesting are to continue. This taxon has a wide distribution, but local extirpations are being observed within urban areas.

Lithops meyeri L.Bolus
Status: **VU** D2
J.E. Victor
[e]**Distribution**: NC. Richtersveld.
Habitat: White quartzite in succulent karoo shrubland.
Rationale: A habitat specialist (AOO < 20 km^2) that is potentially threatened by grazing and trampling by livestock and possibly by harvesting for the specialist succulent horticultural trade.

Lithops naureeniae D.T.Cole
Status: **VU** D2
J.E. Victor
[e]**Distribution**: NC. Springbok and possibly the Kamiesberg.

Habitat: Reddish brown, rocky soil derived from gneiss.
Rationale: One or two locations are potentially threatened by harvesting for the specialist succulent horticultural trade.

Lithops olivacea L.Bolus Plate 72

Status: **VU** D2
J.E. Victor
eDistribution: NC. Aggeneys to Pofadder.
Habitat: Quartzite.
Rationale: A habitat specialist (AOO < 20 km^2) that is potentially threatened by grazing and trampling by livestock and possibly by harvesting for the specialist succulent horticultural trade.

Lithops otzeniana Nel

Status: **VU** D2
J.E. Victor
eDistribution: NC. Loeriesfontein to Gamoep.
Habitat: In decomposed granite under shrubs and in open places among stones derived from gneiss.
Rationale: Three known locations are potentially threatened by grazing and trampling by livestock and possibly by harvesting for the specialist succulent horticultural trade.

Lithops viridis H.A.Lückh.

Status: **VU** D2
J.E. Victor
eDistribution: NC. Loeriesfontein.
Habitat: Weathered chert and shale stone.
Rationale: One known location is potentially threatened by trampling by livestock and possibly by harvesting for the specialist succulent horticultural trade.

Machairophyllum Schwantes

[F] **Machairophyllum brevifolium** L.Bolus

Status: **VU** D2
C. Klak & D. Raimondo
eDistribution: WC. Oudtshoorn and De Rust.
Habitat: Red conglomerate hills.
Rationale: Three known locations are potentially threatened by grazing and trampling by livestock.

[F] **Machairophyllum stayneri** L.Bolus

Status: **Critically Rare**
C. Klak & D. Raimondo
eDistribution: EC. Suurberg.
Habitat: Fynbos on shale or quartzite.
Rationale: Known from the type collection made in 1958, but occurs on mountain slopes and is not likely to be threatened.

Mestoklema N.E.Br. ex Glen

Mestoklema albanicum N.E.Br. ex Glen

Status: **NT** D2
J.E. Victor & A.P. Dold
eDistribution: EC. Uitenhage to Graaff-Reinet.
Habitat: Thicket and valley bushveld.
Rationale: Eight known locations are potentially threatened by expanding human settlements and grazing by goats.

Meyerophytum Schwantes

[F] **Meyerophytum globosum** (L.Bolus) Ihlenf.

Status: **VU** D2
C. Klak & J.E. Victor
eDistribution: NC. Komaggas.
Habitat: Quartz patches.
Rationale: Habitat at one known location has declined because of quarrying. The population is stable at present, but mining and grazing by livestock are potential threats.

Mitrophyllum Schwantes

Mitrophyllum abbreviatum L.Bolus

Status: **VU** D2
G. Williamson, P.M. Burgoyne, F. Daniels & L. Potter
eDistribution: NC. Richtersveld.
Habitat: Southeast-facing slopes in quartz amongst succulent karoo vegetation.
Rationale: One known location is potentially threatened by grazing by livestock.

Mitrophyllum roseum L.Bolus

Status: **Rare**
P.M. Burgoyne & L. Potter
eDistribution: NC. Komaggas Mountains.
Habitat: Southwest-facing slopes in quartzitic outcrops.
Rationale: A range-restricted (EOO < 10 km^2) habitat specialist that is not threatened.

Monilaria (Schwantes) Schwantes

[F] **Monilaria obconica** Ihlenf. & S.Jörg.

Status: **VU** D2
C. Klak, J.E. Victor, P.M. Burgoyne & F. Daniels
eDistribution: NC. Springbok.
Habitat: Quartz.
Rationale: Three known locations are potentially threatened by mining and grazing by livestock.

[F] **Monilaria pisiformis** (Haw.) Schwantes Plate 71

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)
N.A. Helme & D. Raimondo
eDistribution: WC. Vredendal to the mouth of the Olifants River.
Habitat: Quartz patches.
Rationale: EOO 30 km^2, AOO < 30 km^2. Two known locations are declining because of ongoing habitat loss to vineyards and tomato cultivation.

Muiria N.E.Br.

Muiria hortenseae N.E.Br.

Status: **CR** A2abc; B1ab(iii,v)+2ab(iii,v)
J.H. Vlok & D. Raimondo
eDistribution: WC. Springfontein and Barrydale.
Habitat: Large quartzite patches, on clay soils in succulent karoo on ridges of low hills.
Rationale: A population reduction of > 80% is estimated based on habitat loss to road construction over the past 50 years and the observed effects of trampling by livestock (generation length 20 years). Only one of five known subpopulations remains (EOO and AOO < 1 km^2) and mature individuals at this location continue to decline.

Namaquanthus L.Bolus

[F] **Namaquanthus vanheerdii** L.Bolus

Status: **VU** D2

C. Klak & J.E. Victor

[e]**Distribution:** NC. Port Nolloth.

Habitat: Upper slopes of rocky outcrops.

Rationale: Two known locations are potentially threatened by mining and grazing and trampling by livestock.

Nelia Schwantes

Nelia pillansii (N.E.Br.) Schwantes

Status: **Rare**

D. Raimondo, P.M. Burgoyne & F. Daniels

[e]**Distribution:** NC. Richtersveld.

Habitat: Quartz fields.

Rationale: A range-restricted habitat specialist (EOO < 10 km^2) that is not threatened.

Nelia schlechteri Schwantes

Status: **Rare**

D. Raimondo, P.M. Burgoyne & G. Williamson

[e]**Distribution:** NC. Richtersveld, Soetwaterberg and other mountains further north.

Habitat: Quartz.

Rationale: A range-restricted species (EOO < 500 km^2) that is not threatened.

Neohenricia L.Bolus

Neohenricia spiculata S.A.Hammer

Status: **Rare**

J.E. Victor & S.A. Hammer

[e]**Distribution:** EC. Andriesberg.

Habitat: In crevices of dolerite domes.

Rationale: Small, scattered subpopulations occur in an area of $\pm$ 5 km^2, but is not threatened because of the inaccessibility of the habitat.

Octopoma N.E.Br.

[F] **Octopoma abruptum** (A.Berger) N.E.Br.

Status: **DD**D

P.M. Burgoyne, D. Raimondo & F. Daniels

[e]**Distribution:** WC. Clanwilliam, Brandewyn River.

Habitat: Dry stony slopes, 500 m.

Rationale: The farm where this poorly known species was last collected in 1897 has been extensively transformed for crop cultivation, and it is likely to be threatened.

[F] **Octopoma octojuge** (L.Bolus) N.E.Br.

Status: **VU** B1ab(iii,v)+2ab(iii,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Ladismith.

Habitat: Quartz apronveld, on loamy soils with some quartzite pebbles.

Rationale: EOO 450 km^2, AOO < 450 km^2. Habitat quality at fewer than 10 locations is declining as a result of trampling and grazing by large concentrations of game.

[F] **Octopoma quadrisepalum** (L.Bolus) H.E.K.Hartmann

Status: **VU** B1ab(iii,v)

J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Laingsburg to Ladismith.

Habitat: Open succulent vegetation in loamy soils with some quartzite pebbles in quartz gannaveld.

Rationale: EOO 15 km^2. Three locations are known, but there are likely to be more in poorly explored areas of the range. The specialised habitat of this species is prone to erosion, and overgrazing and trampling by livestock are probably causing a continuing decline.

[F] **Octopoma rupigenum** (L.Bolus) L.Bolus

Status: **DD**D

P.M. Burgoyne & F. Daniels

[e]**Distribution:** WC. Clanwilliam, between Pakhuis Pass and Biesiesfontein.

Habitat: Among rocks.

Rationale: Not recorded since the type collection in 1933. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Odontophorus N.E.Br.

[F] **Odontophorus angustifolius** L.Bolus subsp. **angustifolius**

Status: **Rare**

S.A. Hammer & E.J. van Jaarsveld

[e]**Distribution:** NC. West of Steinkopf.

Habitat: Sandstone ridges, rocky slopes and hilltops.

Rationale: A range-restricted taxon (EOO < 500 km^2) that is not threatened because of the inaccessibility of its habitat.

[F] **Odontophorus angustifolius** L.Bolus subsp. **protoparcoides** S.A.Hammer

Status: **Rare**

C. Klak & J.E. Victor

[e]**Distribution:** NC. Richtersveld, Mount Terror and Rosyntjieberg.

Habitat: Quartzite slopes.

Rationale: A range-restricted taxon (EOO < 300 km^2) occurring in a remote area where it is not threatened.

Odontophorus marlothii N.E.Br.

Status: **Rare**

E.J. van Jaarsveld & L. Potter

[e]**Distribution:** NC. Nigramoep Mountain.

Habitat: Namaqualand Shale Shrubland, gravelly north- to northwest-facing slopes.

Rationale: A range-restricted species (EOO < 500 km^2) that is locally common and not threatened.

Orthopterum L.Bolus

Orthopterum coegana L.Bolus

Status: **CR** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

J.E. Victor, W. Berrington & A.P. Dold

[e]**Distribution:** EC. Coega.

Habitat: Rocky sandstone outcrops.

Rationale: A highly range-restricted species that occurs only at Coega (EOO < 10 km^2, AOO < 1 km^2). There were three isolated, severely fragmented subpopulations, but the habitat of one subpopulation was destroyed as a result of quarrying. Plants from this site were translocated, but appear not to survive the disturbance. The habitat at a second subpopulation is being degraded by dumping, disturbance from vehicles and removal of the quartz rocks on which the plants grow for sale in nurseries and this subpopulation is also declining. A third subpopulation is not threatened.

Oscularia Schwantes

Oscularia cremnophila Van Jaarsv., Desmet & A.E.van Wyk

Status: **CR** D

P.A. Manyama

eDistribution: WC. Lambert's Bay.

Habitat: Quartzitic sandstone inselberg, 122 m.

Rationale: A population of 24 mature individuals at a single site is potentially threatened by mining.

F **Oscularia vredenburgensis** (L.Bolus) H.E.K.Hartmann

Status: **VU** A2abc; B1ab(ii,iii,v)+2ab(ii,iii,v)

N.A. Helme & D. Raimondo

eDistribution: WC. Stompneus Bay to Langebaan.

Habitat: Granite rocks.

Rationale: A population reduction of > 30% over the past 15 years is estimated based on observed declines in known subpopulations and habitat loss to coastal development (generation length ± 10 years). EOO and AOO < 500 km^2. Five locations are known, but there are likely to be a few more in poorly explored areas of the range. Ongoing habitat loss and degradation by coastal development and grazing livestock are causing a continuing decline.

Ottosonderia L.Bolus

F **Ottosonderia obtusa** L.Bolus

Status: **VU** D2

C. Klak & J.E. Victor

eDistribution: NC. Wallekraal and Komaggas.

Habitat: Quartz patches.

Rationale: Habitat at one of two known locations was lost to quarrying, but the population is stable at present. Further quarrying and trampling and overgrazing by livestock are potential threats.

Phiambolia Klak

F **Phiambolia franciscii** (L.Bolus) Klak

Status: **Rare**

C. Klak & D. Raimondo

eDistribution: WC. Ceres to the Cederberg.

Habitat: Sandstone slabs on shallow soil.

Rationale: A range-restricted habitat specialist (EOO 450 km^2) that is not threatened because of its preference for rocky habitats.

F **Phiambolia hallii** (L.Bolus) Klak

Status: **Rare**

C. Klak & D. Raimondo

eDistribution: WC. Karoopoort to Katbakkies and the Cederberg.

Habitat: Shale or sandstone, often in very rocky areas.

Rationale: A habitat specialist known from five sites. It is not threatened because of its preference for rocky habitats.

F **Phiambolia incumbens** (L.Bolus) Klak

Status: **Rare**

C. Klak & D. Raimondo

eDistribution: WC. Klawer to Clanwilliam to Katbakkies.

Habitat: Shallow sand on sandstone pavements.

Rationale: A habitat specialist known from three subpopulations. It is not threatened because of its preference for rocky habitats.

F **Phiambolia stayneri** (L.Bolus ex Toelken & Jessop) Klak

Status: **VU** D2

C. Klak, D. Raimondo & J.E. Victor

eDistribution: WC. Worcester to Ceres.

Habitat: Shale in renosterveld.

Rationale: Five known locations are potentially threatened crop cultivation and quarrying.

Phyllobolus N.E.Br.

F **Phyllobolus abbreviatus** (L.Bolus) Gerbaulet

Status: **VU** D2

C. Klak & D. Raimondo

eDistribution: WC. Knersvlakte.

Habitat: Quartz patches on flats.

Rationale: A habitat specialist (AOO < 20 km^2) that is potentially threatened by mining and grazing and trampling by livestock.

F **Phyllobolus amabilis** Gerbaulet & Struck

Status: **Rare**

D. Raimondo & F. Cholo

eDistribution: NC. Sutherland.

Habitat: Rocky sites, 1 200–1 600 m.

Rationale: A range-restricted species (EOO < 500 km^2) that is not threatened.

F **Phyllobolus caudatus** (L.Bolus) Gerbaulet

Status: **VU** D2

D. Raimondo, C. Klak, E. Marinus & S. Todd

eDistribution: WC. Hex River Valley and Bokkeveld Escarpment.

Habitat: Sandy alluvial soils on shale.

Rationale: One disjunct subpopulation in the Hex River Valley is now locally extinct as a result of fruit orchard cultivation. Four known locations on the Bokkeveld Escarpment near Nieuwoudtville are potentially threatened by alien grass invasion and trampling and grazing by livestock.

F **Phyllobolus chrysophthalmus** Gerbaulet & Struck

Status: **Rare**

D. Raimondo & P.G. Desmet

eDistribution: WC. Vanrhynsdorp to Bitterfontein.

Habitat: Stony soils in Knersvlakte Quartz Vygie Veld, growing in bushes, 180–350 m.

Rationale: A range-restricted (EOO < 500 km^2) habitat specialist that is not threatened.

F **Phyllobolus congestus** (L.Bolus) Gerbaulet

Status: **VU** D2

C. Klak & D. Raimondo

eDistribution: WC. Knersvlakte.

Habitat: Rocky sites, often on quartz.

Rationale: Four known locations are potentially threatened by mining and grazing by livestock.

F **Phyllobolus gariepensis** Gerbaulet & Struck

Status: **Rare**

D. Raimondo & F. Cholo

eDistribution: NC. Richtersveld.

Habitat: Rocky slopes, 190–1 100 m.
Rationale: A range-restricted endemic to the north-eastern Richtersveld (EOO < 100 km²) with no known threats.

F **Phyllobolus rabiei** (L.Bolus) Gerbaulet

Status: **DD**D
D. Raimondo & F. Cholo

e**Distribution:** FS. Fauresmith.
Habitat: Unknown, 1 100–1 450 m.
Rationale: A poorly known species last collected in 1932. It is potentially threatened by grazing livestock.

F **Phyllobolus suffruticosus** (L.Bolus) Gerbaulet

Status: **EN** B1ab(i,ii,iii,iv,v); D
C. Klak & D. Raimondo

e**Distribution:** WC. Riebeek Kasteel and Moorreesburg to Nardous Pass.
Habitat: On shale in renosterveld.
Rationale: EOO 2 300 km². A population of less than 200 mature individuals at two disjunct locations is declining as a result of ongoing habitat loss to expanding vineyards around Riebeek Kasteel and to rooibos tea cultivation at Nardous Pass.

F **Phyllobolus tenuiflorus** (Jacq.) Gerbaulet

Status: **VU** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)
D. Raimondo

e**Distribution:** WC. Knersvlakte.
Habitat: Quartzite outcrops.
Rationale: EOO 1 100 km², AOO < 1 100 km². Habitat at 5–10 locations is declining because of mining.

F **Phyllobolus viridiflorus** (Aiton) Gerbaulet

Status: **Rare**
C. Klak & D. Raimondo

e**Distribution:** WC. Olifants River Valley.
Habitat: Hills or quartzite plains.
Rationale: A range-restricted species (EOO 100 km²) that is not threatened.

Pleiospilos N.E.Br.

F **Pleiospilos bolusii** (Hook.f.) N.E.Br.

Status: **VU** B1ab(iii,v)
J.H. Vlok & D. Raimondo

e**Distribution:** EC. Willowmore to Aberdeen.
Habitat: Quartz flats in karroid shrubland.
Rationale: EOO < 7 000 km². The number of mature individuals at an estimated fewer than 10 locations is declining as a result of overgrazing and trampling and illegal collecting for the specialist succulent horticultural trade.

Pleiospilos compactus (Aiton) Schwantes subsp. **minor** (L.Bolus) H.E.K.Hartmann & Liede

Status: **Critically Rare**
D. Raimondo & S.A. Hammer

e**Distribution:** EC. Steytlerville.
Habitat: Gravels or shales usually on northeast-facing slopes.
Rationale: Known to occur at a single site where it is not threatened.

Pleiospilos nelii Schwantes

Status: **NT** B1ab(iii,v)+2ab(iii,v)
D. Raimondo

e**Distribution:** EC. Willowmore karoo.
Habitat: Quartz-covered flats in sparse karoo vegetation.
Rationale: EOO and AOO < 2 000 km². Occurs as small subpopulations or scattered individuals at 15–20 locations. Collecting for horticultural trade caused a decline in the past, but at present overgrazing and trampling by livestock is the main threat to this species.

Pleiospilos simulans (Marloth) N.E.Br.

Status: **EW**
J.H. Vlok & D. Raimondo

e**Distribution:** EC. Graaff-Reinet and Aberdeen.
Habitat: Quartz flats in Nama-Karoo vegetation.
Rationale: This species used to occur at several locations between Graaff-Reinet and Aberdeen, but most of them were depleted as a result of illegal collecting for the specialist succulent horticultural trade; in the early 1990s only three subpopulations remained. Collecting continued, and the last wild subpopulation near Preston was cleared between 2004 and 2007.

Prenia N.E.Br.

F **Prenia vanrensburgii** L.Bolus

Status: **NT** B1ab(ii,iii,v)+2ab(ii,iii,v)
D. Raimondo & R.C. Turner

e**Distribution:** WC. Coast between Hawston and Agulhas.
Habitat: Coastal sands associated with limestone and sandstones.
Rationale: EOO 128 km², AOO < 128 km². The 15 locations are declining as a result of habitat loss to coastal development and invading alien acacias.

Psilocaulon N.E.Br.

F **Psilocaulon densum** N.E.Br.

Status: **DD**D
P.M. Burgoyne & F. Daniels

e**Distribution:** NC. Steinkopf.
Habitat: Unknown.
Rationale: A poorly known species known from only two collections. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Rhinephyllum N.E.Br.

Rhinephyllum inaequale L.Bolus

Status: **EN** D
J.H. Vlok & D. Raimondo

e**Distribution:** WC. Little Karoo, Prince Albert.
Habitat: Loose gravelly shale.
Rationale: A population of less than 100 mature individuals at one location is potentially threatened by trampling by livestock.

Rhombophyllum (Schwantes) Schwantes

F **Rhombophyllum rhomboideum** (Salm-Dyck) Schwantes

Status: **EN** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)
D. Raimondo & A.P. Dold

e**Distribution:** EC. Uitenhage and Port Elizabeth.
Habitat: Sundays Thicket associated with calcrete soils.
Rationale: EOO 102 km², AOO < 102 km². Four locations are known. The habitat of this range-restricted species is being rapidly transformed by urban and industrial development around Port Elizabeth, St George's Bay, Motherwell and Coega.

Ruschia Schwantes

[F] **Ruschia altigena** (L.Bolus) L.Bolus

Status: **Rare**

P.M. Burgoyne, P.G. Desmet & D. Raimondo

[e]**Distribution**: EC WC. Swartberg, Witteberg and Baviaanskloof Mountains.

Habitat: Rocky slopes in sandstone fynbos above 1 700 m.

Rationale: A high-altitude habitat specialist that is not threatened.

Ruschia amicorum (L.Bolus) Schwantes

Status: **VU** D2

J.E. Victor

[e]**Distribution**: WC. Montagu to Ladismith.

Habitat: Succulent karoo on shales.

Rationale: Five known locations are potentially threatened by crop cultivation and urban development.

[F] **Ruschia ceresiana** L.Bolus

Status: **Rare**

D. Raimondo & F. Cholo

[e]**Distribution**: WC. Tanqua Karoo.

Habitat: Succulent karoo shrubland.

Rationale: A range-restricted endemic to the Tanqua Karoo (EOO < 500 km^2) that is not threatened.

[F] **Ruschia cupulata** (L.Bolus) Schwantes

Status: **VU** D2

N.A. Helme & D. Raimondo

[e]**Distribution**: WC. Saldanha to Jacobsbaai.

Habitat: Low granite rocks along coast.

Rationale: Fewer than five known locations are potentially threatened by coastal development.

[F] **Ruschia densiflora** L.Bolus

Status: **CR** B1ab(ii,iii,v)

N.A. Helme, C. Klak & D. Raimondo

[e]**Distribution**: WC. Lambert's Bay to Clanwilliam.

Habitat: Acid sand fynbos in sandveld.

Rationale: EOO < 100 km^2. Two of three known locations are now locally extinct as a result of habitat loss to potato cultivation. The number of mature individuals at one remaining location in a road verge near Clanwilliam is declining because of habitat degradation as a result of fragmentation.

[F] **Ruschia duthiae** (L.Bolus) Schwantes

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

[e]**Distribution**: WC. Knysna to Nature's Valley.

Habitat: Garden route shale fynbos.

Rationale: EOO and AOO < 160 km^2. Five known locations are declining as a result of ongoing habitat loss to coastal development, crop cultivation, afforestation, invasion by alien plants and inappropriate fire management as a result of fragmentation of its habitat. This species belongs to a genus that is difficult to identify and may be overlooked in environmental impact assessments.

[F] **Ruschia geminiflora** (Haw.) Schwantes

Status: **VU** B1ab(ii,iii,iv,v)

N.A. Helme, D. Raimondo & C. Klak

[e]**Distribution**: WC. Cape Peninsula to Kalbaskraal.

Habitat: Clay flats, also in alluvial sands over clay or coastal sands.

Rationale: EOO 13 400 km^2. Only 15 small, severely fragmented subpopulations remain after > 80% of the habitat has been transformed by crop cultivation, urban and coastal development and invasion by alien plants, and decline is continuing.

[F] **Ruschia indecora** (L.Bolus) Schwantes

Status: **EN** B1ab(ii,iii,iv,v)

C. Klak & D. Raimondo

[e]**Distribution**: WC. Mamre to Bloubergstrand.

Habitat: Coastal lowland fynbos in deep sands.

Rationale: EOO 1 350 km^2. Five remaining locations continue to decline owing to habitat loss to crop cultivation, coastal development and invasion by alien plants.

[F] **Ruschia klipbergensis** L.Bolus

Status: **DD**

D. Raimondo & F. Cholo

[e]**Distribution**: WC. Malmesbury Klipberg.

Habitat: Granite soils in renosterveld, 250–380 m.

Rationale: Last collected in the 1950s. It occurs in an area where it is likely to be threatened, but not enough is known about the distribution, specific habitat or population status of this species to determine its status.

[F] **Ruschia lapidicola** L.Bolus

Status: **Rare**

D. Raimondo & F. Cholo

[e]**Distribution**: WC. Northern Cederberg.

Habitat: Rocky sandstone basins, 600–1 070 m.

Rationale: A rare, range-restricted species (EOO < 500 km^2) that is not threatened.

[F] **Ruschia leptocalyx** L.Bolus

Status: **EN** B1ab(ii,iii,iv,v)

C. Klak & D. Raimondo

[e]**Distribution**: WC. Struisbaai to Mossel Bay.

Habitat: Shale outcrop among Enon conglomerate associated with quartz.

Rationale: EOO < 4 900 km^2. Five known locations are declining as a result of ongoing habitat loss to crop cultivation, coastal development and invasion by alien plants.

[F] **Ruschia nieuwerustensis** L.Bolus

Status: **Rare**

D. Raimondo & F. Cholo

[e]**Distribution**: WC. Nuwerus.

Habitat: Namaqualand Klipkoppe Shrubland.

Rationale: A range-restricted (EOO < 500 km^2) habitat specialist that is not threatened.

[F] **Ruschia polita** L.Bolus

Status: **VU** D2

J.H. Vlok & D. Raimondo

[e]**Distribution**: WC. Touwsrivier to Anysberg.

Habitat: Low hills on calcrete soils.

Rationale: Two known locations are potentially threatened by overgrazing and trampling by livestock.

[F] **Ruschia promontorii** L.Bolus

Status: **Rare**

E.J. van Jaarsveld, N.A. Helme & L. Potter

[e]**Distribution**: WC. Cape Peninsula.

Habitat: Shallow pockets of sand on narrow rocky ledges and steep precipitous slopes exposed to salt-laden sea breezes, 15–180 m.
Rationale: A range-restricted (EOO < 100 km²) habitat specialist that is not threatened.

Ruschia rubricaulis (Haw.) L.Bolus

Status: **VU** D2
N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Cape Peninsula.
Habitat: Granite boulders on coastal slopes.
Rationale: A range-restricted endemic (EOO 70 km²) to the Cape Peninsula. Five known locations are potentially threatened by invading alien plants.

[F] **Ruschia strubeniae** (L.Bolus) Schwantes

Status: **VU** D2
C. Klak & D. Raimondo
[e]**Distribution:** WC. Piketberg and Perdeberg.
Habitat: Bases of rock outcrops on sandstone slopes.
Rationale: Four known locations are potentially threatened by invading alien plants and expansion of vineyards.

[F] **Ruschia tecta** L.Bolus

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)
C. Klak & D. Raimondo
[e]**Distribution:** WC. Darling to Cape Town.
Habitat: Sandy coastal flats.
Rationale: EOO 240 km², AOO < 240 km². Fewer than five remaining locations continue to decline as a result of ongoing habitat loss to coastal development, crop cultivation and invasion by alien plants.

Saphesia N.E.Br.

Saphesia flaccida (Jacq.) N.E.Br.

Status: **CR** B2ab(ii,iii,iv,v)
C. Klak & D. Raimondo
[e]**Distribution:** WC. Malmesbury and Redelinghuys.
Habitat: Lowland sand fynbos, in seasonally wet depressions.
Rationale: Two small, severely fragmented subpopulations remain on isolated habitat remnants (AOO < 10 km²) after > 50% of known subpopulations were lost to invading alien plants, crop cultivation and urban development. It continues to decline because of ongoing habitat loss to rooibos tea cultivation and invasion by alien plants.

Sceletium N.E.Br.

Sceletium expansum (L.) L.Bolus

Status: **VU** B1ab(ii,iii,iv,v)
C. Klak & D. Raimondo
[e]**Distribution:** WC. Malmesbury to Clanwilliam.
Habitat: Arid succulent fynbos on sandstone slopes.
Rationale: EOO < 2 200 km². Fewer than 10 locations are declining because of ongoing habitat loss to rooibos tea cultivation around Clanwilliam.

[F] **Sceletium strictum** L.Bolus

Status: **EN** B1ab(iii,v)+2ab(iii,v)
C. Klak, J.H. Vlok & D. Raimondo
[e]**Distribution:** WC. Ladismith.
Habitat: Succulent karoo, among shrubs.
Rationale: EOO and AOO < 250 km². Habitat quality at three known locations is declining as a result of grazing and trampling by goats and ostriches. It is also potentially threatened by illegal harvesting for horticultural purposes.

[F] **Sceletium varians** (Haw.) Gerbaulet

Status: **VU** B1ab(ii,iii,v)+2ab(ii,iii,v)
J.E. Victor & N.A. Helme
[e]**Distribution:** WC. Worcester and Robertson.
Habitat: Lowlands on shale flats.
Rationale: EOO and AOO < 500 km². Fewer than 10 locations are declining as a result of ongoing habitat loss to vineyard expansion and urban development.

Schwantesia Dinter

Schwantesia acutipetala L.Bolus

Status: **VU** D2
J.E. Victor
Distribution: NC. Richtersveld.
Habitat: Kahams Mountain Desert, on quartzite, moderate to steep slopes.
Rationale: One known location is potentially threatened by trampling by livestock and illegal harvesting for the specialist succulent horticultural trade.

Schwantesia borcherdsii L.Bolus

Status: **VU** D2
J.E. Victor
[e]**Distribution:** NC. Upington, near Augrabies.
Habitat: Succulent karoo, in rocky soils derived from red or black gneiss rocks.
Rationale: One known location is potentially threatened by harvesting for the illegal succulent horticultural trade.

Schwantesia pillansii L.Bolus

Status: **Rare**
J.E. Victor
[e]**Distribution:** NC. Bushmanland, Namies Mountain.
Habitat: Bushmanland Inselberg Shrubland, well-drained, sandy soil, mostly in crevices of quartzite, steep slopes, 1 000 m.
Rationale: A range-restricted species (EOO 30 km²) that is not threatened.

Skiatophytum L.Bolus

[F] **Skiatophytum tripolium** (L.) L.Bolus

Status: **VU** B1ab(ii,iii,iv,v)
C. Klak & D. Raimondo
[e]**Distribution:** WC. Between Clanwilliam, Franschhoek and Cape Town.
Habitat: Table Mountain Sandstone sands adjacent to mountain streams or seeps on lower slopes.
Rationale: EOO < 13 000 km². Fewer than 10 known locations are declining because of ongoing habitat loss to afforestation, urban development, invasion by alien plants and crop cultivation.

Stayneria L.Bolus

Stayneria neilii (L.Bolus) L.Bolus

Status: **VU** D2
J.E. Victor
[e]**Distribution:** WC. Breede River Valley between Worcester and McGregor.
Habitat: Rocky sandstone hills or mountain slopes in vegetation transitional between succulent karoo and montane fynbos.
Rationale: Three known locations are potentially threatened by vineyard expansion.

Tanquana H.E.K.Hartmann & Liede

Tanquana archeri (L.Bolus) H.E.K.Hartmann & Liede

Status: **VU** D2
J.E. Victor

e**Distribution:** WC. Matjiesfontein to Laingsburg.
Habitat: Gravelly soils derived from shales of the Ecca Formation.
Rationale: One known location is potentially threatened by harvesting for the specialist succulent horticultural trade.

Tanquana hilmarii (L.Bolus) H.E.K.Hartmann & Liede

Status: **CR** B1ab(v)+2ab(v)
D. Raimondo, A.L. Schutte-Vlok & J.H. Vlok

e**Distribution:** WC. Little Karoo south of Laingsburg.
Habitat: In cracks between shale ridges in succulent karoo.
Rationale: EOO < 100 km^2, AOO 9.5 km^2. The number of mature individuals at three severely fragmented subpopulations is declining as a result of harvesting for the specialist succulent horticultural trade. One subpopulation has lost 95% of individuals over the past 20 years.

Trichodiadema Schwantes

Trichodiadema aureum L.Bolus

Status: **VU** D2
D. Raimondo, J.E. Victor & P.M. Burgoyne

e**Distribution:** EC. Willowmore to Jeffreys Bay.
Habitat: Karroid vegetation, near alluvial soils.
Rationale: Three known locations are potentially threatened by urban expansion, crop cultivation and overgrazing and trampling by livestock.

Trichodiadema burgeri L.Bolus

Status: **VU** D2
D. Raimondo & J.H. Vlok

e**Distribution:** WC. De Rust near Oudtshoorn.
Habitat: De Rust sandolien-spekboomveld.
Rationale: One known location is potentially threatened by trampling and overgrazing by sheep and ostriches.

Trichodiadema pygmaeum L.Bolus

Status: **VU** D2
J.E. Victor

e**Distribution:** WC. Cape Infanta.
Habitat: Calcrete flats.
Rationale: One known location is potentially threatened by coastal development and invasion by alien plants.

Vlokia S.A.Hammer

F **Vlokia ater** S.A.Hammer

Status: **Critically Rare**
C. Klak, A.L. Schutte-Vlok & D. Raimondo

e**Distribution:** WC. Montagu, Waboomsberg.
Habitat: Shallow pans on a sandstone plateau.
Rationale: Known to occur at a single site where it is not threatened.

Wooleya L.Bolus

F **Wooleya farinosa** (L.Bolus) L.Bolus

Status: **VU** B1ab(ii,iii,iv,v)
C. Klak & D. Raimondo

e**Distribution:** NC. Hondeklip Bay, Wallekraal and Kleinsee.
Habitat: On coastal sands within coastal mistbelt zone.
Rationale: EOO 2 400 km^2. Habitat at 5–10 locations continues to decline because of coastal development and mining. Mining has already had an extensive impact on the habitat of this species and it is likely to increase in future.

Zeuktophyllum N.E.Br.

Zeuktophyllum suppositum (L.Bolus) N.E.Br. **Plate 76**

Status: **EN** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)
C. Klak & J.E. Victor

e**Distribution:** WC. Barrydale.
Habitat: Quartz patches in succulent karoo.
Rationale: EOO and AOO < 500 km^2. Three remaining locations continue to decline as a result of overgrazing and illegal collecting for the specialist succulent horticultural trade.

MOLLUGINACEAE

Adenogramma Rchb.

F **Adenogramma congesta** Adamson

Status: **DD**D
N.A. Helme & D. Raimondo

e**Distribution:** WC. Slanghoek to Ceres Warm Bokkeveld.
Habitat: Damp sand.
Rationale: Last collected before 1960, with no specific locality details known. This species may be threatened by agriculture.

F **Adenogramma physocalyx** Fenzl

Status: **DD**D
N.A. Helme & D. Raimondo

e**Distribution:** WC. Franschhoek, Bot River and Breede River.
Habitat: Damp flats.
Rationale: Last collected before 1950, no specific locality details known. Not enough is known about the distribution, specific habitat or population status of this species to determine its status, but if it occurs in low-lying areas it is likely to be threatened.

F **Adenogramma rigida** (Bartl.) Sond.

Status: **CR** PE
N.A. Helme & D. Raimondo

e**Distribution:** WC. Darling to Houwhoek.
Habitat: Sandy flats.
Rationale: Last recorded in 1970. Habitat at seven known locations has been extensively transformed by urban expansion and agriculture. It is quite likely to be extinct.

F **Adenogramma teretifolia** (Thunb.) Adamson

Status: **DD**D
N.A. Helme & D. Raimondo

e**Distribution:** NC WC. Unknown, possibly from Clanwilliam to northern Namaqualand.
Habitat: Unknown.
Rationale: Last collected before 1960. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Hypertelis E.Mey. ex Fenzl

F **Hypertelis trachysperma** Adamson

Status: **CR** PE
N.A. Helme & D. Raimondo

e**Distribution:** WC. Cape Flats.

Habitat: Inland saline flats.
Rationale: Last collected in 1950. It could be extinct because of wetland eutrophication and changes in hydrology as a result of urban expansion, but habitat still remains at Zeekoevlei, Rondevlei and Zandvlei. Surveys of these areas are required.

Psammotropha Eckl. & Zeyh.

F **Psammotropha diffusa** Adamson
Status: **VU** D2
D. Raimondo & R.C. Turner
e**Distribution:** WC. Cederberg, Sneeuberg.
Habitat: Shale bands at 1 400 m.
Rationale: One known location is potentially threatened by too frequent fires.

F **Psammotropha spicata** Adamson
Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)
D. Raimondo, N.A. Helme & R.C. Turner
e**Distribution:** WC. Gifberg.
Habitat: Deep sands.
Rationale: EOO 60 km^2, AOO < 60 km^2. Habitat at two known locations is declining because of rooibos tea cultivation.

MYRICACEAE

Morella Lour.

F **Morella microbracteata** (Weim.) Verdc. & Polhill
Status: **EN** D
M. Lötter, J.E. Burrows & J.E. Victor
Distribution: MP. Lydenburg to Graskop. Also occurs near Nyanga in Zimbabwe.
Habitat: Mistbelt forest.
Rationale: Three small subpopulations, consisting of no more than 250 mature individuals in total, are known to occur in South Africa. The population is not declining, but it is isolated from subpopulations in Zimbabwe, and the national status is not downgraded.

MYRSINACEAE

Rapanea Aubl.

Rapanea gilliana (Sond.) Mez
Status: **EN** B1ab(ii,iii,iv,v)
J.E. Victor
e**Distribution:** EC. St Francis Bay to Port Alfred.
Habitat: Coastal sand dunes.
Rationale: EOO 2 940 km^2. The 15 small, severely fragmented subpopulations continue to decline because of coastal development, invasion by alien plants and industrial development at Coega.

F **Rapanea melanophloeos** (L.) Mez
Status: **Declining**
V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter, A.M. Ngwenya & A.P. Dold
Distribution: EC FS KZN LM MP WC. Cape Peninsula to Malawi.
Habitat: Coastal, swamp and mountain forest, on forest margins and in bush clumps, often in damp areas from coast to mountains.
Rationale: The species is declining as a result of bark harvesting for the medicinal plant trade, especially in KwaZulu-Natal. Tree mortality has been observed as a result of debarking and its vulnerability to fungal and insect attack following bark removal. However, the species is widespread and there is sufficient recruitment for it not to be in danger of extinction.

MYRTACEAE

Eugenia L.

Eugenia erythrophylla Strey **Plate 52**
Status: **NT** B1ab(iii,v)
L. von Staden & A.T.D. Abbott
e**Distribution:** EC KZN. Oribi Gorge to Magwa Gorge.
Habitat: Pondoland scarp forest. Occurs in kloof forest margins near streams or along the upper edges of Msikaba Formation Sandstone cliffs above river gorges.
Rationale: EOO 2 600 km^2. More than 10 locations occur in a highly threatened and restricted habitat. Habitat extent and quality and number of mature individuals continue to decline because of too frequent and intense grassland fires that have an impact on forest margins, harvesting for firewood and building materials and invasion by alien plants.

Eugenia pusilla N.E.Br.
Status: **EX**
J.E. Victor & A.E. van Wyk
e**Distribution:** MP. Ermelo.
Habitat: KaNgwane Montane Grassland.
Rationale: Last collected in 1920 and never recorded again despite numerous searches. The area where it was last recorded has been transformed to wattle plantations.

Eugenia simii Dummer
Status: **VU** B1ab(iii,v)
J.E. Victor, C.R. Scott-Shaw & A.E. van Wyk
e**Distribution:** EC KZN. Mainly southern KwaZulu-Natal and Pondoland. Disjunct records from near Vryheid in northern KwaZulu-Natal.
Habitat: Rocky banks of rivers.
Rationale: EOO < 4 500 km^2. Known from fewer than 10 locations. There is continuing decline in habitat quality and the number of mature individuals as a result of dam construction and extraction of water for crop irrigation that affect the hydromorphic characteristics of riverbanks.

Eugenia umtamvunensis A.E.van Wyk **Plate 52**
Status: **EN** B1ab(iii,v)+2ab(iii,v)
L. von Staden & A.T.D. Abbott
e**Distribution:** EC KZN. Pondoland, between Umtamvuna and Mtentu Rivers.
Habitat: Pondoland scarp forest. Restricted to the margins of a particular type of kloof or ravine forest that stretch up along narrow drainage lines above the steep cliffs of the deep Pondoland gorges, Msikaba Formation Sandstone, 300–500 m.
Rationale: EOO 140–660 km^2, AOO < 50 km^2. Known subpopulations are small and isolated and therefore considered severely fragmented. This species is restricted to a highly threatened and restricted habitat and continues to decline owing to too frequent and intense grassland fires that have an impact on forest margins, harvesting for firewood and building materials, and invasion by alien plants. Only six subpopulations in three locations are currently known but there may be a few others in inaccessible and unexplored areas of the Pondoland region.

Eugenia verdoorniae A.E.van Wyk **Plate 52**

Status: **NT** B1ab(iii,v)

L. von Staden & A.T.D. Abbott

e**Distribution:** EC KZN. Pondoland, Umtamvuna to Port St Johns.

Habitat: Pondoland scarp forest. Occurs on forest margins and on exposed streambanks and islands of larger rivers, restricted to Msikaba Formation Sandstone.

Rationale: EOO 1 200 km^2. More than 10 locations occur in a highly threatened and restricted habitat. Habitat quality and number of mature individuals continue to decline because of too frequent and intense grassland fires that have an impact on forest margins.

Syzygium Gaertn.

Syzygium pondoense Engl.

Status: **Rare**

J.E. Victor & A.E. van Wyk

e**Distribution:** EC KZN. From Umtamvuna to Mlambomkulu Rivers.

Habitat: Pondoland scarp forest. Rocky islands and sandbanks in streams, restricted to Msikaba Formation Sandstone, 20–200 m.

Rationale: A range-restricted Pondoland endemic (EOO 280 km^2) that occurs in an inaccessible habitat where it is not threatened.

OCHNACEAE

Brackenridgea A.Gray

F **Brackenridgea zanguebarica** Oliv.

Status: **CR** A2ad; B1ab(ii,v)

V.L. Williams & D. Raimondo

Distribution: LM. One known subpopulation in South Africa occurs in the Thengwe district in Venda. Also occurs in Zimbabwe, Mozambique and northwards to Tanzania.

Habitat: South Africa: stony, light grey and shallow sandy loam in woodland, 655 m, also on the southern aspect of dry mountain bushveld. In East Africa, it is found in deciduous woodland and coastal bush, 0–1 500 m.

Rationale: At one known location in South Africa an 86% population reduction was observed from 1990–1997 due to debarking for the medicinal plant trade, collecting of fuel wood, and habitat destruction for agriculture. South African EOO and AOO < 35 km^2 and decline continues. The South African national assessment is not downgraded as this population is significantly disjunct from other subpopulations in Africa.

OROBANCHACEAE

Buchnera L.

F **Buchnera remotiflora** Schinz

Status: **DD**D

D. Raimondo, P.A. Manyama & D.A. Kamundi†

e**Distribution:** LM. Woodbush.

Habitat: Unknown.

Rationale: Known only from the type, collected in 1894 from an area now extensively transformed to forestry plantations. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Graderia Benth.

F **Graderia linearifolia** Codd

Status: **VU** D2

L. von Staden & M. Lötter

e**Distribution:** MP. Steenkampsberg.

Habitat: Sparse montane grassland on poor, gravelly, quartzitic soil, 2 255 m.

Rationale: One known location is potentially threatened by invading alien plants and infrastructure development.

Harveya Hook.

Harveya euryantha Schltr.

Status: **DD**D

F. Daniels, N.A. Helme & D. Raimondo

e**Distribution:** WC. Bredasdorp.

Habitat: Stony slopes, 400 m.

Rationale: A poorly known species, last collected in 1930. It is likely to be threatened by vineyard expansion and invasion by alien plants, but not enough is known about the distribution, specific habitat or population status of this species to determine its status.

F **Harveya roseoalba** J.C.Manning & Goldblatt

Status: **Rare**

N.A. Helme & D. Raimondo

e**Distribution:** WC. Gamkaberg and Attakwasberg.

Habitat: Eastern slopes in clay soil, parasitic on *Phylica lanigera* and *Hermannia velutina*.

Rationale: A range-restricted species (EOO 143 km^2), known from two subpopulations, but not threatened.

Hyobanche L.

F **Hyobanche fulleri** E.Phillips

Status: **CR** A2c; B1ab(i,ii,iii,iv,v)

A. Wolfe & D. Raimondo

e**Distribution:** KZN. Durban to Port Shepstone.

Habitat: Sandy soils within 1 km of the coast.

Rationale: Restricted to the coastline between Durban and Port Shepstone (EOO less than 85 km^2). This species has lost over 90% of its habitat to coastal development and associated dune stabilisation over the past 40 years. Plants are long-lived, generation time is estimated to be 15 years. There are two known remaining extant locations. Subpopulations have been fragmented as a result of coastal developments where dunes around developments are planted up to prevent erosion. As this species requires fire and flooding to recruit, stabilisation of its dune habit is detrimental to its ecology and is likely to cause an ongoing decline in the population.

F **Hyobanche robusta** Schönland

Status: **EN** B1ab(ii,iii,v)

A. Wolfe & D. Raimondo

e**Distribution:** EC WC. Oyster Bay to Kenton on Sea.

Habitat: Deep sand dune systems.

Rationale: EOO 2 200 km^2. Five known locations are declining because of invading alien acacias and coastal development. This species requires periodic disturbance of its dune habitat to recruit, and both development and invasive plants lead to stabilisation of dune systems.

OXALIDACEAE

Oxalis L.

F **Oxalis albiuscula** T.M.Salter

Status: **DD**D

L.L. Dreyer & K.C. Oberlander

e**Distribution:** NC. South of Kamieskroon.

Habitat: Namaqualand blomveld, 152–976 m.

Rationale: Last collected in the 1930s and not recorded since, despite searches. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

[F] **Oxalis amblyosepala** Schltr.

Status: **VU** D2

J. Zietsman, L.L. Dreyer, K.C. Oberlander, N.A. Helme & D. Raimondo

[e]**Distribution:** NC WC. Gifberg to Pakhuis.

Habitat: Seasonally wet, shallow sands on sandstone pavements.

Rationale: A habitat specialist (AOO < 20 km^2) that is potentially threatened by recruitment failure and invasive alien plants.

Oxalis anomala T.M.Salter

Status: **DD**D

L.L. Dreyer, K.C. Oberlander & D. Pillay

[e]**Distribution:** WC. Barrydale, Little Karoo.

Habitat: Shale flats.

Rationale: Last collected in 1938 and not recorded since, despite searches. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

[F] **Oxalis aridicola** T.M.Salter

Status: **DD**D

N.A. Helme

[e]**Distribution:** WC. Clanwilliam to Doringbos.

Habitat: Sandy and clay flats.

Rationale: Last collected in the 1930s. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Oxalis attaquana T.M.Salter

Status: **Rare**

L.L. Dreyer, K.C. Oberlander & D. Pillay

[e]**Distribution:** WC. Attakwas and Outeniqua Mountains.

Habitat: High-altitude, sandstone slopes.

Rationale: A range-restricted (EOO < 500 km^2), high-altitude habitat specialist that is not threatened.

[F] **Oxalis aurea** Schltr.

Status: **VU** B1ab(ii,iii,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Clanwilliam to Citrusdal.

Habitat: Clay slopes and flats below 300 m.

Rationale: EOO < 3 000 km^2. Known from fewer than 10 locations. Relatively little of its habitat remains in the Olifants River Valley because of extensive transformation for citrus cultivation. This species continues to decline as a result of ongoing habitat loss to rooibos tea cultivation, invasion by alien plants and urban development.

Oxalis blastorrhiza T.M.Salter

Status: **VU** D2

L.L. Dreyer, K.C. Oberlander & J.E. Victor

[e]**Distribution:** WC. Vanrhynsdorp.

Habitat: Alkaline sandy clay flats.

Rationale: One known location is potentially threatened by road construction and mining.

Oxalis burtoniae T.M.Salter

Status: **VU** B1ab(ii,iii,v)+2ab(ii,iii,v)

N.A. Helme

[e]**Distribution:** WC. Paternoster to Saldanha Bay.

Habitat: Granite and limestone outcrops, 0–100 m.

Rationale: EOO 700 km^2, AOO < 700 km^2. Habitat at fewer than 10 locations continues to decline as a result of coastal development. Likely to be overlooked in environmental impact assessments.

Oxalis calvinensis R.Knuth

Status: **DD**D

L.L. Dreyer, K.C. Oberlander & D. Pillay

[e]**Distribution:** NC. Hantamsberg Mountain.

Habitat: Unknown.

Rationale: Last collected in 1955. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

[F] **Oxalis camelopardalis** T.M.Salter

Status: **VU** D2

N.A. Helme

[e]**Distribution:** WC. Villiersdorp to Worcester.

Habitat: Renosterveld on shales.

Rationale: Two known locations are potentially threatened by urban and agricultural expansion.

Oxalis cathara T.M.Salter

Status: **Rare**

L.L. Dreyer, K.C. Oberlander & K. Naidoo

[e]**Distribution:** NC WC. Bitterfontein to Garies.

Habitat: Granite flats and slopes.

Rationale: A range-restricted species (EOO < 500 km^2) that is not threatened.

Oxalis comptonii T.M.Salter

Status: **NT** D2

N.A. Helme, L.L. Dreyer & K.C. Oberlander

[e]**Distribution:** WC. Gifberg and Matsikamma Mountain.

Habitat: High-altitude sandstone plateau.

Rationale: Five to ten locations are potentially threatened by rooibos tea cultivation.

Oxalis creaseyi T.M.Salter

Status: **VU** D2

N.A. Helme, L.L. Dreyer & K.C. Oberlander

[e]**Distribution:** NC. Between Garies and Leliefontein, and Kamiesberg.

Habitat: Granite flats and slopes, medium elevations.

Rationale: Two disjunct locations are potentially threatened by overstocking of livestock on communal lands and ploughing for cereal crops.

Oxalis crispula Sond.

Status: **DD**D

L.L. Dreyer, K.C. Oberlander & D. Pillay

[e]**Distribution:** WC. Between Bitterfontein and Eenkoker.

Habitat: Granite flats and slopes.

Rationale: Last collected in 1941 and not recorded since, despite searches from 2000 to 2006. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Oxalis crocea T.M.Salter **Plate 77**

Status: **VU** D2

N.A. Helme, L.L. Dreyer & K.C. Oberlander

[e]**Distribution:** NC. Port Nolloth to Spektakel Pass.

Habitat: Clays and course, gravelly slopes.

Rationale: A population of less than 1 000 mature individuals occurring at three known locations is potentially threatened by grazing and trampling by livestock and climate change.

Oxalis cuneata Jacq.

Status: **VU** D2

L.L. Dreyer, K.C. Oberlander & D. Pillay

[e]**Distribution:** NC WC. Bitterfontein to Vanrhynsdorp.

Habitat: Quartzite patches.

Rationale: Known from two subpopulations at two locations, one of which has not been recorded since 1937, despite recent searches. The other location, near Vanrhynsdorp, is potentially threatened by mining.

[F] **Oxalis davyana** R.Knuth

Status: **VU** D2

K. Naidoo, D. Raimondo & L.L. Dreyer

Distribution: MP. Barberton and Swaziland.

Habitat: Along streams in forests, on serpentine soils.

Rationale: Three known locations are potentially threatened by small-scale farming and mining.

Oxalis dines Ornduff **Plate 77**

Status: **VU** B1ab(iii)

D. Raimondo, L.L. Dreyer, K.C. Oberlander & N.A. Helme

[e]**Distribution:** NC WC. Vanrhynsdorp to Clanwilliam and Calvinia.

Habitat: Seasonal pools and pans in clay.

Rationale: EOO < 6 600 km^2. Less than 20 isolated, severely fragmented subpopulations continue to decline as a result of habitat degradation caused by trampling and grazing by livestock.

[F] **Oxalis droseroides** E.Mey. ex Sond.

Status: **VU** B1ab(ii,iii,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Tulbagh to Worcester and Malmesbury to Paarl.

Habitat: Clay slopes, 300–500 m.

Rationale: EOO < 3 500 km^2. Fewer than 10 remaining locations continue to decline because of ongoing habitat loss to urban development, invasive alien plants and crop cultivation, especially in the upper Breede River Valley.

Oxalis duriuscula Schltr. **Plate 77**

Status: **NT** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Caledon to Bredasdorp and Swellendam.

Habitat: Renosterveld on sandy flats, 100–500 m.

Rationale: EOO and AOO < 2 000 km^2. Less than 20 locations are declining as a result of ongoing habitat loss to crop cultivation, urban expansion and invasion by alien plants.

Oxalis extensa T.M.Salter

Status: **DD**D

L.L. Dreyer, K.C. Oberlander & D. Pillay

[e]**Distribution:** NC. Augrabies Falls.

Habitat: Unknown.

Rationale: Last collected in 1936. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

[F] **Oxalis falcatula** T.M.Salter

Status: **EN** B1ab(ii,iii,iv,v)

D. Raimondo, L.L. Dreyer, K.C. Oberlander & N.A. Helme

[e]**Distribution:** WC. Cape Peninsula to Paarl.

Habitat: Lower slopes on granites or shales.

Rationale: EOO < 1 000 km^2. Three locations remain after most of the habitat has been transformed by urban expansion. It continues to decline because of ongoing habitat loss.

Oxalis fourcadei T.M.Salter

Status: **Rare**

L.L. Dreyer, K.C. Oberlander & D. Pillay

[e]**Distribution:** EC WC. Kammanassie to Humansdorp.

Habitat: Dry upper slopes.

Rationale: A high-altitude habitat specialist that is not threatened.

Oxalis fragilis T.M.Salter

Status: **CR** PE

L.L. Dreyer, K.C. Oberlander & D. Pillay

[e]**Distribution:** WC. Moorreesburg.

Habitat: Shale flats, 170 m.

Rationale: Known to occur at only one site where it was last recorded before 1936. The area is now extensively transformed for wheat cultivation. Despite searches between 2000 and 2006 it has not been relocated and is likely to be extinct.

[F] **Oxalis hirsuta** Sond.

Status: **DD**D

L.L. Dreyer & K.C. Oberlander

[e]**Distribution:** WC. Between Rhenosterkop and Beaufort West.

Habitat: Unknown.

Rationale: Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

[F] **Oxalis hygrophila** Dreyer

Status: **CR** PE

L.L. Dreyer, K.C. Oberlander & D. Raimondo

[e]**Distribution:** WC. Pakhuis Pass.

Habitat: Seepage area on shale band.

Rationale: A small flowering population was discovered in 2001 after a fire and good rainfall. Visits to the site during the next five years failed to relocate the population, even in 2006 when similar conditions—a fire followed by good rains—occurred. The ecology of this species is still poorly understood at present, but it appears that the population may have gone extinct for unknown reasons.

[F] **Oxalis inconspicua** T.M.Salter **Plate 77**

Status: **Rare**

L.L. Dreyer & K.C. Oberlander

[e]**Distribution:** NC. Namaqualand, near Kamieskroon and Steinkopf.

Habitat: Gravelly hill slopes.

Rationale: A naturally rare species that occurs as scattered individuals or small subpopulations, but it is not threatened.

Oxalis involuta T.M.Salter

Status: **CR** PE

L.L. Dreyer, K.C. Oberlander & D. Pillay

[e]**Distribution:** WC. Porterville.

Habitat: Renosterveld, 175 m.

Rationale: Known only from the type, collected in 1935. The area where this species was collected has been extensively transformed for wheat cultivation. Despite extensive searches between 1998 and 2006, it has not been relocated and is likely to be extinct.

Oxalis ioeides T.M.Salter & Exell

Status: **DD**D

L.L. Dreyer, K.C. Oberlander & D. Pillay

e**Distribution:** WC. Kammanassie Mountains and Robinson Pass in the Outeniqua Mountains.

Habitat: Damp lower slopes, 600 m.

Rationale: Known only from the type, collected in 1932. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Oxalis lasiorrhiza T.M.Salter

Status: **VU** D2

L.L. Dreyer, K.C. Oberlander & D. Raimondo

e**Distribution:** NC. Nieuwoudtville.

Habitat: Shale flats.

Rationale: Small subpopulations at two known locations are potentially threatened by recruitment failure.

Oxalis levis T.M.Salter

Status: **CR** PE

L.L. Dreyer, K.C. Oberlander & D. Pillay

e**Distribution:** WC. Malmesbury to Mamre.

Habitat: White clay overlain by sands, 120–160 m.

Rationale: The only known location is densely invaded by alien plants and recent searches have failed to locate individuals of this species.

Oxalis lichenoides T.M.Salter

Status: **Rare**

N.A. Helme, L.L. Dreyer, K.C. Oberlander & D. Pillay

e**Distribution:** WC. Vanrhynsdorp to Bitterfontein.

Habitat: Shale flats.

Rationale: A range-restricted species (EOO < 500 km^2), known from only three subpopulations. No known threats.

F **Oxalis lineolata** T.M.Salter

Status: **DD**D

K. Naidoo & L.L. Dreyer

e**Distribution:** WC. Clanwilliam to Doring River.

Habitat: Dry shale flats.

Rationale: Known only from the type, collected in 1935. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

F **Oxalis louisae** T.M.Salter **Plate 77**

Status: **Rare**

L.L. Dreyer & K.C. Oberlander

e**Distribution:** NC. Namaqualand, Kamieskroon.

Habitat: Shady areas.

Rationale: A rare, range-restricted species (EOO 120 km^2), known from fewer than five subpopulations. No known threats.

F **Oxalis macra** Schltr.

Status: **VU** D2

N.A. Helme

e**Distribution:** NC WC. Piketberg to Nieuwoudtville.

Habitat: Sandy slopes in fynbos.

Rationale: Three known locations are potentially threatened by rooibos tea cultivation.

Oxalis marlothii Schltr. ex R.Knuth

Status: **CR** PE

L.L. Dreyer, K.C. Oberlander & D. Raimondo

e**Distribution:** NC. Sutherland.

Habitat: High-altitude shale and sandstone plateaus.

Rationale: Known only from the type, collected in 1920. The area is now extensively transformed for agriculture and searches in the 1930s and 1940s as well as between 1998 and 2006 failed to locate surviving individuals.

F **Oxalis massoniana** T.M.Salter var. **flavescens** T.M.Salter **Plate 77**

Status: **VU** D2

L.L. Dreyer, K.C. Oberlander & D. Raimondo

e**Distribution:** NC. Bokkeveld Escarpment, north of Nieuwoudtville.

Habitat: Renosterveld, on shale flats and tillite-derived soils.

Rationale: Two known locations remain after < 80% of the habitat of this taxon has been transformed for wheat cultivation. Although agriculture in the area is not currently expanding, further habitat loss remains a potential threat.

F **Oxalis massoniana** T.M.Salter var. **massoniana**

Status: **DD**D

J.E. Victor & N.A. Helme

e**Distribution:** WC. Bokkeveld Escarpment, summit of Vanrhyn's Pass.

Habitat: Shallow, damp, muddy loams overlying sandstone.

Rationale: Known to occur at a single location where it was last recorded in 1942. The area is disturbed by road construction and this taxon may be threatened. However, not enough is known about the distribution or population status of this taxon to determine its status.

F **Oxalis meisneri** Sond.

Status: **VU** B1ab(ii,iii)+2ab(ii,iii)

N.A. Helme

e**Distribution:** WC. Tulbagh to Robertson.

Habitat: Foothills of south-facing shale slopes.

Rationale: EOO and AOO < 1 800 km^2. Two locations are known, but up to 10 are estimated to occur in poorly explored parts of the range. It is declining as a result of ongoing habitat loss to crop cultivation and invasive alien plants.

F **Oxalis melanograpta** T.M.Salter

Status: **DD**D

L.L. Dreyer, K.C. Oberlander & D. Raimondo

e**Distribution:** WC. Vanrhynsdorp.

Habitat: Shale koppies.

Rationale: Last collected before 1944 but not recorded since, despite recent searches. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Oxalis melanosticta Sond. var. **latifolia** T.M.Salter

Status: **DD**D

N.A. Helme, L.L. Dreyer & K.C. Oberlander

e**Distribution:** WC. Summit of Vanrhyn's Pass.

Habitat: Sandstone.

Rationale: A poorly known taxon recorded at a single location where it could not be relocated, despite recent searches. Not enough is known about the distribution, specific habitat or population status of this taxon to determine its status.

Oxalis microdonta T.M.Salter

Status: **DD**D

L.L. Dreyer, K.C. Oberlander & D. Pillay

e**Distribution:** WC. Montagu.

Habitat: Lowland shales.

Rationale: Known only from the type, collected in 1932. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Oxalis natans L.f. Plate 77

Status: **CR** B2ab(iii)

L.L. Dreyer, K.C. Oberlander, B.M. Bayer, J. Zietsman & D. Raimondo

e**Distribution:** WC. Stellenbosch to Somerset West and Elandsberg.

Habitat: Seasonal pools along slow-flowing seasonal streams, 50–200 m.

Rationale: Two small, severely fragmented subpopulations remain after > 90% of known subpopulations were lost when the habitat was transformed by urban expansion on the Cape Flats and vineyard and wheat cultivation in the Swartland and around Somerset West and Stellenbosch. One subpopulation is currently declining because of habitat degradation as a result of eutrophication and invasion of alien grasses. The same subpopulation is also showing signs of inbreeding depression as a result of habitat fragmentation and has very low seed set (< 5%).

Oxalis oculifera E.G.H.Oliv. Plate 77

Status: **Rare**

L.L. Dreyer, K.C. Oberlander & D. Raimondo

e**Distribution:** WC. Gifberg and Matsikamma Mountain.

Habitat: Seasonally waterlogged rock flushes and moss pads on sandstone pavement, 600–1 000 m.

Rationale: One large, continuous population stretching over an area of 150 km^2 is buffered from the threat of habitat loss to rooibos tea cultivation by the fact that it occurs on rock pavements, which cannot be ploughed.

Oxalis oligophylla T.M.Salter

Status: **Rare**

L.L. Dreyer, K.C. Oberlander & D. Raimondo

e**Distribution:** WC. Gifberg and Matsikamma Mountain.

Habitat: Shady shale and steep sandstone slopes, 500 m.

Rationale: A range-restricted (EOO < 200 km^2) habitat specialist that is not threatened.

Oxalis oreithala T.M.Salter

Status: **VU** D2

N.A. Helme, L.L. Dreyer & K.C. Oberlander

e**Distribution:** WC. Gifberg and Matsikamma Mountain.

Habitat: Seasonally wet, rocky sandstone slopes, 800 m.

Rationale: Two known locations are potentially threatened by agriculture and climate change.

Oxalis oreophila T.M.Salter

Status: **Critically Rare**

L.L. Dreyer, J. Zietsman & D. Raimondo

e**Distribution:** WC. Pakhuis Pass.

Habitat: Ecotone of renosterveld and fynbos, in seepage band, restricted to grass- and restio-dominated vegetation.

Rationale: A range-restricted habitat specialist (EOO < 5 km^2), known from one subpopulation. No known threats.

F **Oxalis pallens** Eckl. & Zeyh.

Status: **EN** B1ab(ii,iii,v)

N.A. Helme, L.L. Dreyer & K.C. Oberlander

e**Distribution:** WC. Clanwilliam to Piketberg.

Habitat: Seasonally wet flats.

Rationale: EOO < 2 500 km^2. Two known locations remain after most of the habitat has been transformed for crop cultivation. Decline due to agriculture, invasion by alien plants and urban expansion is continuing.

F **Oxalis pendulifolia** T.M.Salter

Status: **VU** B1ab(ii,iii,v)

N.A. Helme & K.C. Oberlander

e**Distribution:** WC. Swellendam to Plettenberg Bay.

Habitat: Lowland shales.

Rationale: EOO < 8 500 km^2. Available habitat at 10 known locations continues to decline as a result of crop cultivation, coastal development, invasion by alien plants and afforestation.

Oxalis perineson T.M.Salter & Exell

Status: **CR** PE

L.L. Dreyer, K.C. Oberlander & D. Pillay

e**Distribution:** WC. Moorreesburg.

Habitat: Lowland shales.

Rationale: Known only from the type, collected between 1932 and 1935. Most of the habitat has been transformed to wheat cultivation. Despite recent searches, it has not been relocated and is probably extinct.

F **Oxalis petiolulata** F.Bolus

Status: **DD**D

L.L. Dreyer & K.C. Oberlander

e**Distribution:** WC. Cederberg, Krakadou.

Habitat: High-altitude sandstone slopes.

Rationale: Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

F **Oxalis phloxidiflora** Schltr.

Status: **Rare**

N.A. Helme, L.L. Dreyer, K.C. Oberlander & D. Raimondo

e**Distribution:** NC WC. Central Cederberg to the Onder Bokkeveld.

Habitat: Upper sandstone plateaus.

Rationale: A range-restricted species (EOO < 400 km^2) that is not threatened.

F **Oxalis pillansiana** T.M.Salter & Exell

Status: **DD**D

N.A. Helme

e**Distribution:** WC. Southern Knersvlakte to Trawal.

Habitat: Shale flats.

Rationale: A surprisingly poorly known species, given that it occurs along the N7 highway. Last collected in 1938. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Oxalis porphyriosiphon T.M.Salter

Status: **Critically Rare**

L.L. Dreyer, K.C. Oberlander & D. Raimondo

e**Distribution:** WC. Pakhuis Pass.

Habitat: Damp spots, rocky sandstone slopes, 900 m.

Rationale: A range-restricted species (EOO < 100 km^2), known from one site. No known threats.

[F] **Oxalis psammophila** G.Will.

Status: **Rare**

L.L. Dreyer & K.C. Oberlander

[e]**Distribution:** NC. Richtersveld.

Habitat: Dry riverbeds, in coarse, loose, granite-derived sands in full sun, 150–600 m.

Rationale: A range-restricted (EOO 10 km^2) habitat specialist that is not affected by heavy grazing.

[F] **Oxalis pseudo-hirta** T.M.Salter

Status: **CR** PE

L.L. Dreyer, K.C. Oberlander, N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Du Toit's Kloof to Robertson.

Habitat: Low slopes and valleys.

Rationale: Known to occur at two sites where it was last recorded in 1930. Both sites have been surveyed recently. The natural habitat at these sites has been transformed for vineyards and these subpopulations are locally extinct. Further searches of untransformed suitable habitat within the range of this species are required before it is listed as extinct.

Oxalis purpurata Jacq.

Status: **Rare**

L.L. Dreyer, K.C. Oberlander & D. Pillay

[e]**Distribution:** NC. Bokkeveld Escarpment near Nieuwoudtville.

Habitat: Cliff faces, rocky outcrops.

Rationale: A range-restricted species (EOO < 300 km^2). Although much of the range of this species is affected by rooibos tea cultivation, a large section of the population is protected in the Oorlogskloof Nature Reserve, and it occurs in a habitat that cannot be ploughed.

[F] **Oxalis reflexa** T.M.Salter

Status: **Rare**

L.L. Dreyer & K.C. Oberlander

[e]**Distribution:** NC WC. Northeast of Vanrhynsdorp.

Habitat: Dry, stony hill sides.

Rationale: A naturally rare, range-restricted species (EOO 130 km^2) known from only a few collections. No known threats.

[F] **Oxalis salteri** L.Bolus

Status: **Rare**

L.L. Dreyer & K.C. Oberlander

[e]**Distribution:** WC. Foot of the Gifberg and near Klawer.

Habitat: Damp sandy flats, 200–400 m.

Rationale: A range-restricted species (EOO 150 km^2) that occurs as small, scattered subpopulations but is not threatened.

Oxalis senecta T.M.Salter

Status: **VU** D2

L.L. Dreyer, K.C. Oberlander & D. Raimondo

[e]**Distribution:** WC. Knersvlakte.

Habitat: Sandy banks of dry watercourses.

Rationale: Three known locations are potentially threatened by climate change.

Oxalis stellata Eckl. & Zeyh. var. **gracilior** T.M.Salter

Status: **Rare**

L.L. Dreyer, K.C. Oberlander & D. Pillay

[e]**Distribution:** WC. Langkloof, northern slopes of the Outeniqua Mountains.

Habitat: Arid mountain fynbos on sandstone slopes.

Rationale: A range-restricted taxon (EOO < 100 km^2) that is not threatened. Only one subpopulation is known at present, but its range is poorly explored and there may be others.

[F] **Oxalis stenoptera** Turcz. var. **stenoptera**

Status: **Rare**

L.L. Dreyer & K.C. Oberlander

[e]**Distribution:** NC WC. Namaqualand, between Eenkoker and Bitterfontein.

Habitat: Namaqualand Klipkoppe Shrubland.

Rationale: A rare, range-restricted taxon (EOO 10 km^2) that is not threatened.

[F] **Oxalis stenoptera** Turcz. var. **undulata** T.M.Salter

Status: **Rare**

L.L. Dreyer & K.C. Oberlander

[e]**Distribution:** WC. Kareeberg between Vanrhynsdorp and Nuwerus.

Habitat: Namaqualand Klipkoppe Shrubland.

Rationale: A localised, range-restricted (EOO 10 km^2) taxon that is not threatened.

[F] **Oxalis stictocheila** T.M.Salter

Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v)

N.A. Helme, L.L. Dreyer & D. Raimondo

[e]**Distribution:** WC. Darling to Yzerfontein.

Habitat: Granitic sands.

Rationale: EOO and AOO < 200 km^2. Four known locations remain after > 90% of the habitat has been transformed for the cultivation of wheat and pasture. It continues to decline because of alien grass invasion and ongoing habitat loss to crop cultivation.

[F] **Oxalis stokoei** Weintroub

Status: **DD**D

L.L. Dreyer & K.C. Oberlander

[e]**Distribution:** WC. Ceres, Michell's Pass.

Habitat: Sandstone slopes, 700–1 000 m.

Rationale: Last collected in 1936 and not recorded since, despite recent searches. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

[F] **Oxalis strigosa** T.M.Salter

Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v)

N.A. Helme, K.C. Oberlander & L.L. Dreyer

[e]**Distribution:** WC. Tygerberg to Stellenbosch.

Habitat: Granitic loams.

Rationale: EOO and AOO < 400 km^2. Two remaining locations continue to decline as a result of ongoing habitat loss to urban and vineyard expansion, alien grass invasion and lack of fire because of habitat fragmentation.

[F] **Oxalis suavis** R.Knuth

Status: **VU** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

N.A. Helme, K.C. Oberlander & D. Raimondo

[e]**Distribution:** WC. Restricted to an area within a radius of 2 km around Hopefield.

Habitat: Shale soils transitioning into acid sands.

Rationale: EOO 10 km^2, AOO < 10 km^2. The 10 known locations of this highly range-restricted species continue to decline because of ongoing habitat loss to housing developments and crop cultivation.

Oxalis subsessilis L.Bolus

Status: **DD**D
K.C. Oberlander, L.L. Dreyer & D. Raimondo
e**Distribution:** NC. Steinkopf.
Habitat: Gravelly sands.
Rationale: Last collected in 1950 and not relocated, despite recent searches. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

F **Oxalis tenuipes** T.M.Salter var. **tenuipes**

Status: **Rare**
L.L. Dreyer & K.C. Oberlander
e**Distribution:** NC WC. Vanrhynsdorp, Gifberg.
Habitat: Shady places, 200–500 m.
Rationale: A range-restricted taxon (EOO < 500 km^2) that is not threatened.

Oxalis tenuis T.M.Salter

Status: **Rare**
L.L. Dreyer, K.C. Oberlander & N.A. Helme
e**Distribution:** WC. Vanrhynsdorp, Gifberg.
Habitat: Succulent karoo and fynbos, shady slopes, 500 m.
Rationale: A range-restricted endemic to the Gifberg Mountains (EOO < 200 km^2). No known threats.

F **Oxalis uliginosa** Schltr. **Plate 77**

Status: **CR** B1ab(iii)+2ab(iii)
K.C. Oberlander, L.L. Dreyer, N.A. Helme & D. Raimondo
e**Distribution:** WC. Clanwilliam Valley.
Habitat: Marshy places or in seepage bands.
Rationale: EOO and AOO < 10 km^2. Three of four known locations are now locally extinct owing to habitat loss to citrus cultivation and dam construction. Habitat quality at the only known location continues to decline as a result of overgrazing and invasion by alien plants.

F **Oxalis variifolia** Steud.

Status: **CR** PE
D. Raimondo, K.C. Oberlander, L.L. Dreyer & N.A. Helme
e**Distribution:** WC. Northern Swartland.
Habitat: Lower slopes, shale and sand.
Rationale: Most of the habitat has been transformed for wheat cultivation and recent searches failed to locate any of the subpopulations known through herbarium records.

Oxalis virginea Jacq.

Status: **Rare**
K.C. Oberlander, L.L. Dreyer & N.A. Helme
e**Distribution:** NC. Garies.
Habitat: Granite hills.
Rationale: A rare species that occurs at low densities but is not threatened.

F **Oxalis xantha** T.M.Salter

Status: **DD**D
N.A. Helme & D. Raimondo
e**Distribution:** WC. Pakhuis Pass to Doringbos.
Habitat: Clays on flats.
Rationale: Last collected in 1935. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

PASSIFLORACEAE

Adenia Forssk.

F **Adenia fruticosa** Burtt Davy subsp. **fruticosa**

Status: **NT** A2c; B1ab(iii,v)+2ab(iii,v)
L. von Staden, J.E. Victor & A.E. van Wyk
Distribution: LM MP. Strydpoort Mountains southwards to Ohrigstad and the Steelpoort River Valley.
Habitat: Arid woodland, rocky outcrops, slopes and sandy flats, on dolomite, granite and quartzite, 800–1 400 m.
Rationale: A population reduction of 20–30% is estimated based on habitat loss in low-lying areas due to agriculture, expanding human settlements and mining over the past 100 years (generation length 50 years). EOO 5 900 km^2, AOO < 2 900 km^2. There is a continuing decline in the habitat, but population reduction is unlikely to exceed 30% within the next generation (50 years) as this taxon also occurs on rocky slopes in more remote mountainous areas that are unlikely to be affected by development and agriculture, and more than 10 locations remain. It is used for traditional medicine, but is not harvested in large volumes for the commercial muthi markets at present.

Adenia fruticosa Burtt Davy subsp. **simplicifolia** W.J.de Wilde

Status: **DD**D
D. Raimondo & L. von Staden
Distribution: LM. Central eastern Zimbabwe to Waterpoort north of the Soutpansberg Mountains. Also recorded from the Tuli Block in Botswana.
Habitat: Low, deciduous, open mopane woodland and tall terminalia woodland on basalt, gneiss, granite and pegmatite.
Rationale: The population status of this taxon in South Africa is poorly known—it was collected only once in 1934.

F **Adenia gummifera** (Harv.) Harms var. **gummifera** **Plate 78**

Status: **Declining**
V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya
Distribution: EC KZN LM MP. Widespread in eastern Africa, from Somalia to Kei Mouth in the Eastern Cape, South Africa.
Habitat: Forested ravines, forest patches and forest margins, forest scrub, miombo woodland, savanna, dune forest, on stony slopes, termitaria and littoral bush, 0–1 800 m.
Rationale: This taxon is regularly found on medicinal markets and local declines have been observed. We suspect that there is a continuing decline, but it is still relatively common and not expected to meet criteria for NT.

Adenia natalensis W.J.de Wilde

Status: **CR** PE
D. Styles, C.R. Scott-Shaw, D. Raimondo & L. von Staden
e**Distribution:** KZN. Possibly Tugela River Valley.
Habitat: Presumably low coastal forest.
Rationale: Known from two collections made in 1865. This presumably very rare species may still be relocated in the area where it is thought to have been collected as intact habitat still remains. Search efforts are ongoing, but have not been successful to date.

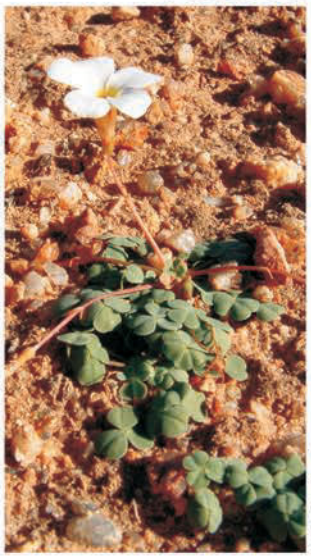
Plate 77


C. Burgers

Oxalis natans CR


K.C. Oberlander

Oxalis uliginosa CR


K.C. Oberlander

Oxalis inconspicua Rare


N.A. Helme

Oxalis duriuscula NT


A. le Roux

Oxalis crocea VU


D. Raimondo

Oxalis dines VU


K.C. Oberlander

Oxalis oculifera Rare


A. le Roux

Oxalis louisae Rare


L.L. Dreyer

Oxalis massoniana var. *flavescens* VU

Plate 78



A.T.D. Abbott

Alberta magna NT



J.E. Burrows

Adenia gummifera var. *gummifera* Declining



J.E. Burrows

Prunus africana VU



G. Grieve

Adenia wilmsii EN

Adenia wilmsii Harms **Plate 78**

Status: **EN** D

L. von Staden, R.H. Archer & S. Krynauw

e**Distribution:** MP. Lydenburg to Waterval Boven.

Habitat: Dolerite outcrops or red loam soil, in open woodland, 1 300–1 500 m.

Rationale: A rare, range-restricted species (EOO 95 km^2), known to occur at two locations. At one location, a thorough search could locate only 20 plants and ± 50 plants have been reported to occur at the other. Two historical subpopulations could not be relocated and are presumed extinct. This species is used in traditional medicine, but only the leaves were confirmed to be used at one site, and harvesting pressure, if any, at the other site is not known.

Schlechterina Harms

Schlechterina mitostemmatoides Harms

Status: **VU*** B1ab(ii,iii,v)+2ab(ii,iii,v)

V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya

Distribution: KZN. Maputaland in northeastern KwaZulu-Natal to Tanzania and Zanzibar.

Habitat: Sand forest and occasionally in lowland coastal forest, 0–700 m.

Rationale: South African EOO 1 100 km^2, AOO 24 km^2. Declining at fewer than five locations owing to destructive harvesting for medicinal purposes and because of habitat loss. The national assessment is downgraded to VU as there are healthy subpopulations in southern Mozambique.

PEDALIACEAE

Ceratotheca Endl.

F **Ceratotheca saxicola** E.A.Bruce

Status: **Rare**

D. Raimondo & F. Cholo

e**Distribution:** LM. Northern Kruger National Park and Venda.

Habitat: Crevices in sandstone cliffs, 300–400 m.

Rationale: A range-restricted (EOO < 500 km^2) habitat specialist that is not threatened.

PENAEACEAE

Brachysiphon A.Juss.

Brachysiphon fucatus (L.) Gilg **Plate 79**

Status: **Rare**

D. Raimondo & N.A. Helme

e**Distribution:** WC. Cape Peninsula.

Habitat: Fire-protected, moist, rocky slopes, usually southeast-facing.

Rationale: A range-restricted Table Mountain endemic (EOO < 90 km^2) that is not threatened.

F **Brachysiphon microphyllus** Rourke **Plate 79**

Status: **Rare**

J.E. Victor

e**Distribution:** WC. Touwsberg and Klein Swartberg Mountains.

Habitat: Rocky outcrops.

Rationale: A palaeoendemic occurring in a relictual habitat, known from two naturally disjunct subpopulations (EOO < 500 km^2). It has no known threats.

Brachysiphon mundii Sond.

Status: **VU** D2

N.A. Helme, D.I.W. Euston-Brown, D. Raimondo & R.C. Turner

e**Distribution:** WC. De Hoop Nature Reserve.

Habitat: Limestone cliffs.

Rationale: One known location is potentially threatened by unmanaged invasive alien acacias.

Brachysiphon rupestris Sond.

Status: **Rare**

J.E. Victor

e**Distribution:** WC. Kleinrivier Mountains.

Habitat: Sandstone rocks, often in crevices or on small ledges, 30–350 m.

Rationale: A range-restricted species (EOO 20 km^2), known from four subpopulations, but not threatened.

Endonema A.Juss.

Endonema lateriflora (L.f.) Gilg

Status: **EN** B1ab(iii)+2ab(iii); C2a(i); D

N.A. Helme & D. Raimondo

e**Distribution:** WC. Riviersonderend Mountains.

Habitat: Wet areas near streams, south-facing, rocky sandstone slopes.

Rationale: EOO 50 km^2, AOO < 50 km^2. Some 250 mature individuals occur at four known locations. Habitat quality continues to decline because of invasion by alien plants.

Endonema retzioides Sond. **Plate 79**

Status: **VU** D2

N.A. Helme & D. Raimondo

e**Distribution:** WC. Riviersonderend Mountains above Genadendal.

Habitat: Rocky slopes near watercourses.

Rationale: One known location is potentially threatened by invading alien plants.

Glischrocolla (Endl.) A.DC.

Glischrocolla formosa (Thunb.) R.Dahlgren **Plate 79**

Status: **VU** D1

N.A. Helme & D. Raimondo

e**Distribution:** WC. Victoria Peak to Hottentots Holland Mountains.

Habitat: Damp, southeast-facing cliffs and ledges, 1 200–1 500 m.

Rationale: Less than 1 000 mature individuals occur at two known sites within a restricted range (EOO < 7 km^2) but are not threatened.

Penaea L.

F **Penaea acutifolia** A.Juss.

Status: **Rare**

D. Raimondo & R.C. Turner

e**Distribution:** WC. Outeniqua Mountains, Robinson Pass to George.

Habitat: Damp sandstone slopes.

Rationale: A range-restricted species (EOO < 150 km^2) with no known threats.

[F] **Penaea dahlgrenii** Rourke **Plate 79**

Status: **VU** D2

D. Raimondo, J.H. Vlok, A.L. Schutte-Vlok & R.C. Turner

[e]**Distribution:** WC. Langeberg.

Habitat: Streambanks.

Rationale: Small subpopulations at five known locations are potentially threatened by invading alien pines and the extraction of water.

Sonderothamnus R.Dahlgren

Sonderothamnus petraeus (W.F.Barker) R.Dahlgren

Status: **Rare**

D. Raimondo

[e]**Distribution:** WC. Hottentots Holland Mountains to Kleinmond.

Habitat: Narrow crevices in sandstone rocks.

Rationale: A range-restricted habitat specialist (EOO 490 km^2) that is not threatened.

Sonderothamnus speciosus (Sond.) R.Dahlgren **Plate 79**

Status: **Rare**

J.E. Victor

[e]**Distribution:** WC. Kleinrivier Mountains, Babilonstoring Mountain and Caledon.

Habitat: Sand, sandstone gravel and crevices of sandstone rock.

Rationale: A range-restricted species (EOO < 500 km^2), known from five subpopulations, but not threatened.

Stylapterus A.Juss.

Stylapterus barbatus A.Juss.

Status: **EN** D

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Hottentots Holland Mountains.

Habitat: Slightly wet slopes on mountain peak, south- and southeast-facing slopes, possibly on shale bands.

Rationale: Known from one population consisting of less than 250 mature individuals.

Stylapterus ericifolius (A.Juss.) R.Dahlgren

Status: **Rare**

J.E. Victor & N.A. Helme

[e]**Distribution:** WC. Langeberg Mountains near Swellendam.

Habitat: South-facing slopes, often in moist peaty areas.

Rationale: A range-restricted species (EOO < 20 km^2) that is not threatened.

Stylapterus ericoides A.Juss. subsp. **ericoides**

Status: **Rare**

J.E. Victor & N.A. Helme

[e]**Distribution:** WC. Tulbagh Waterfall.

Habitat: Bare sand along streams in the mountains.

Rationale: A range-restricted taxon (EOO < 10 km^2) that is not threatened.

Stylapterus ericoides A.Juss. subsp. **pallidus** R.Dahlgren

Status: **Rare**

J.E. Victor & N.A. Helme

[e]**Distribution:** WC. Bain's Kloof and Du Toit's Kloof.

Habitat: Bare patches of pure sand along streambanks where competition is slight.

Rationale: A range-restricted habitat specialist (EOO < 100 km^2) that is not threatened.

[F] **Stylapterus fruticulosus** (L.f.) A.Juss. **Plate 79**

Status: **EN** A2c

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Mamre to Cape Peninsula.

Habitat: Alkaline to acid sands.

Rationale: A population reduction of > 50% is estimated based on local extinctions at known locations, reduction of range size (EOO) and habitat loss to urban development, crop cultivation and invasion by alien plants over the past 100 years. This is a long-lived resprouter with a generation length of > 50 years.

Stylapterus micranthus R.Dahlgren

Status: **VU** D2

J.E. Victor, N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Hottentots Holland Mountains.

Habitat: Medium-altitude slopes in fynbos.

Rationale: This species was known to occur at two locations, but one was lost as a result of the construction of the Steenbras Dam. The remaining location is potentially threatened by invasive alien plants.

Stylapterus sulcatus R.Dahlgren

Status: **Rare**

J.E. Victor & N.A. Helme

[e]**Distribution:** WC. Du Toit's Kloof Mountains.

Habitat: Rocky upper slopes.

Rationale: A range-restricted species (EOO < 10 km^2) that is not threatened.

PHYLLANTHACEAE

Lachnostylis Turcz.

[F] **Lachnostylis sp. nov.**

Voucher: *Meyer 1804, 1805* PRE

Status: **VU** D2

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Olifants River Mountains.

Habitat: Rocky slopes in thicket.

Rationale: One known location is potentially threatened by invasive alien plants and dam construction.

PLUMBAGINACEAE

Afrolimon Lincz.

Afrolimon capense (L.Bolus) Lincz.

Status: **NT** A2a; B1ab(ii,iii,v)+2ab(ii,iii,v)

N.A. Helme, D. Raimondo, J.E. Victor & L. Mucina

[e]**Distribution:** WC. Saldanha and Dwarskersbos.

Habitat: Coastal calcretes and associated sands.

Rationale: A population reduction of 20% due to urban expansion has been observed over the past 10 years (one generation). EOO and AOO < 1 000 km^2. Known to occur at nine locations, but there is likely to be up to 20 locations as parts of the range are not well explored. Ongoing habitat loss to urban development is causing a continuing decline and fragmentation of subpopulations.

Afrolimon namaquanum (L.Bolus) Lincz.

Status: **Rare**

J.E. Victor, A. le Roux & L. Mucina

[e]**Distribution:** NC. Namaqualand, Riethuis.

Plate 79



N.A. Helme

Brachysiphon fucatus Rare



C. Paterson-Jones

Brachysiphon microphyllus Rare



C. Paterson-Jones

Glischrocolla formosa VU



C. Paterson-Jones

Endonema retzioides VU



C. Paterson-Jones

Penaea dahlgrenii VU



C. Paterson-Jones

Stylapterus fruticulosus EN



C. Paterson-Jones

Sonderothamnus speciosus Rare

Plate 80



C. Burgers

Muraltia satureoides var. *salteri* CR



C. Burgers

Muraltia pottebergensis VU



C. Burgers

Muraltia calycina VU



N.A. Helme

Muraltia brevicornu EN



J.H. Vlok

Muraltia cliffortiifolia VU



N.A. Helme

Muraltia mitior EN



J.H. Vlok

Muraltia karroica VU



N.A. Helme

Muraltia macropetala VU

Habitat: Dense quartz pebbles.
Rationale: A range-restricted species (EOO < 100 km², AOO < 20 km²) known from fewer than five subpopulations. Although its habitat is grazed by livestock, individuals are not suspected to be negatively affected by grazing.

Afrolimon purpuratum (L.) Lincz.

Status: **CR** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)
D. Raimondo, N.A. Helme & L. Mucina

e**Distribution:** WC. Mamre to Durbanville.
Habitat: Sand plain fynbos.
Rationale: EOO 60 km², AOO < 10 km². Four small, severely fragmented subpopulations remain after > 95% of the habitat has been transformed for wheat cultivation in the Swartland and urban expansion on the Cape Flats. It continues to decline because of invasion by alien plants, urban expansion and grazing by livestock.

Afrolimon teretifolium (L.) Lincz.

Status: **Rare**
A. le Roux, D. Raimondo, J.E. Victor & L. Mucina

e**Distribution:** WC. Knersvlakte.
Habitat: Quartz patches.
Rationale: A range-restricted habitat specialist (EOO < 200 km²) that is not threatened.

Limonium Mill.

Limonium acuminatum L.Bolus

Status: **VU** A2c; B1ab(iii,iv,v)+2ab(iii,iv,v); C1
N.A. Helme, L. Mucina, D. Raimondo & J.E. Victor

e**Distribution:** WC. Rocher Pan to Yzerfontein.
Habitat: Coastal limestone outcrops and occasionally on calcareous coastal sands.
Rationale: A population reduction of > 30% is estimated based on habitat loss to urban development over the past 30 years (generation length 10 years). EOO 1 200 km², AOO < 1 200 km². Remaining subpopulations are severely fragmented and continue to decline because of coastal development. Subpopulations are typically small and we estimate that the total population consists of less than 10 000 mature individuals.

[F] **Limonium anthericoides** (Schltr.) R.A.Dyer

Status: **EN** B1ab(iii,iv,v)
D. Raimondo & L. Mucina

e**Distribution:** WC. Agulhas Plain.
Habitat: Seasonally wet sands over clays.
Rationale: EOO < 1 100 km². Five locations remain after two have been lost to crop cultivation. It continues to decline as a result of invasion by alien plants and grazing near Elim.

Limonium decumbens (Boiss.) Kuntze

Status: **DD**
D. Raimondo & L. Mucina

e**Distribution:** WC. West Coast.
Habitat: Unknown.
Rationale: Known only from the type, collected in 1838. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

[F] **Limonium depauperatum** (Boiss.) R.A.Dyer

Status: **EN** B1ab(i,ii,iii,iv)
J.E. Victor & L. Mucina

e**Distribution:** WC. Cape Flats and West Coast.
Habitat: River and estuary banks.
Rationale: EOO < 5 000 km². Four known locations are declining because of habitat loss to crop cultivation and urban and coastal development.

POLYGALACEAE

Muraltia DC.

[F] **Muraltia acipetala** Harv.

Status: **Rare**
N.A. Helme

e**Distribution:** WC. Cape Peninsula, Red Hill to Bonteberg.
Habitat: Low hills and sandy flats in fynbos.
Rationale: Known from five subpopulations. Invasion by alien plants and urban expansion are likely to have caused losses but extant subpopulations are safe within the Table Mountain National Park.

Muraltia aciphylla Levyns

Status: **DD**
J.E. Victor & R.C. Turner

e**Distribution:** WC. Hottentots Holland Mountains, Guardian Peak.
Habitat: Unknown.
Rationale: Last collected more than 30 years ago. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Muraltia alba Levyns

Status: **Rare**
D. Raimondo & R.C. Turner

e**Distribution:** WC. Jonkershoek and Groot Drakenstein Mountains.
Habitat: Fynbos, mountain slopes, 600–1 372 m.
Rationale: A range-restricted species (EOO < 100 km²) that is not threatened.

Muraltia angustiflora Levyns

Status: **DD**
F. Daniels, F. Forest & R.C. Turner

e**Distribution:** WC. Ceres, Gydo Pass.
Habitat: Shale bands and Table Mountain Sandstone scree, 700 m.
Rationale: Last collected in 1961 in an area that has been extensively transformed, this species is likely to be threatened.

[F] **Muraltia arachnoidea** Chodat

Status: **VU** B1ab(ii,iii)+2ab(ii,iii)
N.A. Helme & D. Raimondo

e**Distribution:** WC. Piketberg.
Habitat: Fynbos vegetation in sandy places on low sandstone slopes or plateaus.
Rationale: EOO 370 km², AOO < 370 km². Fewer than 10 locations remain after much of the habitat has been transformed for citrus, wheat and rooibos tea cultivation. Ongoing habitat loss to crop cultivation is causing a continuing decline.

[F] **Muraltia aspalatha** DC.

Status: **Rare**
N.A. Helme & D. Raimondo

e**Distribution:** WC. Hottentots Holland Mountains to Betty's Bay.
Habitat: Fynbos, occurring on low to medium-elevation slopes in sand or gravel.
Rationale: A Kogelberg endemic (EOO < 500 km²). Most subpopulations fall within the boundaries of the Kogelberg Biosphere Reserve and are not threatened.

Muraltia barkerae Levyns

Status: **EN** B1ab(iii)+2ab(iii)

R.C. Turner & D. Raimondo

e**Distribution:** WC. Still Bay to Riversdale.

Habitat: Low limestone hills.

Rationale: EOO and AOO < 250 km². Habitat quality at three known locations continues to decline because of invasion by alien plants.

F **Muraltia bolusii** Levyns

Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v)

N.A. Helme & D. Raimondo

e**Distribution:** WC. Kleinmond to Hermanus.

Habitat: Sandy coastal flats.

Rationale: EOO 97 km², AOO < 97 km². Fewer than five known locations continue to decline owing to habitat loss to coastal development, invasion by alien plants, crop cultivation and sand mining.

Muraltia bondii Vlok

Status: **Critically Rare**

J.E. Victor & R.C. Turner

e**Distribution:** WC. Anysberg.

Habitat: Sandstone outcrops on mountain summits, 1 400–1 600 m.

Rationale: The only known subpopulation is protected in the Anysberg Nature Reserve.

F **Muraltia brachypetala** Wolley-Dod

Status: **VU** D2

N.A. Helme & D. Raimondo

e**Distribution:** WC. Cape Peninsula, Red Hill.

Habitat: Sandstone ridges and slopes, 200–400 m.

Rationale: One known location is potentially threatened by invading alien plants and inappropriate fire management.

F **Muraltia brevicornu** DC. Plate 80

Status: **EN** B1ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

e**Distribution:** WC. Malmesbury.

Habitat: Lowland acid sands over clay.

Rationale: EOO < 2 500 km². Four severely fragmented subpopulations remain after > 80% of the habitat has been transformed for wheat cultivation. It continues to decline as a result of invasion by alien plants, urban expansion and overgrazing.

F **Muraltia caledonensis** Levyns

Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v)

N.A. Helme & D. Raimondo

e**Distribution:** WC. Bot River to Caledon and Shaw's Pass.

Habitat: Loamy flats and low slopes in renosterveld.

Rationale: EOO and AOO < 200 km². Fewer than five locations remain after > 80% of the habitat has been transformed for wheat cultivation. Ongoing habitat loss to crop cultivation and invading alien plants is causing a continuing decline.

Muraltia calycina Harv. Plate 80

Status: **VU** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

R.C. Turner & D. Raimondo

e**Distribution:** WC. Gansbaai to De Hoop.

Habitat: Low limestone hills near the sea.

Rationale: EOO and AOO < 1 400 km². Fewer than 10 locations are declining because of invading alien acacias and habitat loss to coastal development, protea cultivation and grazing by livestock.

Muraltia capensis Levyns

Status: **DD**

F. Daniels & R.C. Turner

e**Distribution:** WC. Viljoen's Pass to Houwhoek.

Habitat: Unknown.

Rationale: Last collected more than 50 years ago. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Muraltia carnosa E.Mey. ex Harv.

Status: **Rare**

F. Daniels, D. Raimondo & R.C. Turner

e**Distribution:** WC. Groot Swartberg Mountains.

Habitat: Rocky slopes, 1 220–1 525 m.

Rationale: A range-restricted species (EOO < 500 km²), known from four subpopulations. No known threats.

Muraltia chamaepitys Chodat

Status: **VU** D2

R.C. Turner & D. Raimondo

e**Distribution:** WC. Houwhoek.

Habitat: Shale-sandstone transitions, 600–915 m.

Rationale: Two known locations are potentially threatened by invading alien plants and too frequent fires.

F **Muraltia cliffortiifolia** Eckl. & Zeyh. Plate 80

Status: **VU** D2

J.H. Vlok & D. Raimondo

e**Distribution:** WC. Rooiberg and the area between Riversdale and Mossel Bay.

Habitat: Arid fynbos.

Rationale: Fewer than five known locations are potentially threatened by road construction and invasion by alien plants.

Muraltia comptonii Levyns

Status: **VU** D2

N.A. Helme, F. Forest & D. Raimondo

e**Distribution:** WC. Cape Peninsula, Hout Bay and Klaas Jagersberg.

Habitat: Fynbos, sandy mountain slopes.

Rationale: Two known locations are potentially threatened by too frequent fires and invasion by alien plants.

Muraltia concava Levyns

Status: **DD**

F. Forest, F. Daniels & R.C. Turner

e**Distribution:** WC. Riviersonderend Mountains above Genadendal.

Habitat: Fynbos, on mountain slopes, 1 525 m.

Rationale: Known only from the type, collected in the 1930s. The area is densely invaded by alien pines and is being burnt too frequently. This poorly known species is likely to be threatened.

F **Muraltia curvipetala** Levyns

Status: **Rare**

N.A. Helme & D. Raimondo

e**Distribution:** WC. Constantiaberg to Kalk Bay.

Habitat: Fynbos, sandstone slopes, 270–900 m.

Rationale: A range-restricted Table Mountain endemic (EOO 35 km²) that is not threatened.

Muraltia cuspifolia Chodat

Status: **DD**D

F. Daniels, F. Forest & R.C. Turner

e**Distribution:** WC. Elim.

Habitat: Fynbos, 150 m.

Rationale: Known only from the type, collected in the 1890s. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

F **Muraltia cyclolopha** Chodat

Status: **VU** A2ac; B1ab(ii,iii,v)+2ab(ii,iii,v)

N.A. Helme & D. Raimondo

e**Distribution:** WC. Agulhas Plain.

Habitat: Elim Ferricrete Fynbos on gravel flats and low slopes.

Rationale: A population reduction of > 30% is estimated based on a 42% loss of habitat to crop cultivation over the past 60 years (generation length 20 years). EOO 440 km^2, AOO < 440 km^2. Six locations continue to decline because of ongoing habitat loss to agricultural expansion and invasion by alien plants.

F **Muraltia decipiens** Schltr.

Status: **EN** B1ab(ii,iii,v)

N.A. Helme & D. Raimondo

e**Distribution:** WC. Tygerberg to Franschhoek.

Habitat: Clay flats and lower slopes.

Rationale: EOO 1 084 km^2. Five isolated, severely fragmented subpopulations remain after 54% of known locations and > 80% of the habitat of this species have been transformed for vineyard, wheat and citrus cultivation, forestry plantations and urban expansion around Cape Town, Franschhoek and Paarl. It continues to decline because of ongoing habitat loss and degradation as a result of urban development, grazing by livestock and invasion by alien plants.

F **Muraltia diabolica** Levyns

Status: **Rare**

N.A. Helme & D.A. Kamundi†

e**Distribution:** WC. Cape Peninsula.

Habitat: Fynbos on rocky slopes.

Rationale: A rare, range-restricted species (EOO 73 km^2) that is not threatened.

Muraltia elsieae Paiva

Status: **Critically Rare**

F. Daniels, F. Forest & R.C. Turner

e**Distribution:** WC. Klein Swartberg Mountains, Seweweekspoort.

Habitat: Fynbos, rocky slopes, 990–1 320 m.

Rationale: One known subpopulation is not threatened.

Muraltia ferox Levyns

Status: **CR** PE

F. Daniels & F. Forest

e**Distribution:** WC. Worcester.

Habitat: Lower rocky slopes, 300 m.

Rationale: Last collected in 1951. Its habitat has been transformed and degraded as a result of expansion of vineyards and overgrazing. It is possibly extinct.

Muraltia gillettiae Levyns

Status: **EN** B1ab(ii,iii,iv,v)

R.C. Turner & D. Raimondo

e**Distribution:** WC. Elandsberg near Elim.

Habitat: Lowland fynbos, on low mountain slopes.

Rationale: EOO 240 km^2, AOO < 240 km^2. Habitat extent and quality at three known locations are declining as a result of invasion by alien plants, vineyard and orchard expansion and grazing by livestock.

Muraltia guthriei Levyns

Status: **VU** D2

F. Daniels & R.C. Turner

e**Distribution:** WC. Sir Lowry's Pass.

Habitat: Rocky sandstone slopes in fynbos.

Rationale: One known location is potentially threatened by too frequent fires.

Muraltia harveyana Levyns

Status: **VU** B1ab(ii,iii,v)+2ab(ii,iii,v)

F. Forest, N.A. Helme, D. Raimondo & F. Daniels

e**Distribution:** WC. Darling to Saldanha Bay.

Habitat: Calcrete and associated sands.

Rationale: EOO and AOO < 650 km^2. Habitat at 10 known locations continues to decline because of urban development and limestone mining.

Muraltia hirsuta Levyns

Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v)

R.C. Turner & D. Raimondo

e**Distribution:** WC. Hemel-en-Aarde Valley and Houwhoek.

Habitat: Granitic soils, 120 m.

Rationale: EOO 150 km^2, AOO < 150 km^2. Known to occur at three locations. Vineyard expansion and invasion by alien plants are causing a continuing decline in the Hemel-en-Aarde Valley and at Shaw's Pass. Plants in the Kogelberg Biosphere Reserve near Houwhoek are potentially threatened by too frequent fires.

Muraltia karroica Levyns **Plate 80**

Status: **VU** B1ab(v)+2ab(v)

J.H. Vlok, A.L. Schutte-Vlok & D. Raimondo

e**Distribution:** WC. Klein Swartberg to Rooiberg.

Habitat: Arid fynbos on rocky sandstone slopes, 760–1 200 m.

Rationale: EOO 1 800 km^2, AOO < 1 800 km^2. Mature individuals of this palatable species are declining at 5–10 locations because of grazing by livestock and antelope.

F **Muraltia knysnaensis** Levyns

Status: **VU** B1ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

e**Distribution:** WC. George to Keurbooms River.

Habitat: Fynbos, on dry flats and hills.

Rationale: EOO 2 300 km^2. Eight locations remain on fragments of natural habitat after most of the habitat has been transformed for crop cultivation, forestry plantations and coastal development around Knysna and Plettenberg Bay. It continues to decline because of ongoing habitat degradation as a result of the exclusion of fire on small fragments.

F **Muraltia langebergensis** Levyns

Status: **Rare**

N.A. Helme & D. Raimondo

e**Distribution:** WC. Langeberg Mountains.

Habitat: Fynbos, on rocky sandstone slopes above 1 500 m.

Rationale: A range-restricted (EOO 30 km^2), high-altitude habitat specialist that is not threatened.

Muraltia lewisiae Levyns

Status: **VU** D2

J.E. Victor & R.C. Turner

Distribution: WC. Gansbaai and Baardskeerdersbos.
Habitat: Limestone ridges near the sea.
Rationale: Two known locations are potentially threatened by invading alien plants.

F **Muraltia macropetala** Harv. **Plate 80**

Status: **VU** B1ab(ii,iii,v)

N.A. Helme & D. Raimondo

Distribution: WC. Hopefield to Faure.
Habitat: Sandy loams and clay flats in renosterveld.
Rationale: EOO 6 955 km^2. Small, isolated, severely fragmented subpopulations remain after > 80% of the habitat has been transformed by crop cultivation and urban expansion. Decline as a result of ongoing urban expansion and invasion by alien plants is continuing.

F **Muraltia minuta** Levyns

Status: **EN** B1ab(ii,iii)+2ab(ii,iii)

N.A. Helme & D. Raimondo

Distribution: WC. Betty's Bay to Kleinmond.
Habitat: Rocky and sandy coastal flats.
Rationale: EOO and AOO < 4 km^2. Habitat extent and quality at two known locations continue to decline as a result of the ongoing expansion of Kleinmond and invasion by alien plants.

Muraltia mitior (P.J.Bergius) Levyns **Plate 80**

Status: **EN** B1ab(i,ii,iii,iv,v)

F. Forest & R.C. Turner

Distribution: WC. Cape Peninsula to Agulhas.
Habitat: Low-lying sandy flats, usually water-logged during winter.
Rationale: EOO 2 625 km^2. Four known locations remain after most of the habitat has been transformed and degraded by urban development, agriculture and invading alien plants. It is now locally extinct on the Cape Flats and continues to decline around Elim because of invasion by alien plants and grazing by livestock.

F **Muraltia mixta** (L.f.) DC.

Status: **DD**

N.A. Helme & D. Raimondo

Distribution: WC. Cape Peninsula.
Habitat: Mountain slopes and summits in sandstone fynbos.
Rationale: This species was frequently collected during the 1800s, but in a revision of *Muraltia* (Levyns 1954) it was noted that it had become very rare. Last recorded more than 50 years ago, this species is quite likely to be threatened, but its current status cannot be determined.

F **Muraltia montana** Levyns

Status: **Rare**

N.A. Helme & D. Raimondo

Distribution: WC. Groot Winterhoek and Wemmershoek peaks.
Habitat: High-altitude fynbos on mountain peaks.
Rationale: A range-restricted (EOO < 100 km^2), high-altitude habitat specialist that is not threatened.

F **Muraltia mutabilis** Levyns

Status: **DD**

N.A. Helme, J.E. Victor & R.C. Turner

Distribution: WC. Cape Hangklip.
Habitat: Low coastal sandstone slopes.
Rationale: A poorly known species, not collected since 1960. It is possibly overlooked and may be threatened by coastal development at Rooi Els.

F **Muraltia obovata** DC.

Status: **VU** C2a(i)

N.A. Helme & D. Raimondo

Distribution: WC. Olifants River Mouth to Saldanha.
Habitat: Sandy flats.
Rationale: Subpopulations are small and typically have less than 50 mature individuals. The total population is estimated to be no more than 5 000 mature individuals. It is declining as a result of ongoing habitat loss to potato and rooibos tea cultivation.

F **Muraltia occidentalis** Levyns

Status: **Rare**

D. Raimondo, D.A. Kamundi† & J.E. Victor

Distribution: WC. Hottentots Holland Mountains to Kogelberg.
Habitat: Mountain slopes in sandstone fynbos.
Rationale: A range-restricted species (EOO 190 km^2) that is not threatened.

F **Muraltia orbicularis** Hutch.

Status: **VU** D2

N.A. Helme & D. Raimondo

Distribution: WC. Cape Peninsula, Chapman's Peak.
Habitat: Fynbos, on granite and sandstone on west-facing slopes.
Rationale: One known location is potentially threatened by road construction and invasion by alien plants.

F **Muraltia paludosa** Levyns

Status: **Rare**

N.A. Helme & D.A. Kamundi†

Distribution: WC. Grabouw to Kleinmond.
Habitat: Fynbos, in marshes on sandstone slopes.
Rationale: A range-restricted species (EOO < 100 km^2) that is protected in the Kogelberg Biosphere Reserve.

Muraltia pappeana Harv.

Status: **NT** B1ab(iii)+2ab(iii)

D. Raimondo

Distribution: WC. Bredasdorp to Riversdale.
Habitat: Low shrubby fynbos on limestone pavements.
Rationale: EOO 1 100 km^2, AOO < 1 100 km^2. Suspected to occur at 10–15 locations. Habitat quality is declining as a result of invading alien acacias.

Muraltia pottebergensis Levyns **Plate 80**

Status: **VU** D2

D. Raimondo & F. Forest

Distribution: WC. Potberg.
Habitat: Fynbos, in coarse sandy soils, interspersed with sandstone rocks.
Rationale: One known location is potentially threatened by invading alien plants.

F **Muraltia rara** Levyns

Status: **DD**

D. Raimondo, D.A. Kamundi† & J.E. Victor

Distribution: EC. Amathole Mountains, Keiskammahoek.
Habitat: Montane grassland.

Rationale: Known only from the type, collected in 1948. This species is possibly threatened by forestry, but not enough is known about the distribution, specific habitat or population status to determine its status.

Muraltia satureioides DC. var. **salteri** Levyns **Plate 80**

Status: **CR** PE

R.C. Turner & D. Raimondo

eDistribution: WC. Cape Peninsula, Karbonkelberg.

Habitat: Lower sandy slopes.

Rationale: Known to occur at a single location now severely degraded because of invasion by alien plants, spreading housing developments and too frequent fires. It has not been recorded for more than 30 years and is possibly extinct.

F **Muraltia schlechteri** Levyns

Status: **DD**D

D. Raimondo, D.A. Kamundi† & J.E. Victor

eDistribution: WC. Hottentots Holland and Riviersonderend Mountains.

Habitat: Unknown.

Rationale: Last collected in the 1940s, not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Muraltia serrata Levyns

Status: **DD**D

F. Daniels & R.C. Turner

eDistribution: WC. Kleinberg and Hex River Mountains.

Habitat: Montane fynbos on sandstone slopes.

Rationale: Known only from the type, collected in the 1950s. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Muraltia spicata Bolus

Status: **VU** D2

R.C. Turner, F. Forest & D. Raimondo

eDistribution: WC. Between Napier and Elim.

Habitat: Low hills.

Rationale: One known location is potentially threatened by overgrazing and invasive alien acacias.

F **Muraltia stipulacea** (Burm.f.) DC.

Status: **DD**D

D. Raimondo

eDistribution: WC. Cape Peninsula.

Habitat: Low slopes and flats on gravel or sandy soils.

Rationale: Although there are 30 collections of this species in South African herbaria, they were all collected prior to 1965. Many of the collecting localities are from the lower slopes of Table Mountain and have been transformed for urban development, forestry plantations and vineyard cultivation. Not enough is known about this species to determine its status.

F **Muraltia stokoei** Levyns

Status: **Rare**

D. Raimondo, D.A. Kamundi† & J.E. Victor

eDistribution: WC. Groenlandberg and Kogelberg.

Habitat: Rocky slopes in fynbos.

Rationale: A range-restricted species (EOO 70 km^2) that is not threatened.

F **Muraltia tenuifolia** (Poir.) DC.

Status: **VU** D2

N.A. Helme & D. Raimondo

eDistribution: WC. Riviersonderend Mountains.

Habitat: Rocky sandstone slopes in fynbos.

Rationale: Three known locations are potentially threatened by alien pines that invade the habitat.

F **Muraltia thunbergii** Eckl. & Zeyh.

Status: **NT** B1ab(ii,iii,v)+2ab(ii,iii,v)

N.A. Helme & D. Raimondo

eDistribution: WC. Darling to Franschhoek and Cape Peninsula.

Habitat: Low sandy or clay slopes in fynbos or renosterveld.

Rationale: EOO and AOO < 1 400 km^2. Only 16 locations remain after most of the habitat has been transformed by agriculture and urban expansion. At least 36% of known subpopulations are now locally extinct and this species continues to decline owing to expanding vineyard and olive cultivation and invasion by alien plants.

F **Muraltia trinervia** (L.f.) DC.

Status: **NT** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

eDistribution: WC. Porterville to Cape Flats.

Habitat: Granite and shale flats and slopes.

Rationale: EOO and AOO < 1 750 km^2. Only 12 locations remain after most of the habitat has been transformed for wheat cultivation. It continues to decline because of ongoing habitat loss to urban expansion around Malmesbury and Durbanville.

Polygala L.

Polygala bowkerae Harv.

Status: **DD**D

J.E. Victor & A.P. Dold

eDistribution: EC. Grahamstown and Koudeveld Mountains near Graaff-Reinet.

Habitat: Montane grassland.

Rationale: Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Polygala dasyphylla Levyns

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

D. Raimondo

eDistribution: WC. Agulhas Plain.

Habitat: Sandy soil derived from limestone.

Rationale: EOO 108 km^2, AOO < 108 km^2. Habitat extent and quality at 2–4 locations continue to decline because of protea cultivation and invading alien acacias.

Polygala gracilipes Harv.

Status: **DD**D

L. Potter

eDistribution: WC. Stellenbosch.

Habitat: Unknown.

Rationale: Known only from the type, collected in the early 1800s. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Polygala langebergensis Levyns

Status: **Rare**

D. Raimondo

[e]**Distribution:** WC. Garcia's Pass.

Habitat: Montane fynbos on sandstone slopes.

Rationale: A range-restricted resprouter (EOO 16 km^2) that is not threatened.

Polygala pottebergensis Levyns

Status: **VU** D2

D. Raimondo

[e]**Distribution:** WC. Potberg to Cape Infanta.

Habitat: Rocky sandstone slopes, 30–390 m.

Rationale: Fewer than five locations are potentially threatened by invasive alien plants.

Polygala praticola Chodat

Status: **DD**D

C.R. Scott-Shaw & L. von Staden

[e]**Distribution:** KZN. Type collection from Dumisa Siding near Ixopo. Possibly also occurs in the KwaZulu-Natal Drakensberg Mountains at Cathedral Peak.

Habitat: Montane grassland, 600–800 m.

Rationale: Last recorded at the type locality at Dumisa in 1912 and possibly locally extinct as a result of extensive habitat loss. Specimens in the local herbarium indicate that it could also occur in the KwaZulu-Natal Drakensberg. If this species does occur in the Drakensberg, a large, untransformed and well-protected area, it is probably not threatened.

[F] **Polygala rodrigueana** Paiva

Status: **DD**D

J.E. Victor

[e]**Distribution:** KZN. Drakensberg foothills, Hoffenthal, in the Bergville district.

Habitat: Montane grasslands.

Rationale: Known only from the type, collected in the early 1900s. This species is possibly threatened by crop cultivation and overgrazing, but not enough is known about the distribution, specific habitat or population status to determine its status.

[F] **Polygala woodii** Chodat

Status: **DD**D

D. Raimondo, C.L. Bredenkamp & L. Potter

[e]**Distribution:** KZN. Oribi Gorge.

Habitat: Unknown.

Rationale: Known from one site at Oribi Gorge, where it was last collected in the late 1800s. Not enough is known about the distribution, specific habitat or population status of this species to determine its status, but it might be threatened as a result of extensive habitat loss to the cultivation of sugarcane.

POLYGONACEAE

Koenigia L.

[F] **Koenigia sp. nov.**

Voucher: *Helme 3468* NBG

Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Graafwater.

Habitat: Seasonally wet, deep sands, usually along drainage lines.

Rationale: EOO and AOO < 300 km^2. Habitat quality at two known locations continues to decline owing to extraction of water for potato cultivation, invasion by alien plants, as well as too frequent burning of wetlands to destroy reedbeds that host granivorous birds.

PORTULACACEAE

Anacampseros L.

Anacampseros bayeriana S.A.Hammer

Status: **Rare**

G. Williamson & L. Potter

Distribution: NC. Southern Namibia, Richtersveld and Bushmanland.

Habitat: Arid inselbergs.

Rationale: A rare habitat specialist known from only three collections.

Anacampseros comptonii Pillans

Status: **VU** D2

N.A. Helme & D. Raimondo

[e]**Distribution:** NC WC. Southern Cederberg to the Bokkeveld Escarpment.

Habitat: In moss pads on seasonally moist sandstone pavements.

Rationale: A habitat specialist occurring at three known locations where it is potentially threatened by illegal succulent collecting and trampling by livestock.

[F] **Anacampseros pisina** G.Will.

Status: **DD**D

L. Potter & G. Williamson

[e]**Distribution:** NC. Richtersveld.

Habitat: Unknown.

Rationale: Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Anacampseros scopata G.Will.

Status: **Rare**

P.M. Burgoyne, G. Williamson & L. Potter

[e]**Distribution:** NC. Namaqualand, southwestern Richtersveld and Augrabies Mountains.

Habitat: Low quartzite cliffs, in narrow, protected, east-facing gorges.

Rationale: A habitat specialist that is not threatened because of the inaccessibility of its habitat.

Anacampseros subnuda Poelln. subsp. **lubbersii** (Bleck) Gerbaulet

Status: **VU** D2

D. McMurtry, J.E. Burrows, M. Lötter & D. Raimondo

[e]**Distribution:** MP. Witbank and Middelburg.

Habitat: Grassland, on rhyolite boulders.

Rationale: A habitat specialist (AOO < 10 km^2) that is potentially threatened by mining and urban expansion.

Avonia (E.Mey. ex Fenzl) G.D.Rowley

Avonia herreana (Poelln.) G.D.Rowley

Status: **VU** D2

G. Williamson & L. Potter

[e]**Distribution:** NC. Richtersveld.

Habitat: Quartz outcrops.

Rationale: Three known locations are potentially threatened by grazing by livestock.

Avonia mallei G.Will.

Status: **Rare**

G. Williamson & L. Potter

e**Distribution:** NC. Richtersveld.

Habitat: Sloping hillsides, growing in reddish soil between pegmatite and quartz pebbles.

Rationale: A range-restricted species (EOO < 100 km^2) that is not threatened.

Avonia recurvata (Schönland) G.D.Rowley subsp. **buderiana** (Poelln.) G.Will.

Status: **VU** D2

G. Williamson & L. Potter

e**Distribution:** NC. Richtersveld, Helskloof.

Habitat: Central Richtersveld Montane Shrubland.

Rationale: One known location is potentially threatened by trampling by livestock.

Avonia recurvata (Schönland) G.D.Rowley subsp. **minuta** (Gerbaulet) G.D.Rowley

Status: **DD**D

P.M. Burgoyne & L. Potter

e**Distribution:** NC. Maraisvlei in Bushmanland west of Kakamas.

Habitat: Bushmanland Arid Grassland.

Rationale: Known from the type collection. Not enough is known about the distribution, specific habitat or population status of this taxon to determine its status.

PROTEACEAE

Aulax P.J.Bergius

F **Aulax pallasia** Stapf

Status: **NT** A4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

e**Distribution:** WC. Widespread in the mountains of the Western Cape, from Piketberg and the Kouebokkeveld the central Langeberg.

Habitat: Montane sandstone soils, often on the edge of wetlands and seeps, 800–2 000 m.

Rationale: Land transformation models predict a population reduction due to habitat loss of at least 30% by 2025 (Bomhard *et al.* 2005), but as it occurs in mountainous areas, this is probably an overestimate. However, this habitat specialist is vulnerable to invasive alien plants, which currently affect 47% of sites in low abundance, and extraction of groundwater. A population reduction of 20–30% is therefore likely within 20 years. This is a long-lived resprouter, generation length > 100 years. It occurs in small numbers in remote areas, and monitoring is advised as population decline may go undetected.

F **Aulax umbellata** (Thunb.) R.Br.

Status: **NT** A2c+4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

e**Distribution:** WC. Houwhoek, Bredasdorp, Potberg and Mossel Bay.

Habitat: Sandstone and limestone fynbos on mountains and flats.

Rationale: A population reduction of 27% is estimated based on a reduction in range size (EOO) over the past 40 years (reseeder, generation length ± 20 years). Land transformation and climate change models predict a > 50% population reduction by 2025 (Bomhard *et al.* 2005). Model predictions are considered extreme, but a further population reduction over the next 20 years is likely. Other threats to the species include invasion by alien plants, afforestation, expanding protea and vineyard cultivation and urban expansion.

Diastella Salisb. ex Knight

Diastella buekii (Gand.) Rourke

Status: **CR** A2a; B1b(i,ii,iii,iv,v)c(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

e**Distribution:** WC. Berg River Valley between Franschhoek and Paarl.

Habitat: Largely confined to Swartland Alluvium Fynbos.

Rationale: A population reduction of 90% was observed within one generation when the population declined from 2 500 plants in the 1980s to 250 plants in 2000 (generation length 20 years) as a result of habitat loss to forestry plantations, vineyard expansion, extraction of groundwater, clearing of road verges, golf course developments and invasion by alien plants. EOO 47 km^2. The population continues to decline and large fire-related fluctuations in number of mature individuals are likely to occur in small subpopulations.

F **Diastella divaricata** (P.J.Bergius) Rourke subsp. **divaricata**

Status: **Rare**

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

e**Distribution:** WC. Cape Peninsula.

Habitat: Peninsula Sandstone Fynbos.

Rationale: A range-restricted Cape Peninsula endemic (EOO 241 km^2). Large subpopulations are protected in the Table Mountain National Park.

F **Diastella divaricata** (P.J.Bergius) Rourke subsp. **montana** Rourke

Status: **VU** A2c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

e**Distribution:** WC. Franschhoek and Houwhoek.

Habitat: Sandstone fynbos.

Rationale: A population reduction of 30% is estimated based on a reduction in the range size (EOO) of this taxon over the past 60 years (generation length 20 years) due to habitat loss to pine plantations and invasions of alien pines and hakeas.

Diastella fraterna Rourke

Status: **Rare**

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Kogelberg.

Habitat: Kogelberg sandstone fynbos.

Rationale: A locally common, but range-restricted species (EOO 173 km^2) that is protected in the Kogelberg Biosphere Reserve.

Diastella myrtifolia (Thunb.) Salisb. ex Knight

Status: **CR** B1ab(i,ii,iii,iv,v)c(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Groot Winterhoek.

Habitat: Along riverbanks in Hawequas sandstone fynbos.

Rationale: EOO 29 km^2. Three severely fragmented subpopulations continue to decline because of ongoing habitat loss to invading alien plants, afforestation, dam construction and infrastructure development and disturbance caused by maintenance of power lines. Fire-related population fluctuations are likely to occur in small subpopulations fragmented and isolated by forestry plantations.

Diastella parilis Salisb. ex Knight **Plate 81**

Status: **CR** B1b(i,ii,iii,iv,v)c(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Elandskloof Mountains to Slanghoek.

Habitat: On seasonally damp sites, predominantly in Breede Alluvium Fynbos.

Rationale: EOO 53 km^2. More than 75% of the range of this species has been transformed by vineyard expansion, invasion by alien plants, extraction of groundwater, inappropriate fire management and altered drainage of seasonally damp sites as a result of agricultural expansion. Ongoing habitat loss is causing a continuing decline, and fire-related population fluctuations are likely to occur in small subpopulations. In addition, it is also likely to be vulnerable to drought-related mortality events.

Diastella proteoides (L.) Druce

Status: **CR** A2c+3c+4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Mamre and Paarl to Cape Peninsula.

Habitat: Atlantis Sand Fynbos and Cape Flats Sand Fynbos.

Rationale: A species that was probably common and widespread, but it is now restricted to a few remnant patches of lowland fynbos. A population reduction of > 80% is estimated over the past 60 years (generation length 20 years), based on a 81% reduction in distribution range, and the loss of > 99% of subpopulations in the southern part of the range. It continues to decline because of ongoing habitat loss to urban expansion, agriculture, invasion by alien plants, inappropriate fire management in small remnants, mowing under power lines and in road verges, mole rat activity and invasive alien ants. Climate change models predict a further population reduction of > 80% by 2025 (Bomhard *et al.* 2005). Remaining subpopulations are small and confined to degraded or poorly managed sites. Only the subpopulation at Tokai appears healthy and may recover well enough, if pine plantations in the area are removed, for placement of this species in the category EN in future.

Diastella thymelaeoides (P.J.Bergius) Rourke subsp. **meridiana** Rourke

Status: **VU** A3c+4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Southern Kogelberg.

Habitat: Largely confined to Kogelberg sandstone fynbos.

Rationale: Land transformation models predict > 80% habitat loss by 2025 (Bomhard *et al.* 2005), mainly as a result of coastal development and invasion by alien plants. However, 60% of the habitat is within conservation areas and alien invasions are actively cleared, and a status of CR is therefore not justified. Some of the largest subpopulations, however, are in an area between Rooiels and Pringle Bay where development is likely to have an extensive impact over the next 20 years and a population reduction of 40–50% can be expected (generation length 20 years). Other threats include inappropriate fire management, road construction, fire-related population fluctuations and invasive alien ants.

Diastella thymelaeoides (P.J.Bergius) Rourke subsp. **thymelaeoides**

Status: **NT** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Hottentots Holland Mountains and Kogelberg.

Habitat: Largely confined to Kogelberg sandstone fynbos.

Rationale: EOO 132 km^2, AOO 74 km^2. The 12 known locations are declining because of habitat loss to afforestation and flower-picking.

Faurea Harv.

Faurea macnaughtonii E.Phillips

Status: **Rare**

A.G. Rebelo, C.J. Geldenhuys, C.R. Scott-Shaw, I.J. van der Merwe, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt,

C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

Distribution: EC KZN MP WC. Knysna to Tanzania.

Habitat: Mature forest.

Rationale: Known from a wide range, but occurs sparsely in very low numbers in isolated forest patches. About 90% of the population in South Africa occurs at Deepwalls near Knysna, where it is protected.

Leucadendron R.Br.

Leucadendron argenteum (L.) R.Br. Plate 82

Status: **EN** A2c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Cape Peninsula and Somerset West.

Habitat: Granite and shale fynbos on moist, south-facing slopes.

Rationale: A population reduction of at least 50% is estimated based on a 74% reduction in range and loss of 55% of the habitat of this species over the past 60 years (generation length 20 years). It is currently threatened by urban expansion, afforestation, inappropriate fire management, invasion by alien plants, habitat fragmentation an susceptibility to root fungal infections. Habitat loss models indicate that the population may decline by > 80% by 2025 (Bomhard *et al.* 2005). However, given that this charismatic species is intensively managed, such drastic declines are unlikely.

Leucadendron bonum I.Williams Plate 82

Status: **CR** C2a(i)b; D

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Kouebokkeveld.

Habitat: Cederberg sandstone fynbos.

Rationale: Three small, severely fragmented subpopulations are known. Fire-related population fluctuations have been observed. In 2005 there were only six known adult plants, and at present the population is less than 50 mature individuals. The population is estimated to fluctuate between five and 100 plants. It continues to decline because of inappropriate fire management and skewed sex ratios and genetic decline in small subpopulations.

Leucadendron brunioides Meisn. var. **flumenlupinum** I.Williams

Status: **CR** A3c+4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Graafwater to Aurora and Eendekuil.

Habitat: Dry montane fynbos in moist habitats such as seeps and river courses on sandy alluvium or sandstone-derived soils.

Rationale: At least 55% of its habitat has already been transformed, and it occurs in an area where irrigated crop cultivation is currently rapidly expanding, and a population reduction of > 80% is expected to occur within the next 20 years (generation length 20 years). Climate change models furthermore estimate that this taxon will be extinct by 2025 (Bomhard *et al.* 2005). Other threats include invasion by alien plants, extraction of groundwater and eutrophication.

Leucadendron burchellii I.Williams

Status: **NT** D2

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Riviersonderend Mountains.

Habitat: Largely confined to North Sonderend Sandstone Fynbos.

Rationale: AOO 65 km^2. Potentially threatened by habitat loss to expanding protea orchards and hybridisation and genetic contamination by closely related taxa planted near wild subpopulations.

Leucadendron cadens I.Williams

Status: **Rare**

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Witteberg.

Habitat: Ridges in dry montane fynbos, amongst quartzitic sandstone rocks of the Witteberg series, around 1 500 m.

Rationale: EOO 132 km^2. A range-restricted habitat specialist that is not threatened.

Leucadendron chamelaea (Lam.) I.Williams

Status: **CR** A4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Kouebokkeveld to Franschhoek Valley.

Habitat: Occurs most prominently in Breede Alluvium Fynbos.

Rationale: A past population reduction of > 60% is estimated based on 55% habitat loss to agriculture and the local extinction of 52% of subpopulations known through herbarium records. Remaining subpopulations are fragmented and largely confined to road verges and adjacent areas. In 2004, > 30% of remaining subpopulations were cleared as part of road verge maintenance programmes and agricultural pest control. Clearing of road verges continues to cause decline, and population reduction is likely to exceed 80% within the next 20 years (generation length 20 years). A few other subpopulations remain on small remnants between agricultural areas, where they are declining as a result of a lack of fire, expanding agriculture, wetland drainage, invasion by alien plants and overgrazing.

Population reduction was previously underestimated (at 55% occupancy) and has been escalating, with an estimated 33% of remaining subpopulations having been

cleared during 2004 as part of road reserve maintenance programmes and for the agricultural control of 'Vaalvurm'. Other subpopulations occur in small isolated pockets between agricultural fields where fires are infrequent. Also threatened by expanding fruit orchards, vineyard expansion, potato and cash crop cultivation, wetland drainage, invasion by alien plants, browsing and overgrazing. Unless the practice of clearing road reserves ceases soon, this species will be confined to a very few remnant patches.

Leucadendron cinereum (Sol. ex Aiton) R.Br.

Status: **VU** A2c+3c+4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Mouth of the Berg River to Kraaifontein.

Habitat: Sand fynbos on flats.

Rationale: Some 37% of the range of this species has already been transformed, and habitat loss to rooibos tea and potato cultivation continues at an estimated 0.5% per year. This is likely to lead to a 30% population reduction within 60 years (generation length 20 years). A number of formerly large subpopulations have been reduced as a result of habitat loss. Subpopulations are being increasingly fragmented and are also threatened by invading alien plants.

Leucadendron comosum (Thunb.) R.Br. subsp. **homaeophyllum** (Meisn.) I.Williams **Plate 82**

Status: **CR** B1ab(i,ii,iii,iv,v)c(iv)+2ab(i,ii,iii,iv,v)c(iv); D

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Stettynsberg and Du Toit's Kloof Pass.

Habitat: Sandstone fynbos at high altitude and granite fynbos at medium altitudes.

Rationale: EOO 33 km^2, AOO 6 km^2. Three small, isolated subpopulations occur within a single location where the number of mature individuals continues to decline because of agricultural expansion, wildflower harvesting, invasion by alien plants and inappropriate fire management. Fire-related population fluctuations occur, and at present the population consists of less than 50 mature individuals. One harvested subpopulation is probably locally extinct as no seedlings emerged after the last fire.

Leucadendron concavum I.Williams

Status: **EN** B1ac(iv)+2ac(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Pakhuis Mountains.

Habitat: Cederberg sandstone fynbos.

Rationale: EOO 19 km^2, AOO < 19 km^2. Fire-related fluctuations in the number of mature individuals occur at two known locations. Inappropriate fire management is a potential threat to this species, but does not appear to be causing a decline at present.

[F]**Leucadendron conicum** (Lam.) I.Williams

Status: **NT** A4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** EC WC. Tsitsikamma and Kouga.

Habitat: Forest margins and riparian and wetland habitats in sandstone fynbos.

Rationale: Although many subpopulations of this species have declined as a result of afforestation and invasion by alien plants, it was not previously considered to be threatened. Land transformation and climate change models (Bomhard *et al.* 2005) predict that there may be a population reduction by 2025 (generation length 20 years), but it is not expected to exceed 30%. The habitat of this species is particularly sensitive to development and invasion by alien plants and the population should be closely monitored.

[F]**Leucadendron coniferum** (L.) Meisn.

Status: **VU** A2c+3c+4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Cape Peninsula to Soetanysberg.

Habitat: Sand fynbos on the lowlands, bordering on strandveld in some situations.

Rationale: A past population reduction of 30% is estimated based on a 33% reduction in range size and 31% habitat loss to urban and coastal development, crop cultivation and invasion by alien plants over the past 60 years (generation length 20 years). Land transformation and climate change models predict a further 50% population reduction by 2025 (Bomhard *et al.* 2005), but the species is resilient to fragmentation, and decline due to expansion of alien invasive plants is unlikely to be significant if current management programmes are maintained. A population reduction of 30%, however, is likely within the next 20 years owing to climate change and ongoing habitat loss to urban and coastal development.

Leucadendron cordatum E.Phillips

Status: **Rare**

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Langeberg and Groot Swartberg.

Habitat: Sandstone fynbos.

Rationale: EOO 2 278 km^2. Occurs in low densities and subpopulations are small. Not threatened in mountainous habitat.

Leucadendron coriaceum E.Phillips & Hutch.

Status: **EN** A2c; B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown,

J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Napier to Riversdale.
Habitat: A renosterveld and renosterveld-ecotone species usually associated with silcrete and pallid zone clays.
Rationale: A population reduction of > 50% is estimated based on a 80% reduction in range size (EOO) and 51% habitat loss, mainly to crop cultivation, over the past 100 years (generation length 100 years). Some 37% of subpopulations known through herbarium records are now locally extinct. EOO 2 222 km^2, AOO 45 km^2. Five small, severely fragmented remaining subpopulations continue to decline because of ongoing habitat loss and fragmentation, skewed sex ratios in small fragments, recruitment failure, herbicide drift from adjacent crop fields and overgrazing.

Leucadendron corymbosum P.J.Bergius

Status: **VU** A2c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Michell's Pass to Paarl.
Habitat: Prefers moist habitats in both Swartland and Breede Alluvium Fynbos.
Rationale: A population reduction of 30–40% is estimated based on a 43–66% reduction in range size (EOO) over the past 60 years (generation length 20 years). Population reduction based on habitat loss is difficult to estimate as this species occurs in ecotonal areas and also because of its ability to recolonise fallow fields. Habitat loss continues as a result of vineyard expansion, wetland drainage, urban expansion, invasion by alien plants, road construction, clearing of road verges and overgrazing. Unexplained population decline has been recorded in Protea Atlas Project surveys.

[F] **Leucadendron crassulaefolium** (Salisb. ex Knight) I.Williams

Status: **NT** D2

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Hex River Mountains and Keeromsberg.
Habitat: Rocky areas in sandstone fynbos.
Rationale: AOO 49 km^2. A slow-maturing species that is potentially threatened by too frequent fires.

Leucadendron cryptocephalum Guthrie

Status: **CR** B1ab(i,ii,iii,iv,v)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Groenland Mountains to Potberg.
Habitat: Shale and silcrete fynbos.
Rationale: EOO 25 km^2. One or two severely fragmented subpopulations remain at one or two locations. Two subpopulations known through herbarium records are now locally extinct owing to habitat loss to crop cultivation and invasion by alien plants. Monitoring recorded fire-related population fluctuations and decline in one small subpopulation, and it appears to now also be locally extinct because of too frequent fires. One known remaining subpopulation of several thousand plants is declining as a result of invasion by alien plants, inappropriate fire management and overgrazing.

Leucadendron daphnoides (Thunb.) Meisn. Plate 82

Status: **EN** A2c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Du Toit's Kloof to Villiersdorp.
Habitat: Most prominent in Boland Granite Fynbos.
Rationale: A population reduction of > 50% is estimated based on 63% habitat loss, mainly to forestry plantations, over the past 60 years (generation length 20 years). Decline due to invading alien pines, habitat loss to protea and buchu cultivation and inappropriate fire management is continuing. In 1996 and 1999 large-scale drought mortality (up to half the plants in some subpopulations) was observed.

Leucadendron diemontianum I.Williams

Status: **EN** B1bc(iv)+2bc(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Cederberg and Groot Winterhoek Mountains.
Habitat: Sandstone fynbos.
Rationale: Previously regarded as rare, but several subpopulations have been discovered during the Protea Atlas Project. EOO 1 705 km^2, AOO 89 km^2. About 14 locations. Most subpopulations are small and quite localised, but a few (7 out of 20) have more than 100 plants. As the species is serotinous, large fire-related fluctuations in population size are expected. It continues to decline because of ongoing habitat loss to expanding fruit orchards.

Leucadendron discolor E.Phillips & Hutch.

Status: **VU** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Piketberg.
Habitat: Largely confined to Piketberg sandstone fynbos.
Rationale: EOO 228 km^2, AOO 81 km^2. The 5–10 known locations are declining as a result of habitat loss to crop cultivation and wildflower harvesting. Subpopulations are small and affected by skewed sex ratios as a result of biased mortality. Hybridisation with cultivated species within the habitat is a potential threat.

Leucadendron dregei E.Mey. ex Meisn.

Status: **EN** B1ab(iii,iv)+2ab(iii,iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Swartberg Mountains.

Habitat: Sandstone fynbos, amid rocks at high altitudes.

Rationale: EOO 1 825 km^2, AOO 221 km^2. Continuing decline has been observed in many small, severely fragmented subpopulations. This species is threatened by too frequent fires.

Leucadendron elimense E.Phillips subsp. **elimense**

Status: **EN** A2c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Bredasdorp.

Habitat: Most prominent in Elim Ferricrete Fynbos, in shallow soil that overlies ironstone gravel and prefers heavy soils in wet areas, ± 150 m.

Rationale: A population reduction of 50% is estimated based on 51% habitat loss, mainly to crop cultivation, over the past 60 years (generation length 20 years). Remaining subpopulations are confined to road verges and small fragments among agricultural fields. It continues to decline as a result of habitat loss to agriculture, invasion by alien plants and overgrazing. It is also threatened by wildflower harvesting, inappropriate fire management, mining and mowing. In 2000 and 2001 large-scale (up to 90%), apparently drought-related, local mortality was observed in some subpopulations.

[F]**Leucadendron elimense** E.Phillips **subsp. nov.**

Voucher: *Protea Atlas: AGRY206712* NBG

Status: **CR** B1ab(i,ii,iii,v)c(iv)+2ab(i,ii,iii,v)c(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Riviersonderend.

Habitat: Confined to wet shales, on the upper southern slopes in Greyton Shale Fynbos.

Rationale: EOO 4 km^2, AOO < 4 km^2. The number of mature individuals at one known location continues to decline as a result of ongoing habitat loss to crop cultivation. Fire-related population fluctuations in number of mature individuals are likely to occur.

Leucadendron elimense E.Phillips subsp. **salteri** I.Williams

Status: **CR** B2ab(i,ii,iii,iv,v)c(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Bot River Valley, Hemel-en-Aarde Valley and Shaw's Pass.

Habitat: Silcrete and shale fynbos in the lowlands.

Rationale: AOO < 9 km^2. Fire-related fluctuations in number of mature individuals occur in four small, severely fragmented subpopulations. It continues to decline owing to invasion by alien plants, ongoing habitat loss to agriculture, and wildflower harvesting. Most subpopulations are on isolated fragments among crop fields and none are formally conserved.

Leucadendron elimense E.Phillips subsp. **vyeboomense** I.Williams **Plate 82**

Status: **CR** B1ab(i,ii,iii,iv,v)c(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Viljoen's Pass to Theewaterskloof Dam.

Habitat: Elgin shale fynbos.

Rationale: EOO 12 km^2. Fire-related fluctuations in number of mature individuals occur in one or two small subpopulations at a single location. It continues to decline because of ongoing habitat loss to crop cultivation, invasion by alien plants and urban expansion. It is also threatened by too infrequent fires and drought.

Leucadendron flexuosum I.Williams

Status: **CR** B1ab(i,ii,iii,iv,v)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Breede River Valley near Worcester.

Habitat: Grows on level alluvial soils containing a high proportion of water-worn stones, endemic to Breede Alluvium Fynbos.

Rationale: EOO and AOO 12 km^2. About 400–500 plants at a single known location continue to decline as a result of expanding agriculture, invasion by alien plants, overgrazing, clearing and mowing of road verges and inappropriate fire management.

Leucadendron floridum R.Br. **Plate 82**

Status: **CR** A2c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Cape Peninsula.

Habitat: Currently largely confined to Peninsula Sandstone Fynbos in permanently moist to seasonally wet, peaty sands, often along rivers and at the edge of vleis.

Rationale: A population reduction of > 80% is estimated based on 81% decline in subpopulations known through herbarium records due to habitat loss to urban expansion, agriculture and alien invasive plants over the past 60 years (generation length 20 years). Remaining subpopulations are threatened by wildflower harvesting, inappropriate fire management and habitat degradation as a result of trampling and dumping.

[F] **Leucadendron foedum** I.Williams

Status: **VU** A2c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Piketberg to Hopefield.

Habitat: Most prominent in Hopefield Sand Fynbos.

Rationale: A population reduction of at least 30% is estimated based on a 44% reduction in range size (EOO) and 35% habitat loss, mainly to crop cultivation, over the past 60 years (generation length 20 years). The population continues to decline because of expanding agriculture, overgrazing, invasion by alien plants, inappropriate fire management and urban expansion.

Leucadendron galpinii E.Phillips & Hutch.

Status: **VU** A4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. De Hoop to Mossel Bay.

Habitat: Low-lying areas between limestone hills on deeper, neutral soils.

Rationale: A range-restricted species occurring in habitats that are targeted for destructive thatch harvesting. Population reduction is difficult to estimate. Land cover data indicate that 24% of the habitat is transformed, but it underestimates areas that are severely degraded as a result of thatch harvesting and management practices such as brush cutting aimed at encouraging dense restio growth. Experts disagree on the extent of habitat loss, with some arguing that the population has already declined by 60% over the last two generations (generation length 20 years) and may be reduced by up to 80% within the next 20 years. It is suspected that a population reduction of at least 30% over three generations is likely, but surveys are urgently needed to determine the extent of the impact of harvesting on the habitat of this species.

Leucadendron globosum (Kenn. ex Andrews) I.Williams

Status: **CR** A2c; B1ab(i,ii,iii,iv,v)c(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Elgin Valley.

Habitat: Largely confined to Elgin Shale Fynbos on steep, south-facing slopes.

Rationale: A population reduction of > 80% is estimated based on a 94% reduction in range size (EOO) and 89% habitat loss, mainly to crop cultivation, invasion by alien plants and forestry plantations, over the past 60 years (generation length 20 years). EOO 55 km^2. Fire-related fluctuations in number of mature individuals occur in four small, severely fragmented subpopulations. The population, consisting of ± 180 mature individuals at present, continues to decline because of ongoing habitat loss and the exclusion of fire. Dormant subpopulations are easily overlooked in surveys.

Leucadendron grandiflorum (Salisb.) R.Br.

Status: **EX**

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Cape Peninsula.

Habitat: Granitic soils in fynbos.

Rationale: Last recorded in 1806. No records exist of its ecology, habitat, extent or time of demise, other than that it used to occur on granitic soils of Wynberg Hill. The cause of extinction is most likely to be vineyard expansion.

[F] **Leucadendron gydoense** I.Williams **Plate 82**

Status: **EN** A2a

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Kouebokkeveld and Hex River Mountains.

Habitat: Shale fynbos at medium to high elevations.

Rationale: The largest two subpopulations have been effectively eliminated by habitat loss to crop cultivation, resulting in a > 50% population reduction over the past 60 years (generation length 20 years).

[F] **Leucadendron immoderatum** Rourke

Status: **CR** B1ac(iv)+2ac(iv); D

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Riviersonderend.

Habitat: Mesic montane fynbos at ± 1 300 m.

Rationale: EOO and AOO 50 m^2. Fire-related fluctuations in number of mature individuals occur in one small subpopulation at one location. At present the population consists of only 14 mature individuals and is threatened by too frequent fires.

[F] **Leucadendron lanigerum** H.Buek ex Meisn. var. **laevigatum** Meisn.

Status: **CR** A2c; B1b(i,ii,iii,iv,v)c(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Breede River Valley from Tulbagh to Wolseley.

Habitat: Most prominent in Breede Alluvium Fynbos.

Rationale: A population reduction of > 80% in this formerly common taxon is estimated based on a 81% loss of number of subpopulations known through herbarium records over the past 60 years (generation length 20 years). EOO 33 km^2. Continuing decline in habitat and number of mature individuals and fire-related population fluctuations occur. This taxon is threatened by vineyard expansion, mining, invading alien plants and too infrequent fires in isolated fragments.

[F] **Leucadendron lanigerum** H.Buek ex Meisn. var. **lanigerum**

Status: **EN** A2c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Strand and Diep River to Bain's Kloof and Dassenberg.

Habitat: A renosterveld and fynbos species of shale- and granite-derived soils.

Rationale: A population reduction of > 50% is estimated based on a 69% reduction in range size (EOO) and 54% habitat loss over the past 100 years (generation length 100 years). This taxon is threatened by habitat loss to crop cultivation, invasion by alien plants, overgrazing, too infrequent fires and herbicide drift onto small fragments from surrounding agricultural fields.

Leucadendron laxum I.Williams

Status: **EN** A2c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Hermanus to Agulhas.

Habitat: Most prominent in Elim Ferricrete Fynbos where it is largely restricted to wetlands and low-lying areas.

Rationale: A population reduction of > 50% is estimated based on 53% habitat loss over the past 60 years (generation length 20 years). Most remaining subpopulations occur on small fragments and disturbed watercourses between agricultural fields. It continues to decline because of ongoing habitat loss to vineyards. Invasive alien plants are threatening this species at a number of sites, but are being cleared. It is also threatened by wildflower harvesting, eutrophication, too frequent fires, overgrazing and clearing of road verges.

Leucadendron levisanus (L.) P.J.Bergius

Status: **CR** A4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Mamre to Cape Flats.

Habitat: Tends to occur adjacent to seasonally damp areas in Cape Flats Sand Fynbos.

Rationale: An estimated population reduction of > 70% has already occurred owing to extensive habitat loss over the past 40 years (generation length 20 years) and this species continues to decline rapidly, even in conservation areas, primarily as a result of inappropriate fire management and unmanaged invasion by alien plants. Land transformation models indicate that habitat loss will exceed 80% by 2025 (Bomhard *et al.* 2005). Other threats include urban expansion, power lines and clearing of road verges, extraction of groundwater, harvesting for firewood, habitat degradation and pollution, and mole rat disturbance.

Leucadendron linifolium (Jacq.) R.Br.

Status: **VU** A2c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Cape Flats to Riversdale.

Habitat: Typically on acid and alkaline sands that are seasonally waterlogged. Also appears to benefit from veld that is disturbed, overgrazed or too frequently burnt.

Rationale: A population reduction of > 30% is estimated based on a 34% reduction in range size (EOO) and 43% habitat loss over the past 60 years (generation length 20 years). Threatened by urban expansion, invasion by alien plants, agriculture, wetland drainage, extraction of groundwater and wildflower harvesting.

[F] **Leucadendron loranthifolium** (Salisb. ex Knight) I.Williams

Status: **NT** B1ab(iii,v)+2ab(iii,v)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Gifberg to Hex River Mountains.

Habitat: Sandy flats in sandstone fynbos.

Rationale: EOO 9 549 km^2, AOO 893 km^2. Some 20–23% of the habitat has already been transformed by rapidly expanding rooibos tea and potato cultivation, and it continues to decline, but more than 10 locations remain.

Leucadendron macowanii E.Phillips

Status: **CR** B1ac(iv)+2ac(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Cape Peninsula.

Habitat: Currently largely confined to wetland areas in Peninsula Sandstone Fynbos, but historically it also occurred in Peninsula Granite Fynbos.

Rationale: EOO and AOO 9 km^2. One small subpopulation at one location remains. The only other known wild subpopulation is now locally extinct as a result of urban expansion. Extreme fire-related fluctuations in number of mature individuals have been observed in the population between 1973 and 2005. Other threats include vineyard expansion, invasion by alien plants, inappropriate fire management, alien clearing (it tends to be mistaken for *Acacia cyclops*), predation, overgrazing and hybridisation. Attempts have been made to introduce more subpopulations on the Cape Peninsula and near Hermanus, but they have proven not to be viable.

[F] **Leucadendron meyerianum** H.Buek ex E.Phillips & Hutch.

Status: **EN** A3c; B1b(i,ii,iii,iv,v)c(iv)+2b(i,ii,iii,iv,v)c(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard,

E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Bokkeveld Mountains.

Habitat: Largely confined to Bokkeveld sandstone fynbos.

Rationale: A range-restricted species (EOO 112 km^2, AOO 50 km^2) that is undergoing rapid habitat loss to expanding rooibos tea cultivation. At the current rate of habitat loss it is projected that the population is likely to be reduced by > 50% by 2025 (generation length 20 years). Most subpopulations consist of only a few individuals and are easily overlooked in surveys. Fire-related fluctuations in number of mature individuals occur in small subpopulations.

Leucadendron modestum I.Williams

Status: **EN** A2c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Bot River to Potberg.

Habitat: Most prominent in Elim Ferricrete Fynbos, persisting on soils too waterlogged for agriculture.

Rationale: A population reduction of > 50% is estimated based on 59% habitat loss, mainly to crop cultivation, over the past 60 years (generation length 20 years). Remaining subpopulations occur in small fragments and marginal habitat and are threatened by invading alien plants, too frequent fires, overgrazing, clearing of road verges and urban expansion.

Leucadendron nervosum E.Phillips & Hutch.

Status: **NT** A3d+4d

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Riviersonderend Mountains and Langeberg near Heidelberg.

Habitat: Largely confined to North Sonderend Sandstone Fynbos.

Rationale: This species is a popular cut flower at present and is known to occur in one extensive subpopulation on the northern slopes of the Riviersonderend Mountains and in another smaller, isolated subpopulation in the Langeberg. Wild plants are harvested, but the wild population has also been greatly increased when harvesters sowed seeds among the wild population. The population of this species is currently being maintained by its popularity as a cut flower, but it is likely to decline if other species are to become more favoured and planted individuals are replaced by other species.

Leucadendron olens I.Williams

Status: **NT** D2

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Grootdoring River, Outeniqua Mountains.

Habitat: Sandstone fynbos on lower northern slopes.

Rationale: AOO 31 km^2. Potentially threatened by invading alien hakeas. Dense infestations of the habitat have been cleared, but reinvasion remains a potential threat. Protea Atlas surveys recorded low densities of hakea at 70% of locations.

Leucadendron orientale I.Williams

Status: **EN** B1ab(i,ii,iii,iv,v)c(iv)+2ab(i,ii,iii,iv,v)c(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** EC. Cockscomb to Van Stadens Mountain.

Habitat: Confined to Kouga sandstone fynbos.

Rationale: EOO 592 km^2, AOO 43 km^2. Small, severely fragmented subpopulations continue to decline because of ongoing habitat loss to forestry plantations and invasion by alien plants. Fire-related fluctuations in number of mature individuals occur and observed recruitment failure is concerning.

Leucadendron platyspermum R.Br.

Status: **VU** A2cd+4d

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Villiersdorp to Agulhas coast.

Habitat: Because of extensive planting, it is not clear what the original habitat of *L. platyspermum* was.

Rationale: Past population reduction is estimated based on habitat loss (31% decline in AOO). This is a popular species in the cut flower industry and the assessment of its status is complicated by the great increase in the population size over the past 50 years due to planting in orchards and in bushcut and burnt fynbos. Both wild and planted stands are heavily exploited. Up to the 1980s only female cones were harvested from orchards and this led to low canopy seed stores and postfire population collapses. It also caused heavy pressure on wild populations where female cones were harvested to provide seeds for orchards. Currently only males are harvested, so seed banks are large and extensive. If market preferences were to change, however, the population could decline rapidly, especially if planted individuals were to be replaced by other species. It would, however, be very difficult to estimate the proportion of the wild population that could decline, as almost all wild and planted subpopulations are intensively managed for harvesting today. Another possible threat is the development of management practices of thinning out females to increase the production of male plants, as this would lead to a reduction of seed stores, and postfire population collapses would be highly likely. Market and orchard management trends should be carefully monitored.

Leucadendron pondoense A.E.van Wyk

Status: **VU** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

A.G. Rebelo, A.E. van Wyk, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** EC. Mnyameni River to Fraser Gorge.

Habitat: A fire evader, occurring on shallow, acidic, sandy soils, usually between boulders along gullies and streams where most fires do not penetrate. Largely confined to Pondoland-Natal Sandstone Coastal Sourveld.

Rationale: EOO and AOO < 500 km^2. Fewer than 10 known locations continue to decline as a result of too frequent fires. Other threats include flooding, afforestation, water table depletion by forestry plantations and invasion by alien plants.

[F] **Leucadendron procerum** (Salisb. ex Knight) I.Williams

Status: **VU** A4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Gifberg to Piketberg.

Habitat: Found in deep sands, slopes and flats.

Rationale: An estimated population reduction of around 25% has already occurred as a result of habitat loss to crop cultivation and all subpopulations west of the Olifants River occur in fragmented remnants. Rapid habitat loss to rooibos tea and potato cultivation continues and population reduction is projected to exceed 30% within the next 20 years (generation length 20 years).

Leucadendron pubibracteolatum I.Williams

Status: **NT** B1ac(iv)+2ac(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** EC WC. Eastern Swartberg and Outeniqua Mountains to Baviaanskloof Mountains.

Habitat: Tends to occur in particular altitudinal zones on south-facing slopes that might be related to water drainage patterns and associated seeps.

Rationale: EOO 7 679 km^2, AOO 277 km^2. Extreme fluctuations in number of mature individuals have been observed in small, isolated, severely fragmented subpopulations. Unexplained population decline has also been observed, but it is not certain whether this is natural postfire decline or not. Even though between one third and half of subpopulations are conserved, precaution suggests that this species needs careful monitoring.

Leucadendron radiatum E.Phillips & Hutch. **Plate 82**

Status: **EN** B1ab(i,ii,iii,iv,v)c(iv)+2ab(i,ii,iii,iv,v)c(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Langeberg between Swellendam and Riversdale.

Habitat: Largely confined to South Langeberg Sandstone Fynbos.

Rationale: EOO 247 km^2, AOO 37 km^2. The number of mature individuals continues to decline at five known locations because of too frequent fires. Extreme fire-related population fluctuations and recruitment failures have been observed in small, localised subpopulations. This is a slow-maturing species, requiring many years to first seed set.

Leucadendron remotum I.Williams

Status: **EN** A3c; B1ab(i,ii,iii,iv,v)c(iv)+2ab(i,ii,iii,iv,v)c(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Bokkeveld Mountains.

Habitat: Largely confined to Bokkeveld sandstone fynbos where it grows on level sandy plains.

Rationale: EOO 183 km^2, AOO 97 km^2. The number of mature individuals at a single location continues to decline as a result of ongoing habitat loss to rooibos tea and cereal cultivation and the exclusion of fire on small fragments. Fire-related population fluctuations have been observed. Climate change models (Bomhard *et al.* 2005) predict a population reduction of > 80% by 2025 (generation length 20 years).

Leucadendron roodii E.Phillips

Status: **EN** B1ab(ii,iii,iv,v)c(iv)+2ab(ii,iii,iv,v)c(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Gifberg.

Habitat: Sandy areas surrounded by very rocky terrain at an altitude of about 600 m. Largely confined to Bokkeveld sandstone fynbos.

Rationale: EOO 332 km^2, AOO 120 km^2. Six severely fragmented subpopulations continue to decline because of ongoing habitat loss to crop cultivation and inappropriate fire management. Fire-related fluctuations in number of mature individuals occur in small subpopulations on isolated fragments. Other threats include drought and susceptibility *Phytophthora*.

Leucadendron sericeum (Thunb.) R.Br.

Status: **CR** B1ab(i,ii,iii,iv,v)c(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Kouebokkeveld, Waboomsrivier.

Habitat: Largely confined to sandy bottomlands in Cederberg sandstone fynbos.

Rationale: EOO 36 km^2. The number of mature individuals at one known location continues to decline as a result of ongoing habitat loss and degradation caused by crop cultivation, too infrequent fires, wetland drainage, extraction of groundwater and road construction. Fire-related fluctuations in number of mature individuals occur.

[F] **Leucadendron sessile** R.Br.

Status: **NT** B1b(i,ii)c(iv)+2b(i,ii)c(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Witzenberg to Slanghoek and Jonkershoek to Kogelberg.

Habitat: On sandstone fynbos, and often on shale and granite fynbos where the plants are more robust and the populations much larger.

Rationale: EOO 3 053 km^2, AOO 265 km^2. The population continues to decline because of ongoing habitat loss to afforestation and invasion by alien plants, and too frequent fires and drought-related mortality, but more than 10 locations remain. Fire-related fluctuations in number of mature individuals occur in small isolated subpopulations, but are unlikely to result in extreme fluctuations in the total population. Taxonomic problems have to be resolved as two separate taxa may be involved.

[F] **Leucadendron sheilae** I.Williams

Status: **VU** A3c+4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** NC. Bokkeveld Mountains.

Habitat: Largely confined to Bokkeveld sandstone fynbos.

Rationale: This range-restricted species is undergoing rapid habitat loss to rooibos tea cultivation. Although data on the rate and extent of habitat loss are not available, it is suspected that, combined with habitat loss over the past 10 years, population reduction as a result of further habitat loss is likely to exceed 30% over the next 10 years, and very likely to far exceed 30% over the next three generations (generation length 20 years). Many subpopulations are already fragmented and climate change models also predict a 30% population reduction by 2025 (Bomhard *et al.* 2005).

Leucadendron singulare I.Williams

Status: **VU** A3c+4c; D2

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Kammanassie Mountains.

Habitat: Sandstone fynbos.

Rationale: Current EOO 63 km^2. Fewer than five known locations are potentially threatened by firebreak clearing and too frequent fires. Climate change models (Bomhard *et al.* 2005) predict a population reduction of > 30% by 2025 (generation length 20 years).

Leucadendron sorocephalodes E.Phillips & Hutch.

Status: **NT** A2a

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** EC WC. Outeniqua to Baviaanskloof Mountains.

Habitat: Sandstone fynbos.

Rationale: More widespread and common than previously known, but many subpopulations are small and isolated. Unexplained population declines close to 30% have been observed in many subpopulations since 1985. The decline may be the result of climate change, as declines tend to be more severe on lower slopes. Monitoring is required to determine whether the population decline is continuing. Generation length 20 years.

[F] **Leucadendron sp. nov.**

Voucher: *Acocks 23716* NBG

Status: **CR** A4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Groot Winterhoek and Witteberg.

Habitat: Seepage areas in Matjiesfontein Quartzite Fynbos.

Rationale: Climate change models (Bomhard *et al.* 2005) predict a population reduction of > 80% by 2025 (generation length 20 years). Observations of drought vulnerability suggest that this scenario is not unlikely: large-scale drought-related mortality was observed in 1999, with up to 60% mortality in some subpopulations where seepages dried up.

Leucadendron spirale (Salisb. ex Knight) I.Williams

Status: **EX**

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Breede River Valley between Wolseley and Botha.

Habitat: Wet areas.

Rationale: Collected in 1801 and 1819 and last recorded in 1933. Extensive searches in the 1960s and 1990s, the latter accompanied by a reward of R1 000, have yielded no sign of the species. It is serotinous and unlikely to survive as seeds in soil-stored seedbanks. Cause of extinction is unknown, but is possibly the result of habitat loss to crop cultivation, invasion by alien plants and afforestation.

[F] **Leucadendron spissifolium** (Salisb. ex Knight) I.Williams subsp. **natalense** (Thode & Gilg) I.Williams

Status: **NT** B2ab(i,ii,iii,iv,v)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** EC KZN. Oribi Gorge to Port St Johns, also possibly at Dwessa Forest Reserve.
Habitat: Largely confined to Pondoland coastal grassland.
Rationale: AOO 85 km^2. The population continues to decline because of ongoing habitat loss to crop cultivation, too frequent fires and apparent recruitment failure, but more than 10 locations remain. Many subpopulations are small and isolated, but not > 50% of subpopulations are affected by fragmentation.

Leucadendron spissifolium (Salisb. ex Knight) I.Williams subsp. **oribinum** I.Williams

Status: **VU** B1ab(i,ii,iii,iv,v)
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, .H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** EC KZN. Oribi Flats to Mkambati.
Habitat: Pondoland coastal grassland, 300–500 m.
Rationale: EOO 715 km^2, AOO 74 km^2. Many subpopulations in the northern part of the range have declined or are now locally extinct as a result of habitat loss, mainly due to sugarcane cultivation and urban expansion. Fewer than 10 locations remain and continue to decline.

Leucadendron stellare (Sims) Sweet

Status: **CR** A2c
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Aurora to Cape Flats.
Habitat: Found in Hopefield Sand Fynbos, Swartland Shale Renosterveld, Swartland Alluvium Fynbos, Atlantis Sand Fynbos and Leipoldtville Sand Fynbos.
Rationale: A population reduction of at least 81% is estimated based on extensive habitat loss in the southern parts of the range of this long-lived resprouter over the past 100 years (generation length > 100 years). Most remaining subpopulations are small and confined to isolated remnants, with 23% containing fewer than 10 plants. Larger remaining subpopulations in the northern section of the range are rapidly declining because of ongoing habitat loss to potato cultivation.

Leucadendron stelligerum I.Williams

Status: **CR** A3c+4c
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Elim to Agulhas Plain.
Habitat: Largely confined to Elim Ferricrete Fynbos.
Rationale: The population is estimated to have already been reduced by > 50%, based on 58% habitat loss, mainly to crop cultivation, over the past 40–60 years. Some 52% of remaining subpopulations are confined to road verges, where they are extremely vulnerable to verge clearing practices such as herbiciding or mowing. Climate change models (Bomhard *et al.* 2005) furthermore predict a population reduction of > 80% by 2025 (generation length 20 years).

Leucadendron strobilinum (L.) Druce

Status: **NT** D2
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Cape Peninsula.
Habitat: Mainly associated with margins of afromontane forest patches or other relatively fire-safe habitats that do not burn in every fire cycle. Largely confined to Peninsula Sandstone Fynbos.
Rationale: EOO 154 km^2, AOO 71 km^2. About eight locations are potentially threatened by inappropriate fire management, firebreak clearing and invading alien pines. This is a slow-growing, late-maturing species that occurs only in small subpopulations. One known subpopulation cannot be relocated and is possibly extinct, but the population is stable at present.

[F] **Leucadendron teretifolium** (Andrews) I.Williams

Status: **NT** B1ab(ii)+2ab(ii)
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Witteberg and Kleinrivier Mountains to Riversdale.
Habitat: Although a fynbos species, it also occurs within the renosterveld ecotone.
Rationale: EOO 10 423 km^2, AOO 1 254 km^2. Several severely fragmented subpopulations remain after extensive habitat loss to crop cultivation. The population continues to decline because of ongoing habitat loss, invasion by alien plants and drought-related mortality events. It is wind-pollinated and typically occurs in very dense stands—scattered plants should be checked for seed set.

Leucadendron thymifolium (Salisb. ex Knight) I.Williams

Status: **CR** A2c+3c+4c; B1b(i,ii,iii,iv,v)c(iv)
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Dassenberg to Klipheuwel.
Habitat: Appears to thrive in seasonally damp areas along road verges, provided that they are not mown or cleared. Able to recruit in the absence of fire.
Rationale: EOO 65 km^2. Most subpopulations are now confined to road verges after most of the habitat has been transformed by urban expansion, agricultural expansion and invasion by alien plants. It continues to decline and fire-related population fluctuations have been observed. Climate change models predict that this species will be extinct by 2025 (Bomhard *et al.* 2005).

[F] **Leucadendron tinctum** I.Williams

Status: **NT** A4c
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt,

C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Hex River Mountains to Hottentots Holland and Langeberg Mountains.

Habitat: Sandstone and Shale Fynbos.

Rationale: Climate change models predict a population reduction of up to 50% by 2025 (Bomhard *et al.* 2005). This is an extreme scenario as the population is not currently declining. Drought sensitivity has been observed, however, and a population reduction of 20–30% is considered more realistic (generation length 20 years).

Leucadendron tradouwense I.Williams

Status: **CR** B1b(i,ii,iii,iv)c(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Langeberg Mountains, Tradouw Pass.

Habitat: Sandstone fynbos.

Rationale: EOO 35 km^2. Declining as a result of habitat loss to agriculture, invasion by alien plants, too frequent and aseasonal fires and wildflower harvesting. Fire-related population fluctuations have been observed.

[F] **Leucadendron uliginosum** R.Br. subsp. **glabratum** I.Williams

Status: **Rare**

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Langkloof and Tsitsikamma Mountains.

Habitat: Tsitsikamma sandstone fynbos.

Rationale: A range-restricted habitat specialist. Although parts of the habitat have been invaded by alien pines and hakeas, this taxon appears to be able to persist even when invasion is very dense. Most subpopulations are also protected in nature reserves where alien invasions are managed.

Leucadendron verticillatum (Thunb.) Meisn.

Status: **CR** A2c; B1b(i,ii,iii,iv)c(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Cape Flats between Hercules Pillar, Muldersvlei and Fisantekraal.

Habitat: Shale and silts in lowland fynbos.

Rationale: A population reduction of > 80% is estimated based on the local extinction of 74% of subpopulations known through herbarium records by 1992, and an observed further reduction of 30% since 1992 (generation length 20 years). Reasons for decline include habitat loss to crop cultivation, urban expansion and invasion by alien plants, clearing of road verges, lack of fire in isolated fragments and overgrazing. EOO 30 km^2. Habitat loss and population decline are continuing and fire-related population fluctuations have been observed.

Leucospermum R.Br.

Leucospermum arenarium Rycroft

Status: **CR** A3c+4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Redelinghuys to Aurora, and around Malmesbury.

Habitat: Leipoldtville Sand Fynbos.

Rationale: A population reduction of > 50% is estimated based on habitat loss to crop cultivation by 1992, with a further 30% habitat loss over the past 10–15 years (generation length 20 years). Climate change models predict that this species will be extinct by 2025 (Bomhard *et al.* 2005).

Leucospermum bolusii Gand.

Status: **NT** D2

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Gordon's Bay to Kogel Bay.

Habitat: Largely confined to Kogelberg sandstone fynbos.

Rationale: AOO 34 km^2. A rare endemic potentially threatened by too frequent fires, invasive alien plants and urban expansion.

Leucospermum catherinae Compton

Status: **EN** B1ac(iv)+2ac(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Cederberg to Hex River Mountains.

Habitat: Seeps and riverbanks in sandstone fynbos.

Rationale: EOO 3 472 km^2, AOO 142 km^2. Fire-related fluctuations in number of mature individuals occur in small, severely fragmented subpopulations. Seven subpopulations known through herbarium records could not be relocated in Protea Atlas Project surveys, but many new subpopulations were discovered. The impact of agriculture on wetlands and the extraction of groundwater may have caused a past population decline, but this species is also easily overlooked, especially in the dormant phase, and population reduction is therefore difficult to estimate. Climate change models predict a population reduction of up to 30% by 2025 (Bomhard *et al.* 2005). Other threats include too frequent fires and overgrazing.

[F] **Leucospermum conocarpodendron** (L.) H.Buek subsp. **conocarpodendron**

Status: **EN** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

Distribution: WC. Northern Cape Peninsula.
Habitat: Confined to richer soils, predominantly granites, but also occur on shales.
Rationale: EOO 52 km², AOO < 52 km². Habitat and number of mature individuals continue to decline at fewer than five locations because of urban expansion, invasion by alien plants and inappropriate fire management. Plants also tend to hybridise with planted *Leucospermum* species from urban gardens.

F **Leucospermum conocarpodendron** (L.) H.Buek subsp. **viridum** Rourke

Status: **NT** A2c
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

Distribution: WC. Cape Peninsula, Cape Flats (Kanonberg), Hottentots Holland to Franschhoek Mountains, Kogelberg, Kleinmond, Babilonstoring and Kleinrivier Mountains to Stanford.
Habitat: Sandstone fynbos, usually densest in rocky areas where fires are cooler.
Rationale: A population reduction of 24% is estimated based on habitat loss to agricultural and urban expansion, afforestation and invasion by alien plants over the past 60 years (generation length 20 years). Subpopulations on the Cape Peninsula are protected.

Leucospermum cordatum E.Phillips **Plate 81**

Status: **EN** B1ac(iv)+2ac(iv)
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

Distribution: WC. Kogelberg.
Habitat: Sandstone fynbos associated with manganese deposits on screes.
Rationale: EOO 6 km², AOO < 6 km². Fire-related population fluctuations in number of mature individuals occur in two known remaining locations. Past threats of mining and road construction have ceased, the remaining subpopulations are protected and there is no evidence of continuing decline. However, one subpopulation straddles Clarence Drive between Koeëlbaai and Rooiels and any road widening, road verge management or development of the mine as a historical site will affect the population negatively.

F **Leucospermum cordifolium** (Salisb. ex Knight) Fourc.

Status: **NT** A2c+4d
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

Distribution: WC. Kogelberg to Soetanysberg.
Habitat: Sandstone fynbos.
Rationale: A population reduction of nearly 30% is estimated based on a 34% reduction in range size (EOO) and 29% reduction in AOO as a result of habitat loss and extensive picking of planted and wild plants over the past 60 years (generation length 20 years). This is the most popular horticultural pincushion. Many cultivars are available and are planted extensively in protea orchards adjacent to natural stands throughout its range. Contamination of natural gene pools is therefore a major concern, together with habitat loss due to invasion by alien plants and agriculture.

F **Leucospermum erubescens** Rourke

Status: **Rare**
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

Distribution: WC. Langeberg endemic.
Habitat: North Langeberg Sandstone Fynbos.
Rationale: Habitat specialist on north-facing slopes. Not threatened in mountainous habitats.

Leucospermum formosum (Andrews) Sweet

Status: **EN** A3c+4c; B1ab(ii,iii,v)c(iv)+2ab(ii,iii,v)c(iv)
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

Distribution: WC. Riviersonderend to Outeniqua Mountains.
Habitat: Sandstone fynbos, usually on wet south-facing slopes.
Rationale: Three out of six known subpopulations are already extinct, and climate change models (Bomhard *et al.* 2005) predict a further population reduction of at least 50% by 2025 (generation length 20 years). EOO 2 689 km², AOO 57 km². Fire-related fluctuations in number of mature individuals occur in small, severely fragmented subpopulations, and habitat and number of mature individuals continue to decline because of urban expansion, afforestation, too frequent fires and wildflower harvesting. Dormant subpopulations are easily overlooked in surveys.

Leucospermum fulgens Rourke

Status: **CR** B1ab(iii)c(iv)
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

Distribution: WC. Potberg to Cape Infanta.
Habitat: Confined to deep colluvial soils between Potberg to the north and limestone hills to the south.
Rationale: EOO 19 km². Fire-related fluctuations occur at a single known location. Invasive alien plants at the site are likely to cause a continuing decline in habitat quality. Other threats include agriculture and inappropriate fire management.

Leucospermum gerrardii Stapf

Status: **NT** A2c
A.G. Rebelo, M. Lötter, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo,

D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

Distribution: KZN MP. Barberton and Carolina, Swaziland Escarpment, Mapumulo, Ndwedwe and New Hanover.

Habitat: Shallow sandstone-derived soils in Ngongoni and Mistbelt Grassland, from 900–1 100 m. Associated with serpentine.

Rationale: A population reduction of nearly 30% is estimated based on a 27% reduction in range size due to habitat loss to forestry plantations, agriculture and overgrazing over the past 100 years (generation length > 100 years). Also threatened by too frequent fires.

Leucospermum glabrum E.Phillips

Status: **EN** B1ab(iii,v)c(iv)+2ab(iii,v)c(iv); C2a(i)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Outeniqua and Tsitsikamma Mountains.

Habitat: Wet southern slopes in sandstone fynbos.

Rationale: EOO 1 005 km^2, AOO 54 km^2. The 14 severely fragmented subpopulations continue to decline as a result of invasion by alien plants, afforestation and firebreak maintenance. Fire-related population fluctuations occur in small subpopulations, only three subpopulations have more than 100 plants. Total population is less than 1 000 mature individuals. Dormant subpopulations are easily missed in vegetation surveys and environmental impact assessments.

[F] **Leucospermum gracile** (Salisb. ex Knight) Rourke

Status: **NT** A2c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Kleinrivier Mountains to Bredasdorp.

Habitat: Largely confined to Overberg sandstone fynbos.

Rationale: A population reduction of nearly 30% is estimated based on a 30% habitat loss, but only 20% reduction in area of occupancy due to invasion by alien plants and urban expansion over the past 60 years (generation length 20 years).

Leucospermum grandiflorum (Salisb.) R.Br.

Status: **EN** A2c; B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Paardeberg to Paarl.

Habitat: Largely confined to Boland Granite Fynbos.

Rationale: A population reduction of > 50% is estimated based on 61% habitat loss to agriculture, afforestation and invasion by alien plants over the past 60 years (generation length 20 years). EOO 221 km^2, AOO 66 km^2. Habitat quality and number of mature individuals at fewer than five remaining locations continue to decline as a result of ongoing habitat loss on lower slopes, and invasion by alien plants, too frequent fires and wildflower harvesting.

Leucospermum gueinzii Meisn. **Plate 81**

Status: **EN** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Jonkershoek to Groenland Mountains.

Habitat: Shale and granite fynbos in moist areas.

Rationale: EOO 557 km^2, AOO 54 km^2. Five known locations continue to decline because of ongoing habitat loss to vineyard expansion, afforestation and alien invasive plants.

Leucospermum hamatum Rourke

Status: **EN** B1ac(iv)+2ac(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Klein Moeras River, Outeniqua Mountains.

Habitat: Largely confined to South Outeniqua Sandstone Fynbos.

Rationale: EOO 22 km^2, AOO 20 km^2. Fire-related fluctuations in number of mature individuals occur in small subpopulations at five known locations. Dense hakea invasions of the habitat have been cleared, but remain a potential threat as it may spread again from nearby areas if it is not managed.

Leucospermum harpagonatum Rourke

Status: **CR** B1ab(iii,v)c(iv)+2ab(iii,v)c(iv); C2a(ii)b

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Riviersonderend Mountains near McGregor.

Habitat: North Sonderend Sandstone Fynbos.

Rationale: EOO 2 km^2. Fire-related population fluctuations occur in one small subpopulation, currently consisting of 200 mature individuals at a single known location. The population continues to decline as a result of cut flower harvesting, urban development, too frequent fires and the impact of alien invasive ants.

Leucospermum heterophyllum (Thunb.) Rourke

Status: **EN** A2c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Elim to De Hoop.

Habitat: Most prominent in Elim Ferricrete Fynbos.
Rationale: A population reduction of > 50% is estimated based on 51% habitat loss to agriculture, gravel mining, urban expansion, overgrazing and invasion by alien plants over the past 100 years (generation length > 100 years).

[F] **Leucospermum hypophyllocarpodendron** (L.) Druce subsp. **canaliculatum** (H.Buek ex Meisn.) Rourke

Status: **VU** A2c
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay
[e]**Distribution:** WC. Piketberg, Hopefield, Cape Flats, Riebeek-Kasteel and Breede River Valley.
Habitat: Most prominent in Atlantis Sand Fynbos.
Rationale: A population reduction of > 30% is estimated based on a 40% reduction in range size and 40% habitat loss to agriculture, urban expansion and invasion by alien plants over the past 100 years (generation length > 100 years). The population is stable at present, but with an EOO of 4 365 km^2, AOO of 426 km^2 and only six known locations, it could rapidly become Endangered if more habitat is lost.

[F] **Leucospermum hypophyllocarpodendron** (L.) Druce subsp. **hypophyllocarpodendron**

Status: **VU** A2c
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay
[e]**Distribution:** WC. Cape Peninsula, Cape Flats, Berg River Valley and Elim coastal flats.
Habitat: Lowland sandstone fynbos.
Rationale: A population reduction of > 30% is estimated based on 37% habitat loss to urban expansion, invasion by alien plants, afforestation and commercial cultivation of proteas for the cut flower industry over the past 100 years (generation length > 100 years). Remaining subpopulations occur within protected areas and no further decline is expected.

Leucospermum innovans Rourke

Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v)
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay
[e]**Distribution:** EC KZN. Pondoland from the Umtamvuna River to Ntsubane. Isolated occurrences near Paddock and Uvongo in southern KwaZulu-Natal.
Habitat: Most prominent in Pondoland-Natal Sandstone Coastal Sourveld in shallow soils, 100–600 m.
Rationale: EOO 642 km^2, AOO 29 km^2. Severely fragmented subpopulations continue to decline owing to habitat loss to agriculture, afforestation and too frequent fires.

[F] **Leucospermum lineare** R.Br.

Status: **VU** A2c
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay
[e]**Distribution:** WC. Bain's Kloof to Hottentots Holland and Villiersdorp Mountains.
Habitat: Primarily found in Boland Granite Fynbos.
Rationale: Estimates of past population reduction based on local extinction of subpopulations known through herbarium specimens, reduction in range size and habitat loss through land transformation give very different values, ranging from 20–60%. It has been decided to place this species in the category VU (30–50% population reduction) as an average estimate of population reduction over the past 60 years (generation length 20 years).

Leucospermum muirii E.Phillips

Status: **EN** A3c+4c
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay
[e]**Distribution:** WC. Still Bay to Gouritsmond.
Habitat: Most prominent in Albertinia Sand Fynbos.
Rationale: A population of several thousand plants is confined to a small area of 169 km^2. Evidence exists that this species may have declined substantially already, as 40% of records are from habitat remnants, road verges or adjacent to agricultural land, and that it continues to decline because of dense invasions of alien plants and habitat degradation as a result of thatch harvesting, but data on the extent of population reduction are lacking. Climate change models (Bomhard *et al.* 2005) predict a population reduction of up to 80% by 2025 (generation length 20 years), but this may be extreme. Other threats include agricultural and urban expansion, clearing of road verges and mole rat activity.

Leucospermum mundii Meisn.

Status: **Rare**
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay
[e]**Distribution:** WC. Langeberg Mountains between Swellendam and Riversdale.
Habitat: Sandstone fynbos.
Rationale: A range-restricted species that is not threatened in mountainous habitats.

Leucospermum parile (Salisb. ex Knight) Sweet

Status: **EN** A2c+3c+4c
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay
[e]**Distribution:** WC. Dassenberg and Paardeberg.

Habitat: Most prominent in Atlantis Sand Fynbos, survives well in disturbed areas.

Rationale: A population reduction of at least 50% is estimated based on habitat loss to urban expansion, agriculture and invasion by alien plants over the past 60 years (generation length 20 years). Climate change models predict a further population reduction by up to 80% by 2025 (Bomhard *et al.* 2005), but this is likely to be extreme.

[F] **Leucospermum patersonii** E.Phillips

Status: **VU** A3c+4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Kleinmond to Agulhas.

Habitat: Limestone Fynbos.

Rationale: Although it has a small range (EOO 709 km^2), this species does not qualify as threatened at present, but climate change models predict a significant population reduction by 2025 (Bomhard *et al.* 2005), generation length 20 years. Some of the habitat has already been lost to urban expansion, protea cultivation and invasion by alien plants, but it does not exceed 30%. At least 12 existing locations are known.

Leucospermum pluridens Rourke

Status: **NT** B1ab(v)+2ab(v)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Rooiberg to Robinson Pass.

Habitat: Largely confined to Cederberg Sandstone Fynbos.

Rationale: EOO 526 km^2, AOO 140 km^2. A number of small, severely fragmented subpopulations remain. Past declines have been noted, but the reasons are unknown. The population appears stable at present.

Leucospermum praecox Rourke

Status: **VU** A2c+3c+4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Gouritsmond to Mossel Bay.

Habitat: Tertiary acid sands associated with limestone formations on the coastal forelands.

Rationale: Land cover data indicate that this species has already lost around 14–22%, mainly as a result of agriculture, but this does not include habitat loss due to vegetation management for thatch harvesting, which, based on expert opinion, may have already caused a population reduction of up to 50% over the past 10–20 years. In the absence of data, past population reduction is estimated to be at least 30% and the population is expected to continue to decline significantly over the next 40 years as a result of thatch harvesting and invading alien plants, which already affect 61% of sites. Generation length 20 years.

[F] **Leucospermum praemorsum** (Meisn.) E.Phillips

Status: **VU** A2c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Namaqualand to Cederberg Mountains.

Habitat: Arid sandstone fynbos. Outside the Fynbos Biome this species occurs on the summits of linear dune systems.

Rationale: A population reduction of at least 30% is estimated based on habitat loss to agriculture, overgrazing, extraction of groundwater and too infrequent fires over the past 60 years (generation length 20 years).

Leucospermum profugum Rourke

Status: **EN** B1ac(iv)+2ac(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Piketberg.

Habitat: Confined to Piketberg sandstone where it grows in well-drained situations in rocky outcrops, 700–800 m.

Rationale: EOO 124 km^2, AOO 29 km^2. Fire-related fluctuations in number of mature individuals occur in small subpopulations at three known locations. Potentially threatened by too frequent fires.

[F] **Leucospermum prostratum** (Thunb.) Stapf

Status: **VU** A4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Groenland Mountains to Elim Flats.

Habitat: Sand and sandstone fynbos, mainly in the lowlands.

Rationale: Some 24% of the habitat has already been transformed, and habitat loss models (Bomhard *et al.* 2005) indicate that habitat loss will exceed 50% by 2025, but that this will be partially offset by climate change. A population reduction of at least 30% is therefore estimated to be reached within the next 20 years (generation length > 100 years). The western populations (Rooiels to Hermanus) are under severe threat from urban expansion.

[FS] **Leucospermum reflexum** H.Buek ex Meisn.

Status: **NT** D2

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Pakhuis and northern Cederberg Mountains.

Habitat: Largely confined to Cederberg Sandstone Fynbos.

Rationale: AOO 67 km². Known from ± 15 subpopulations. A seepage specialist, with observed mortality in subpopulations attributed to drought. All locations outside the Cederberg Wilderness Area are potentially threatened by rooibos tea cultivation.

[F] **Leucospermum rodolentum** (Salisb. ex Knight) Rourke

Status: **VU** A2c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Namaqualand to Cape Peninsula.

Habitat: Sand fynbos on the West Coast lowlands, survives in arid areas by tapping deep water.

Rationale: Population reduction of at least 30% estimated based on a 34% reduction in range size (EOO) and 43% habitat loss due to agriculture and extraction of groundwater over the past 60 years (generation length 20 years). Subpopulations are severely fragmented and susceptible to drought-related mortality.

[F] **Leucospermum saxatile** (Salisb. ex Knight) Rourke

Status: **EN** B1ab(ii)+2ab(ii)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Langeberg Mountains, Garcia's Pass.

Habitat: Largely confined to North Langeberg Sandstone Fynbos.

Rationale: EOO 50 km², AOO 43 km². Three known locations remain after much of the habitat has been transformed for crop cultivation in the past. It continues to decline because of too frequent fires and ongoing habitat loss to agriculture.

Leucospermum saxosum S.Moore

Status: **EN** D

A.G. Rebelo, M. Lötter, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

Distribution: LM MP. Mpumalanga and Limpopo Drakensberg Escarpment, Zimbabwe and Mozambique.

Habitat: Habitat is not well known, plants tend to occur on quartzitic soils.

Rationale: In South Africa, the national population consists of less than 250 plants in four locations, which may not be viable in the long term because of its small size. It is isolated from the Chimanimani subpopulations (Zimbabwe) by > 500 km and the national assessment is therefore not downgraded. The national population represents less than 5% of the global population and is potentially threatened by the fragmentation of its habitat by forestry plantations.

Leucospermum secundifolium Rourke **Plate 81**

Status: **Rare**

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Klein Swartberg Mountains.

Habitat: Mountain slopes, sandstone fynbos.

Rationale: A range-restricted species (EOO 232 km²) that is not threatened in mountainous habitats.

[F] **Leucospermum spathulatum** R.Br.

Status: **NT** A3c+4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Cederberg to Kouebokkeveld, and Kwadousberg near Worcester.

Habitat: Largely confined to Cederberg Sandstone Fynbos.

Rationale: A high-altitude species with many small subpopulations, not threatened at present. Climate change models, however, predict significant population reductions by 2025 (Bomhard *et al.* 2005). Generation length 20 years.

Leucospermum tomentosum (Thunb.) R.Br.

Status: **VU** A3c+4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Hopefield to Bokbaai.

Habitat: Occurs on the edge of fynbos, right up to the strandveld interface. Most prominent in Hopefield Sand Fynbos.

Rationale: This still relatively common species is declining at present because of habitat loss to crop cultivation in coastal areas, and elsewhere in its range it is threatened by invading alien acacias. Land transformation models (Bomhard *et al.* 2005) predict further habitat loss of up to 50% under a high transformation scenario, and a population reduction of at least 30% is likely by 2025 (generation length > 100 years).

[F] **Leucospermum tottum** (L.) R.Br. var. **glabrum** E.Phillips

Status: **CR** B1ac(iv)+2ac(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Western Hex River Mountains.

Habitat: Confined to South Hex Sandstone Fynbos.

Rationale: EOO 5 km². Fire-related population fluctuations occur at one location where there are less than 200 mature individuals at present. Potentially threatened by invading alien plants.

[F] **Leucospermum tottum** (L.) R.Br. var. **tottum**

Status: **NT** A2c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown,

J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

eDistribution: WC. Cederberg, Kouebokkeveld, Groot Winterhoek Mountains, Skurweberg, Hex River to Du Toit's Kloof Mountains and Piketberg.

Habitat: Sandstone fynbos, usually associated with rocky outcrops.

Rationale: Population reduction of nearly 30% is estimated based on a 35% decline in subpopulations known through herbarium records due to too frequent fires, extraction of groundwater and drought-related mortality over the past 60 years (generation length 20 years).

F **Leucospermum truncatulum** (Salisb. ex Knight) Rourke

Status: **NT** A2c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

eDistribution: WC. Nuweberg to Soetanysberg.

Habitat: Sandstone fynbos.

Rationale: A population reduction of nearly 30% is estimated based on 27% habitat loss and a loss of 36% of known subpopulations, mainly to agriculture, over the past 60 years (generation length 20 years). Although most remaining subpopulations occur in sites safe from cultivation, it continues to be threatened by invasions of alien acacias, hakeas and pines, wildflower harvesting and protea cultivation.

F **Leucospermum vestitum** (Lam.) Rourke

Status: **NT** A2c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

eDistribution: WC. Cederberg Mountains to Breede River Valley south of Wolseley, extinct from Paarl to Cape Peninsula.

Habitat: Sandstone fynbos at higher altitudes and alluvium fynbos at lower altitudes.

Rationale: A population reduction of nearly 30% is estimated based on a loss of 26% of known subpopulations at lower elevations due to agriculture, urban expansion and afforestation over the past 60 years (generation length 20 years). The known range of this species has been reduced by > 50%, but this is as a result of the local extinction of an isolated subpopulation on the Cape Peninsula more than 100 years ago. Currently threatened by further agricultural expansion, invasion by alien plants and too frequent fires. Drought-related mortality has been observed.

Leucospermum winteri Rourke

Status: **NT** D2

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

eDistribution: WC. Langeberg Mountains, Langkloof between Garcia's Pass and the Gourits River Valley.

Habitat: Largely confined to South Langeberg Sandstone Fynbos.

Rationale: AOO 68 km^2. About 10 subpopulations are potentially threatened by afforestation and invasion by alien plants.

Mimetes Salisb.

Mimetes arboreus Rourke

Status: **EN** B1ac(iv)+2ac(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

eDistribution: WC. Kogelberg.

Habitat: Confined to Kogelberg Sandstone Fynbos.

Rationale: EOO 94 km^2, AOO 45 km^2. Fire-related population fluctuations occur at five locations. There are less than 1 000 plants at present, with most mature individuals in one subpopulation potentially threatened by too frequent fires, invading alien plants and susceptibility to *Phytophthora*. Dormant subpopulations of this slow-maturing species are easily overlooked in surveys.

Mimetes argenteus Salisb. ex Knight

Status: **EN** B1ab(iii,v)c(iv)+2ab(iii,v)c(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

eDistribution: WC. Franschhoek and Riviersonderend.

Habitat: Sandstone fynbos on peat seeps.

Rationale: EOO 928 km^2, AOO 83 km^2. Fire-related population fluctuations occur in small, severely fragmented subpopulations and the number of mature individuals continues to decline because of extraction of groundwater, invasion by alien plants and too frequent fires. Dormant subpopulations are likely to be overlooked in vegetation surveys and environmental impact assessments.

Mimetes capitulatus (L.) R.Br. **Plate 81**

Status: **EN** B1ab(ii,iii,v)c(iv)+2ab(ii,iii,v)c(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

eDistribution: WC. Kogelberg, Groenland and Kleinrivier Mountains.

Habitat: Largely confined to Kogelberg Sandstone Fynbos.

Rationale: EOO 541 km^2, AOO 29 km^2. Fire-related population fluctuations occur at five known locations where habitat quality and the number of mature individuals continue to decline as a result of wildflower harvesting. Some observed population declines are not understood, but may be the result of inappropriate fire management or may be drought related. Dormant subpopulations easily overlooked in surveys.

Mimetes chrysanthus Rourke

Status: **VU** D2

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Gamkaberg and Perdeberg near Herold.

Habitat: Grows on steep southeast-facing sandstone slopes.

Rationale: Two known locations are potentially threatened by too frequent fires.

[F] **Mimetes fimbriifolius** Salisb. ex Knight

Status: **Rare**

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Cape Peninsula.

Habitat: Peninsula Sandstone Fynbos.

Rationale: A range-restricted endemic (EOO 395 km^2) to the Cape Peninsula, most subpopulations within protected areas.

Mimetes hirtus (L.) Salisb. ex Knight

Status: **VU** A4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Cape Peninsula to Elim.

Habitat: Occurs in seeps and peats both on the coastal forelands and on the coastal mountains.

Rationale: This species has already lost > 50% of its habitat, but over a period longer than three generations. Projected ongoing habitat loss indicates that at least a further 30% of the habitat will be transformed over the next 20 years (generation length 20 years). This species is threatened by urban expansion, agriculture, invasions by alien plants and alien ants, extraction of groundwater, wetland drainage, development of golf courses, eutrophication of drainage systems, afforestation and wildflower harvesting.

Mimetes hottentoticus E.Phillips & Hutch. **Plate 81**

Status: **CR** B1ac(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Kogelberg.

Habitat: Largely confined to Kogelberg Sandstone Fynbos.

Rationale: EOO 17 km^2. Fire-related fluctuations in number of mature individuals occur at one known location. This species is potentially threatened by too frequent fires, seed harvesting and it is susceptible to *Phytophthora* infection. Dormant subpopulations are easily overlooked in surveys.

Mimetes palustris Salisb. ex Knight

Status: **CR** B1b(iii)c(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Kleinrivier Mountains.

Habitat: Largely confined to Overberg Sandstone Fynbos.

Rationale: EOO 26 km^2. Fire-related population fluctuations occur in small subpopulations that are declining as a result of ongoing habitat loss to invading alien plants and too frequent fires. It is easily overlooked in surveys.

Mimetes pauciflorus R.Br.

Status: **VU** A2c+3c+4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** EC WC. Outeniqua and Tsitsikamma Mountains.

Habitat: Most prominent in South Outeniqua Sandstone Fynbos.

Rationale: A past population reduction of at least > 30% is estimated based on habitat loss to forestry plantations. Land transformation models (Bomhard *et al.* 2005) predict a further 50% habitat loss by 2025. However, forestry is in decline in the area and therefore future habitat loss projected by models is probably an overestimate. Generation length is 20 years.

[F] **Mimetes saxatilis** E.Phillips

Status: **EN** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Pearly Beach to Struisbaai.

Habitat: Limestone fynbos, usually in rocky areas.

Rationale: EOO 215 km^2, AOO 62 km^2. Five known locations continue to decline because of ongoing habitat loss to urban expansion and invasion by alien plants. This species is also threatened by invasive alien ants. Dormant subpopulations are easily overlooked in surveys.

Mimetes splendidus Salisb. ex Knight **Plate 81**

Status: **EN** B1ab(i,ii)c(iv)+2ab(i,ii)c(iv); C2a(i)b

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Langeberg to Tsitsikamma Mountains.

Habitat: Sandstone fynbos on moist, peaty slopes.

Rationale: EOO 2 255 km^2, AOO 51 km^2. Fire-related population fluctuations occur in small, severely fragmented subpopulations consisting of no more than 50 mature individuals. The small total population (at present estimated to consist of no more than 400 plants)

Plate 81



Mimetes capitulatus EN

R.C. Turner



Mimetes splendidus EN

C. Paterson-Jones



Mimetes hottentoticus CR

C. Paterson-Jones



Leucospermum cordatum EN

C. Paterson-Jones



Vexatorella latebrosa CR

C. Paterson-Jones



Diastella parilis CR

C. Paterson-Jones



Leucospermum secundifolium Rare

C. Paterson-Jones



Leucospermum gueinzii EN

C. Paterson-Jones

Plate 82



C. Paterson-Jones

Leucadendron gydoense (male) EN



C. Paterson-Jones

Leucadendron elimense subsp. *vyeboomense* (male) CR



C. Paterson-Jones

Leucadendron radiatum (female) EN



C. Paterson-Jones

Leucadendron floridum (male) CR



C. Paterson-Jones

Leucadendron bonum (male) CR



C. Paterson-Jones

Leucadendron daphnoides (female) EN



C. Paterson-Jones

Leucadendron argenteum (male) EN



C. Paterson-Jones

Leucadendron comosum subsp. *homaeophyllum* (female) CR

Plate 83


C. Paterson-Jones

Serruria cyanoides EN


C. Paterson-Jones

Serruria pinnata CR


C. Paterson-Jones

Paranomus adiantifolius EN


C. Paterson-Jones

Serruria meisneriana EN


C. Paterson-Jones

Serruria deluvialis EN


C. Paterson-Jones

Sorocephalus scabridus CR


C. Paterson-Jones

Serruria florida CR


C. Paterson-Jones

Spatalla tulbaghensis EN

Plate 84



M.T.P.A.

Protea roupelliae subsp. *hamiltonii* CR



C. Paterson-Jones

Protea venusta EN



C. Paterson-Jones

Protea stokoei EN



C. Paterson-Jones

Protea rupicola EN



C. Paterson-Jones

Protea holosericea EN



J.E. Burrows

Protea parvula NT



C. Paterson-Jones

Protea pudens EN



C. Paterson-Jones

Protea convexa CR



C. Paterson-Jones

Protea namaquana CR

continues to decline because of invasion by alien plants, afforestation and too frequent fires. This is a slow-growing species that is late to mature and is easily overlooked in surveys.

Mimetes stokoei E.Phillips & Hutch.

Status: **CR** B1ac(iv)+2ac(iv); D

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Palmiet River Mountains.

Habitat: Confined to Kogelberg Sandstone Fynbos.

Rationale: EOO and AOO 10 m^2. Fire-related fluctuations occur in one small subpopulation of ± 24 mature individuals of this species that was previously thought extinct. Wildflower harvesting caused past population decline, and at present it is potentially threatened by expanding protea orchards, inappropriate fire management and susceptibility to *Phytophthora*. Dormant subpopulations are easily overlooked in surveys.

Orothamnus Pappe ex Hook.

Orothamnus zeyheri Pappe ex Hook.f.

Status: **VU** B1ab(ii,iv,v)c(iv)+2ab(ii,iv,v)c(iv); C2a(i)b

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Kogelberg to Kleinrivier Mountains.

Habitat: Largely confined to Kogelberg Sandstone Fynbos.

Rationale: EOO 196 km^2, AOO 23 km^2. Extreme fire-related population fluctuations have been observed in six small, severely fragmented subpopulations. Wildflower harvesting and too infrequent fires caused extensive past population declines and inappropriate fire management, susceptibility to *Phytophthora* infection and damage by baboons and vlei rats are causing a continuing decline. Subpopulation size can vary between 10 and 1 000 individuals, and the total population never exceeds more than a few thousand mature individuals, and can be as low as a few hundred.

Paranomus Salisb.

Paranomus abrotanifolius Salisb. ex Knight

Status: **VU** A2c+3c+4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Grabouw, Elim Flats and Potberg.

Habitat: Mainly in sandstone fynbos.

Rationale: A population reduction of nearly 40% is estimated based on habitat loss to invasion by alien plants and agricultural expansion over the past 60 years (generation length 20 years). Climate change and land transformation models predict a further population reduction of up to 80% by 2025 (Bomhard *et al.* 2005), but this is considered an extreme scenario. This species is also threatened by invasive alien ants, too infrequent fires and mining.

Paranomus adiantifolius Salisb. ex Knight **Plate 83**

Status: **EN** B1ac(iv)+2ac(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Groenland and Riviersonderend Mountains.

Habitat: Sandstone fynbos on southern slopes.

Rationale: EOO 125 km^2, AOO 20 km^2. Fire-related population fluctuations occur in small subpopulations at two known locations. It is potentially threatened by invading alien plants, too frequent fires and susceptibility to *Phytophthora* infection. Dormant subpopulations are likely to be missed in vegetation surveys.

[F]**Paranomus bolusii** (Gand.) Levyns

Status: **VU** A2c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Groenland to Kleinrivier Mountains.

Habitat: Sandstone fynbos.

Rationale: A population reduction of 30% is estimated based on a 30% reduction in range size and 33% loss of habitat to invasion by alien plants, afforestation, agriculture and mining over the past 60 years (generation length 20 years).

Paranomus centaureoides Levyns

Status: **NT** A3c+4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Klein Swartberg Mountains.

Habitat: Sandstone fynbos at higher altitudes.

Rationale: At present this species is not threatened. However, it is confined to the Klein Swartberg at higher altitudes and climate change models predict a population reduction of up to 30% by 2025 (Bomhard *et al.* 2005). This prediction is not supported by any other data, and the species requires monitoring.

Paranomus esterhuyseniae Levyns

Status: **NT** A3c+4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** EC WC. Outeniqua and Kouga Mountains.

Habitat: Largely confined to Kouga Sandstone Fynbos.

Rationale: At present this species is not threatened. However, subpopulations are small and isolated. Many new subpopulations have been discovered over the last 10 years, including on the Baviaanskloof Mountains, but few are large. Climate change models indicate that it may decline by up to 30% by 2025 (Bomhard *et al.* 2005).

Paranomus longicaulis Salisb. ex Knight

Status: **VU** B1ab(v)+2ab(v)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Garcia's Pass to Attaquaskloof in the Langeberg Mountains.

Habitat: Sandstone fynbos on lower northern slopes.

Rationale: EOO 116 km^2, AOO 43 km^2. The number of mature individuals at nine known locations is declining because of overgrazing.

Paranomus reflexus (E.Phillips & Hutch.) Fourc.

Status: **EN** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** EC. Van Stadens Mountain.

Habitat: Confined to Kouga Sandstone Fynbos.

Rationale: EOO 605 km^2, AOO 34 km^2. Severely fragmented subpopulations are declining as a result of ongoing habitat loss to afforestation and invasion by alien plants.

Paranomus roodebergensis (Compton) Levyns

Status: **Rare**

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Ladismith, Rooiberg.

Habitat: Grows in very arid sandstone fynbos.

Rationale: A range-restricted species (EOO 390 km^2) that is not threatened.

[F] **Paranomus sceptrum-gustavianus** (Sparrm.) Hyl.

Status: **NT** B1ab(i,ii,iii,iv)c(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Hottentots Holland to Langeberg Mountains near Swellendam.

Habitat: Sandstone fynbos on middle to upper slopes with a moist, southern aspect.

Rationale: EOO 2 431 km^2, AOO 221 km^2. More than 10 remaining locations continue to decline as a result of invasion by alien plants and unexplained postfire mortality of mature individuals, to the extent that entire subpopulations may disappear in mature vegetation. Most subpopulations are small, isolated and unpredictable in their postfire response and may be susceptible to extreme fluctuations.

[F] **Paranomus sp. nov.**

Voucher: *Helme 1999* NBG

Status: **CR** B1b(i,ii)c(iv)+2b(i,ii)c(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Houwhoek.

Habitat: Most prominent in Elgin Shale Fynbos.

Rationale: EOO 8 km^2, AOO < 8 km^2. Fire-related population fluctuations occur in small subpopulations that are declining as a result of habitat loss to agriculture, dam construction, mining, invasion by alien plants and too infrequent fires.

[F] **Paranomus spathulatus** (Thunb.) Kuntze

Status: **NT** A3c+4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Gamkaberg and Langeberg Mountains between Tradouw and Garcia's Pass.

Habitat: Largely confined to North Langeberg Sandstone Fynbos.

Rationale: At present this species is not declining. However, many subpopulations are on lower slopes where they are potentially threatened by agriculture and invasion by alien plants. In addition, climate change models suggest a population reduction of up to 50% by 2025 (Bomhard *et al.* 2005). Therefore, as a precautionary assessment, this species is listed as NT as it is very likely to decline by at least 20–30% over the next 20 years (generation length > 100 years).

Paranomus spicatus (P.J.Bergius) Kuntze

Status: **NT** B1ab(iv)c(iv)+2ab(iv)c(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Hottentots Holland Mountains to Kogelberg.

Habitat: Sandstone fynbos, mainly on lower slopes in gullies and seeps.

Rationale: EOO 159 km^2, AOO 74 km^2. Fire-related population fluctuations occur in a few small, isolated subpopulations of this species, but it is not declining and not severely fragmented.

Paranomus tomentosus (E.Phillips & Hutch.) N.E.Br.

Status: **NT** A2c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Cederberg Mountains.

Habitat: Largely confined to Cederberg Sandstone Fynbos.

Rationale: Three out of five sites known from herbarium records in the northern extremes of the range of this species could not be relocated during the Protea Atlas Project. The loss of these sites would mean a 55% reduction in the range (EOO). However, it is not known when

or why these subpopulations disappeared, and they may have declined more than three generations ago. It is also unlikely that the subpopulations at these sites represented > 50% of the total population, as they are isolated sites at the extremes of the distribution range and were therefore probably smaller than the average subpopulation size. A population reduction of 20–30% over the past 60 years (generation length 20 years) is considered a realistic estimate.

Protea L.

Protea angustata R.Br.

Status: **EN** C1

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Groenland Mountains to Kleinrivier Mountains.

Habitat: Lowland sandstone fynbos.

Rationale: This species is not declining at present and is a resprouter with high persistence in isolated remnants. However, the three largest subpopulations are under imminent threat of urban expansion at Pringle Bay, Onrus and Kleinmond; one site is already being developed. There are only ± 2 000 plants in total, and development is likely to cause at least a 20% decline over the next 40 years (generation length > 100 years). Further development at Brightwater, where the largest subpopulation occurs, could potentially cause as much as a 50% decline in the total population. Additional threats include invasion by alien plants and expanding protea orchards.

Protea aristata E.Phillips

Status: **VU** C2a(i)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Klein Swartberg.

Habitat: Largely confined to South Swartberg Sandstone Fynbos, 800–1 050 m.

Rationale: Population estimated at a maximum of 6 000 plants, with no subpopulation consisting of more than 1 000 mature individuals. This slow-maturing species is declining as a result of too frequent fires.

[F] **Protea aspera** E.Phillips

Status: **VU** A2c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Kleinrivier Mountains to Agulhas and Langeberg Mountains between Garcia's Pass and Cloete's Pass.

Habitat: Sandstone fynbos.

Rationale: A population reduction of at least 30% is estimated based on habitat loss to agriculture, mining and invasion by alien plants over the past 100 years (generation length > 100 years).

Protea aurea (Burm.f.) Rourke subsp. **potbergensis** Rourke

Status: **NT** D2

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Potberg.

Habitat: Largely confined to Potberg Sandstone Fynbos.

Rationale: AOO 31 km^2. A single, extensive subpopulation is potentially threatened by too frequent fires and alien pine and acacia invasion.

[F] **Protea burchellii** Stapf

Status: **VU** A2c+3c+4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Hottentots Holland to Olifants River Mountains and on the lowlands from the Cape Flats to Hopefield. Isolated subpopulations occur on the Witzenbergvlakte, Piketberg and in the upper Breede River Valley.

Habitat: Found predominantly in Boland Granite Fynbos, Swartland Alluvium Fynbos, Breede Shale Fynbos, Atlantis Sand Fynbos, Breede Alluvium Fynbos and Swartland Shale Renosterveld.

Rationale: A population reduction of at least 30% is estimated based on 40% habitat loss, predominantly to agriculture. Given that it occurs in habitats only marginally suitable to cultivation, most habitat loss probably occurred relatively recently. Habitat loss continues, particularly as a result of recent expansion in wine and olive production within its range, and a further 30% population reduction over the next 20 years is likely (generation length 20 years).

Protea caespitosa Andrews

Status: **CR** B1ac(iv)+2ac(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Kogelberg Peak.

Habitat: On a shale band in montane fynbos.

Rationale: EOO 2 km^2. Fire-related population fluctuations occur at a single known location.

[F] **Protea compacta** R.Br.

Status: **NT** A2c+4d

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Betty's Bay to Bredasdorp Mountains.

Habitat: Sandstone fynbos, often in the lowlands.

Rationale: A population reduction of 20–30% is estimated based on 35% reduction of the range (EOO) and 23% habitat loss to urban expansion, agriculture and invasion

by alien plants over the past 60 years (generation length 20 years). Population decline is expected to continue, especially as this is a popular cut flower that may hybridise with *P. compacta* cultivars in protea orchards, and it should be monitored.

Protea comptonii Beard

Status: **NT** A2c

A.G. Rebelo, M. Lötter, J.E. Burrows, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

Distribution: KZN MP. Mpumalanga, Swaziland and KwaZulu-Natal Drakensberg Escarpment.

Habitat: Most prominent in Barberton Montane Grassland. In KwaZulu-Natal it occurs in open woodland on steep, cool, south-facing slopes from 850–1 000 m. Also on quartzites of the Mozaan Group.

Rationale: Subpopulations in the southern parts of the range have declined, but this species is still common in Mpumalanga where most sites are not threatened. Population reduction over the past 100 years is therefore estimated to be close to, but less than 30% (generation length > 100 years).

Protea convexa E.Phillips **Plate 84**

Status: **CR** A3c+4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Northern Cederberg, Witteberg and Klein Swartberg.

Habitat: Dry montane fynbos on the Witteberg range near Matjiesfontein. Favours north-facing slopes, usually in soils derived from Witteberg quartzite.

Rationale: Models and experts agree that a population reduction of > 80% is likely by 2025 as a result of climate change (Bomhard *et al.* 2005), generation length 20 years. This species is currently declining because of habitat loss to rooibos tea cultivation and observations indicate that it is susceptible to drought-related mortality.

[F] **Protea coronata** Lam.

Status: **NT** A2c+3c+4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** EC WC. Cape Peninsula to Kouga.

Habitat: A variety of habitats, but especially shale and granite fynbos in moist, south-facing situations.

Rationale: A population reduction of nearly 30% is estimated based on a decline of 27% of known subpopulations and 30% habitat loss to crop cultivation and alien pine and hakea invasions over the past 60 years (generation length 20 years). Climate change models predict a population reduction of up to 50% by 2025 (Bomhard *et al.* 2005), but this is considered an unlikely, worst-case scenario.

Protea cryophila Bolus

Status: **NT** D2

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Cederberg.

Habitat: Mountain summits on Cederberg Sandstone Fynbos.

Rationale: AOO 43 km^2. About seven subpopulations are potentially threatened by too frequent fires and climate change. Plants are slow to mature and therefore particularly sensitive to increased fire frequency. Although the habitat is untransformed and continuous between locations, subpopulations are isolated.

Protea curvata N.E.Br.

Status: **VU** D2

A.G. Rebelo, A.E. van Wyk, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** MP. Barberton.

Habitat: Serpentine soils.

Rationale: One known location (AOO 12 km^2) is potentially threatened by inappropriate fire management and afforestation.

Protea decurrens E.Phillips

Status: **EN** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Shaw's Pass to Langeberg Mountains.

Habitat: An ecotonal fynbos-renosterveld species.

Rationale: EOO 1 591 km^2, AOO 97 km^2. Severely fragmented subpopulations continue to decline because of habitat loss to agriculture, invasion by alien plants, overgrazing and too frequent fires. Unexplained population declines have also been noted in some subpopulations.

Protea denticulata Rourke

Status: **Rare**

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Potberg, De Hoop Nature Reserve.

Habitat: Potberg Sandstone Fynbos.

Rationale: Habitat specialist with a restricted range (EOO 167 km^2).

[F] **Protea effusa** E.Mey. ex Meisn.

Status: **NT** A4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard,

E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

eDistribution: WC. Kouebokkeveld to Du Toit's Kloof and Naudesberg.
Habitat: Most populations occur as isolated remnants on summit peaks.
Rationale: EOO 3 147 km², AOO 146 km². Occurring as small, severely fragmented subpopulations. Small subpopulation sizes may indicate that they are remnants of formerly larger subpopulations, but monitoring is needed to establish whether any significant declines are taking place. A past population reduction is suspected based on habitat loss due to agriculture. More declines are projected based on climate change models, but are not expected to exceed 30% within three generations.

[F] **Protea grandiceps** Tratt.

Status: **NT** B1ac(iv)+2ac(iv)
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

eDistribution: EC WC. Cape Peninsula to Kouga.
Habitat: Often on peaks in rocky habitats and other fire-safe situations.
Rationale: EOO 17 750 km², AOO 652 km². Fire-related population fluctuations occur in small, severely fragmented subpopulations, but overall the population does not fluctuate extremely. This species is slow to mature and subpopulations are easily destroyed by too frequent fires. Other threats include wildflower collecting and over-harvesting for firewood (in the past), hybridisation and drought-related mortality.

Protea holosericea (Salisb. ex Knight) Rourke

Plate 84

Status: **EN** B1ac(iv)+2ac(iv)
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

eDistribution: WC. Kwadous Mountains.
Habitat: Steep, harsh, arid and extremely rocky areas, ± 1 200 m.
Rationale: EOO 15 km², AOO < 15 km². Fire-related population fluctuations occur in small subpopulations at two known locations. Threatened in the past by wildflower harvesting and at present by too frequent fires, predation by baboons and genetic decline.

Protea inopina Rourke

Status: **VU** D1+2
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

eDistribution: WC. Southern Olifants River Mountains.
Habitat: Largely confined to Cederberg Sandstone Fynbos.
Rationale: EOO 6 km². One known location is potentially threatened by habitat loss to agriculture and pathogens. Severe scale infections have been observed in the population, which consists of 800–1 000 mature individuals.

[F] **Protea lacticolor** Salisb.

Status: **EN** B1ab(i)+2ab(i)
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

eDistribution: WC. Bain's Kloof to Hottentots Holland Mountains.
Habitat: Most common on high-altitude shale bands on southern and eastern aspects.
Rationale: EOO 1 607 km², AOO 80 km². Small, severely fragmented subpopulations occur at eight known locations. The northern subpopulations appear to be in decline for unknown reasons. The habitat is densely invaded with alien pine trees at some subpopulations.

Protea laetans L.E.Davidson

Status: **VU** B1ab(iv)+2ab(iv)
A.G. Rebelo, M. Lötter, A.E. van Wyk, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

eDistribution: MP. Blydepoort Nature Reserve.
Habitat: Largely confined to Northern Escarpment Quartzite Sourveld.
Rationale: EOO 101 km², AOO 37 km². The 5–9 known locations continue to decline as a result of ongoing habitat loss to holiday resort development. The largest subpopulation has been incorporated into a holiday resort and it is highly unlikely that its natural fire cycle will be maintained. Consequently, it is unlikely that future recruitment will occur here unless special measures are taken.

[F] **Protea lepidocarpodendron** (L.) L.

Status: **NT** A4e
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

eDistribution: WC. Cape Peninsula and Kogelberg, Groenland, Kleinmond and Kleinrivier Mountains.
Habitat: Sandstone fynbos, usually associated with ferricrete and silcrete outcrops, also locally dominant on shale and granite fynbos.
Rationale: Extensive hybridisation with introduced *P. neriifolia* has been observed. It is estimated that this genetic contamination could affect nearly 30% of the population in future. A ban on planting of *P. neriifolia* within 500 m to 1 km of natural stands of *P. lepidocarpodendron*, including in urban areas and botanical gardens (e.g. Kirstenbosch in Cape Town and Harold Porter in Betty's Bay), should be investigated.

Protea longifolia Andrews

Status: **VU** A2c+3c+4c
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt,

C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

eDistribution: WC. Hottentots Holland Mountains to Agulhas.

Habitat: Sandstone fynbos.

Rationale: A population reduction of at least 30% is estimated based on a decline in range (EOO) and habitat loss to commercial protea cultivation over the past 10–20 years. Habitat loss models predict at least a further 30% reduction in population size by 2025 (Bomhard *et al.* 2005), generation length 20 years.

F **Protea lorea** R.Br.

Status: **NT** D2

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

eDistribution: WC. Ceres to Langeberg Mountains.

Habitat: Sandstone and shale fynbos on lower slopes.

Rationale: AOO 82 km^2. Less than 12 known locations are potentially threatened by agriculture, afforestation and invasion by alien plants. It is easily misidentified as a restio and overlooked in surveys.

F **Protea montana** E.Mey. ex Meisn.

Status: **VU** A3c+4c; B1ab(iv)+2ab(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

eDistribution: WC. Swartberg and Kammanassie Mountains.

Habitat: Sandstone fynbos at high altitudes on summits and southern slopes.

Rationale: EOO 1 447 km^2, AOO 112 km^2. Subpopulations are small, severely fragmented and declining, especially on the Kammanassie Mountains. Climate change models predict a population reduction of 30% by 2025 (Bomhard *et al.* 2005), generation length 20 years. Other threats include invasion by alien plants, afforestation and too frequent fires.

Protea mucronifolia Salisb.

Status: **CR** B1ab(i,ii,iii,iv,v)c(iv)+2ab(i,ii,iii,iv,v)c(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

eDistribution: WC. Hermon to Saron.

Habitat: Most prominent in Swartland Alluvium Fynbos.

Rationale: EOO and AOO 10 km^2. Fire-related population fluctuations occur in small, severely fragmented subpopulations at two known locations. Habitat extent and quality and number of mature individuals continue to decline owing to expanding agriculture, overgrazing, invading alien acacias and too infrequent fires.

Protea namaquana Rourke **Plate 84**

Status: **CR** B1ab(v)c(iv)+2ab(v)c(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

eDistribution: NC. Namaqualand, Kamiesberg.

Habitat: Grows on granitic soils in dry montane fynbos, predominantly on south-facing slopes.

Rationale: EOO and AOO 18 km^2. Fire-related population fluctuations occur in small, severely fragmented subpopulations at two known locations. The population continues to decline because of inappropriate fire management, habitat loss to agriculture and drought-related mortality.

Protea nubigena Rourke

Status: **CR** B1ab(v)+2ab(v); D

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

eDistribution: KZN. KwaZulu-Natal Drakensberg Mountains.

Habitat: Confined to uKhahlamba Basalt Grassland around 2 250 m on well-shaded slopes with well-drained, humus-rich soil.

Rationale: EOO < 1 km^2, AOO 300 m^2. A population of 15–40 mature individuals at one known location continues to decline because of poor recruitment as a result of inappropriate fire management.

F **Protea obtusifolia** H.Buek ex Meisn.

Status: **NT** A2c+3c+4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

eDistribution: WC. Stanford to Still Bay.

Habitat: Limestone pavements and outcrops on coastal forelands.

Rationale: A past population reduction of 18–25% is estimated based on reduction in range size (EOO) and habitat loss, predominantly to agriculture, over the past 60 years (generation length 20 years). About 20% of the limestone habitat of this species is densely invaded by alien acacias, and it is expected to continue to decline. Climate change models in combination with land transformation models indicate that a further population reduction of up to 50% is possible by 2025 (Bomhard *et al.* 2005), but this is considered an extreme, worst-case scenario. A decline of 20–30% is likely.

Protea odorata Thunb.

Status: **CR** A2c; B1ab(i,ii,iii,v)c(iv)+2ab(i,ii,iii,v)c(iv); C1+2a(i,ii); D

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

eDistribution: WC. Kalbaskraal to Klapmuts.

Habitat: Most prominent in Swartland Shale Renosterveld, although historically it was more abundant in Atlantis Sand Fynbos.
Rationale: EOO 50 km², AOO km². Fire-related population fluctuations occur in a single remaining subpopulation of 27 mature individuals. The range has been reduced by 99% since 2000 as a result of ongoing habitat loss to agriculture, overgrazing, road construction, invasion by alien plants and too frequent fires. Generation length 20 years.

Protea parvula Beard **Plate 84**

Status: **NT** A2c
A.G. Rebelo, M. Lötter, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay
Distribution: KZN MP. Drakensberg Escarpment in Swaziland, Mpumalanga and KwaZulu-Natal from Mariepskop to Vryheid.
Habitat: Most prominent in Lydenburg Montane Grassland.
Rationale: A population reduction of 20–30% is estimated based on 28% habitat loss to afforestation, mining and invasion by alien plants over the past 100 years (generation length > 100 years).

Protea pityphylla E.Phillips

Status: **NT** D2
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay
[e]**Distribution:** WC. Olifants River to Hex River Mountains.
Habitat: High-altitude shale band fynbos.
Rationale: AOO 66 km². Four known subpopulations are potentially threatened by invading alien plants and urban expansion of Ceres. A large subpopulation above Ceres was eliminated during enlargement of the municipal dam.

Protea pruinosa Rourke

Status: **EN** B1ab(v)+2ab(v)
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay
[e]**Distribution:** WC. Swartberg Mountains.
Habitat: Rocky areas, peaks and ridges at around 2 000 m.
Rationale: EOO 368 km², AOO 26 km². The number of mature individuals at four known locations continues to decline for unknown reasons. This species is possibly threatened by too frequent fires and sensitivity to drought.

Protea pudens Rourke **Plate 84**

Status: **EN** B1ab(i,ii,iii,iv,v)c(iv)+2ab(i,ii,iii,iv,v)c(iv)
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay
[e]**Distribution:** WC. Agulhas coast.
Habitat: Largely confined to Elim Ferricrete Fynbos.
Rationale: EOO 67 km², AOO < 67 km². Habitat loss at four known locations is causing a continuing decline and this species is vulnerable to fire-related population fluctuations. It is threatened by expanding agriculture, invasion by alien plants and wildflower harvesting.

[F]**Protea recondita** H.Buek ex Meisn.

Status: **NT** B1ab(v)+2ab(v)
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay
[e]**Distribution:** WC. Piketberg and Cederberg to Groot Winterhoek Mountains.
Habitat: Sandstone fynbos.
Rationale: EOO 3 153 km², AOO 181 km². Unexplained population declines have been observed in some subpopulations, but more than 10 locations remain. Fragmentation is increasing, but does not yet affect > 50% of subpopulations. Also threatened by too frequent fires and overgrazing by livestock.

Protea restionifolia (Salisb. ex Knight) Rycroft

Status: **VU** A2c; B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay
[e]**Distribution:** WC. Kouebokkeveld, Wolseley to Bot River.
Habitat: Fynbos-renosterveld ecotone, but may have been common in renosterveld that has now been converted to farmland.
Rationale: A population reduction of 30–50% is estimated based on the combined transformation of fynbos and renosterveld habitat, mainly for the cultivation of cereals and vineyards over the past 100 years (generation length > 100 years). EOO 943 km², AOO 103 km². The remaining 5–10 locations continue to decline as a result of invasion by alien plants, grazing, clearing of road verges, herbicide drift from adjacent agricultural fields and mining.

Protea roupelliae Meisn. subsp. **hamiltonii** Beard ex Rourke **Plate 84**

Status: **CR** A2ac; B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v); C2a(ii)
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay
[e]**Distribution:** MP. Barberton.
Habitat: Confined to Barberton Montane Grassland.
Rationale: One subpopulation remains within an EOO and AOO of ± 1 km². Two of the three known subpopulations are now extinct. Remaining plants are not setting seed, regenerating or producing new growth and have declined steadily from 1 000 individuals in the 1980s to the current 172 plants (generation length 20 years). Ongoing threats include afforestation, invasion by alien plants, water table depletion and transformation of surrounding vegetation, too infrequent fires, altered drainage as a result of road construction and canalisation, and overgrazing.

[F] **Protea rupicola** Mund ex Meisn. **Plate 84**

Status: **EN** B2ab(iii,v)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** EC WC. Groot Winterhoek to Groot Swartberg Mountains.

Habitat: Found on fire-safe rocky outcrops, in high-altitude, south-facing sandstone fynbos.

Rationale: AOO 189 km^2. Subpopulations are small (61% consisting of fewer than 10 plants) and occur on isolated peaks and are therefore considered severely fragmented. A continuing decline has been observed. This species is slow to mature and too frequent fires are killing individuals before they are able to flower and set seed. All subpopulations in the Groot Swartberg have declined over the last 15 years.

[F] **Protea scabra** R.Br.

Status: **NT** A2c+3c+4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Hottentots Holland to Riviersonderend and Kleinrivier Mountains and Caledon Swartberg.

Habitat: Sandstone fynbos.

Rationale: A population reduction of nearly 30% is estimated based on 25% habitat loss due to invasion by alien plants, afforestation, agriculture and urban expansion over the past 100 years (generation length > 100 years). Land transformation models indicate that a further population reduction of up to 50% due to habitat loss could occur by 2025 (Bomhard *et al.* 2005), but this is an extreme estimate. A population reduction of 20–30% by 2025 is considered likely.

[F] **Protea scolymocephala** (L.) Reichard

Status: **VU** A2c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Gifberg to Hermanus.

Habitat: A sand plain species, tending to occur along drainage lines and adjacent seepage areas.

Rationale: A population reduction of at least 30% is estimated based on a 40% reduction in range size (EOO) due to urban expansion, crop cultivation, invasion by alien plants, too frequent fires, extraction of groundwater and increased mole rat activity over the past 60 years (generation length 20 years). This species could be classified as Endangered under A2 in the near future, should rapid habitat loss to rooibos tea and potato cultivation in the northern part of the range continue.

Protea scorzonerifolia (Salisb. ex Knight) Rycroft

Status: **VU** A2c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Du Toit's Kloof, Franschhoek and Groot Winterhoek area. Extinct on the Cape Peninsula.

Habitat: Confined to remnants of granite and shale soils on remaining upper slopes, but also on sandstone where there are traces of clay soils.

Rationale: A population reduction of at least 30% is estimated based on habitat loss due to urban expansion, agriculture and afforestation over the past 100 years (generation length > 100 years). Remaining subpopulations occur in sheltered sites, but it is possible that this species was formerly much more common on the now highly transformed lowlands. It continues to be threatened by invading alien plants, mining and overgrazing. This species is susceptible to drought-related mortality and is often misidentified as a restio and is easily overlooked in vegetation surveys and environmental impact assessments.

[F] **Protea stokoei** E.Phillips **Plate 84**

Status: **EN** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Hottentots Holland Mountains to Betty's Bay.

Habitat: Largely confined to Kogelberg Sandstone Fynbos.

Rationale: EOO 524 km^2, AOO 91 km^2. Isolated, severely fragmented subpopulations of this slow-maturing species continue to decline because of too frequent fires, firebreak clearing and wildflower harvesting.

Protea subvestita N.E.Br.

Status: **VU** B2ab(iii,v)

A.G. Rebelo, A.P. Dold, A.E. van Wyk, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

Distribution: EC FS KZN MP. Drakensberg Escarpment from near Wakkerstroom in the north to the Eastern Cape. Also on outlying mountains at Qudeni, Noodsberg and Ngele.

Habitat: Confined to infrequently burnt habitats, often associated with gullies, scarps and forest margins. Occasional fires are required for successful recruitment.

Rationale: AOO 611 km^2. Although still common in some areas, subpopulations in the KwaZulu-Natal Midlands are severely fragmented and continue to decline because of too frequent fires.

[F] **Protea susannae** E.Phillips

Status: **NT** A2c+3c+4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Stanford to Still Bay.

Habitat: Sand fynbos on neutral sands.
Rationale: A population reduction of nearly 30% is estimated based on a 25% reduction in range (EOO) due to urban expansion, invasion by alien plants, protea cultivation and vegetation management for thatch harvesting over the past 60 years (generation length 20 years). Dense alien acacia infestations of the habitat are causing a continuing decline. Climate change models indicate that a further population reduction of up to 50% is possible by 2025 (Bomhard *et al.* 2005), but this is an extreme scenario and a population reduction of 20–30% by 2025 is considered a more realistic estimate.

Protea venusta Compton Plate 84

Status: **EN** A3c+4c; B1ab(v)+2ab(v)
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Groot Swartberg and Kammanassie Mountains.
Habitat: High-altitude, south-facing sandstone fynbos.
Rationale: EOO 1 356 km^2, AOO 117 km^2. Small, severely fragmented subpopulations continue to decline because of too frequent fires. Unexplained mass population mortality has been observed on the Kammanassie Mountains. Climate change models predict a population reduction of at least 50% by 2025 (Bomhard *et al.* 2005), generation length 20 years.

Serruria Salisb.

[F] **Serruria adscendens** (Lam.) R.Br.

Status: **NT** A2c; B1ab(iii)+2ab(iii)
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Hottentots Holland to Kleinrivier Mountains.
Habitat: Sandstone fynbos, lower slopes.
Rationale: A population reduction of nearly 30% is estimated based on 27% habitat loss to urban expansion, golf estate developments and protea and vineyard cultivation over the past 60 years (generation length 20 years). EOO 944 km^2, AOO 207 km^2. This species continues to decline because of ongoing habitat loss, but more than 10 locations remain.

Serruria aemula Salisb. ex Knight

Status: **CR** A2c; B1b(i,ii,iii,iv,v)c(iv)
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Cape Flats.
Habitat: Confined to Cape Flats Sand Fynbos.
Rationale: EOO 55 km^2. A few small subpopulations remain after nearly 100% of the habitat has been transformed by urban expansion, agriculture, invasion by alien plants, overgrazing, too infrequent fires and degradation of remaining fragments and road verges over the past 60 years (generation length 20 years). Fire-related population fluctuations occur in small isolated subpopulations that continue to decline.

Serruria altiscapa Rourke

Status: **EN** B1ac(iv)+2ac(iv)
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Villiersdorp to Hottentots Holland Mountains.
Habitat: Sandstone fynbos.
Rationale: EOO 77 km^2, AOO 20 km^2. Fire-related population fluctuations occur in small subpopulations at four known locations. Potentially threatened by invading alien plants, too frequent fires and seed predation. Dormant subpopulations are easily overlooked in surveys.

Serruria balanocephala Rourke

Status: **NT** A3c+4c
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Langeberg Mountains between Montagu and Swellendam.
Habitat: Largely confined to north-facing slopes North Langeberg Sandstone Fynbos.
Rationale: This species occurs in mountainous habitats where it is not threatened at present. Climate change models, however, indicate that a population reduction of up to 50% is likely by 2025 (Bomhard *et al.* 2005), generation length 20 years. These model predictions are considered to be mostly worst-case scenarios, but some declines due to climate change are likely, especially since this species is confined to a narrow climatic niche on north-facing slopes.

[F] **Serruria bolusii** E.Phillips & Hutch.

Status: **NT** A2c
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Elim Hills and Soetanysberg.
Habitat: Sandstone and ferricrete fynbos on the lowlands.
Rationale: A population reduction of nearly 30% is estimated based on habitat loss to agriculture and invasion by alien plants over the past 60 years (generation length 20 years).

Serruria brownii Meisn.

Status: **EN** A2c
A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Hopefield to Tygerberg.
Habitat: A fynbos-renosterveld ecotonal species, preferring shale soils.
Rationale: Population reduction based on habitat loss is difficult to estimate as this is an ecotonal species, but

could be as high as 76%. About 41% of subpopulations known through herbarium records have declined over the past 60 years and only four remain (generation length 20 years). Threats include urban expansion, invasion by alien plants, agriculture, overgrazing, inappropriate fire management, inappropriate vegetation management and mining.

Serruria candicans R.Br.

Status: **EN** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Paardeberg to Slanghoek Mountains.

Habitat: Alluvium and granite fynbos on the lower slopes.

Rationale: EOO 190 km^2, AOO 126 km^2. Three severely fragmented subpopulations continue to decline as a result of ongoing habitat loss. About 79% of subpopulations known through herbarium records are now locally extinct because of agriculture, industrial development and invasion by alien plants.

Serruria collina Salisb. ex Knight

Status: **VU** D2

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Cape Peninsula.

Habitat: Confined to Peninsula Sandstone Fynbos.

Rationale: AOO 9 km^2. Fewer than five locations are potentially threatened by urban expansion, invasion by alien plants and inappropriate fire management.

Serruria confragosa Rourke

Status: **EN** B1ac(iv)+2ac(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Kouebokkeveld and Groot Winterhoek Mountains.

Habitat: Rocky outcrops of sandstone fynbos.

Rationale: EOO 11 km^2, AOO < 11 km^2. Fire-related population fluctuations occur at two known locations.

Serruria cyanoides (L.) R.Br. **Plate 83**

Status: **EN** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Cape Peninsula and Cape Flats.

Habitat: Largely confined to Peninsula Sandstone Fynbos.

Rationale: EOO 81 km^2, AOO 31 km^2. Four known locations continue to decline because of urban expansion, invasion by alien plants and invasive alien ants, afforestation, trampling, dumping, inappropriate management of large game and inappropriate fire management.

[F]**Serruria decipiens** R.Br.

Status: **VU** A2c+3c+4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Olifants River Mountains to Cape Flats.

Habitat: Sand fynbos of the West Coast lowlands.

Rationale: A past population reduction of at least 30% is estimated based on a 40% reduction in range (EOO) and 31% habitat loss over the past 60 years (generation length 20 years). Habitat loss continues and is expected to increase as a result of urban and agricultural expansion, too infrequent fires, extraction of groundwater, invasion by alien plants and overgrazing so that a further population reduction of at least 30% is projected to be met within the next 20 years.

Serruria decumbens (Thunb.) R.Br.

Status: **EN** B1ac(iv)+2ac(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Cape Peninsula.

Habitat: Largely confined to Peninsula Sandstone Fynbos.

Rationale: EOO 23 km^2, AOO < 23 km^2. Fire-related population fluctuations occur in five isolated, severely fragmented subpopulations. Threats include inappropriate fire management, invasion by alien plants and inappropriate management of large game. Easily overlooked in surveys.

Serruria deluvialis Rourke **Plate 83**

Status: **EN** A2c; B1ab(iii)c(iv)+2ab(iii)c(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Kogelberg.

Habitat: Confined to Kogelberg Sandstone Fynbos.

Rationale: A population reduction of at least 50% is estimated based on a reduction in the historical range due to agriculture, dam construction and invasion by alien plants over the past 60 years (generation length 20 years). EOO 7 km^2, AOO < 7 km^2. Fire-related population fluctuations occur at two remaining locations where the population continues to decline because of ongoing habitat loss. Easily overlooked in surveys.

[F]**Serruria effusa** Rourke

Status: **NT** A3c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Cederberg to Olifants River Mountains.

Habitat: Sandstone fynbos.

Rationale: The habitat of this species is rapidly being transformed for cash crop cultivation and a population

reduction of nearly 30% is likely within the next 60 years (generation length 20 years). Also threatened by invading alien plants. This species is susceptible to drought-related mortality and requires monitoring.

[F] **Serruria elongata** (P.J.Bergius) R.Br.

Status: **NT** A2c+4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Du Toit's Kloof to Agulhas.

Habitat: Sandstone fynbos.

Rationale: A population reduction of nearly 30% is estimated based on a 30% reduction in range size due to habitat loss to agriculture and urban expansion, afforestation and invasion by alien plants over the past 60 years (generation length 20 years). Land transformation models predict a population reduction of up to 50% by 2025 (Bomhard *et al.* 2005), but this is an extreme scenario and a population reduction of 20–30% is considered more realistic. Also threatened by alien invasive ants.

[F] **Serruria fasciflora** Salisb. ex Knight

Status: **NT** A2c+4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Malmesbury to Tsitsikamma.

Habitat: Sandstone and sand fynbos over a wide variety of habitats.

Rationale: A population reduction of nearly 30% is estimated based on a 26% reduction in range (EOO) and 29% habitat loss due to invasion by alien plants, afforestation, agriculture and urban expansion over the past 60 years (generation length 20 years). Combined land transformation and climate change models predict a further population reduction of up to 50% by 2025 (Bomhard *et al.* 2005), but this is an extreme scenario, and as this species is still common in mountainous areas, a future population reduction of 20–30% is considered more realistic.

Serruria flagellifolia Salisb. ex Knight

Status: **VU** A4c; B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Grabouw to Babilonstoring.

Habitat: Sandstone fynbos at lower altitudes.

Rationale: Current EOO 280 km^2, AOO 68 km^2. Ten known locations continue to decline as a result of vineyard expansion. Recent applications to develop significant portions of the nonconserved habitat of this species to vineyards will mean that > 30% population reduction will occur over the next two generations (generation length 20 years). Other threats include invasion by alien plants, mining, agriculture, afforestation and too frequent fires. This species is easily overlooked in surveys.

Serruria flava Meisn.

Status: **CR** B1ac(iv)+2ac(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Northern Cederberg.

Habitat: Cederberg Sandstone Fynbos on sandy flats amid rocky outcrops.

Rationale: EOO and AOO 8 km^2. Fire-related population fluctuations occur at one known location. Potentially threatened by rooibos tea cultivation.

Serruria florida (Thunb.) Salisb. ex Knight

Plate 83

Status: **CR** B1ab(i,ii,iii,iv,v)c(iv)+2ab(i,ii,iii,iv,v)c(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Franschhoek, Assegaaibooskloof.

Habitat: Confined to Kogelberg Sandstone Fynbos.

Rationale: EOO 8 km^2, AOO < 8 km^2. Fire-related population fluctuations and continuing decline in number of mature individuals occur at one known location. Threatened by afforestation, invasion by alien plants, wildflower harvesting and inappropriate fire management. Dormant subpopulations are easily overlooked in surveys.

Serruria foeniculacea R.Br.

Status: **CR** A2c; B1ab(i,ii,iii,iv,v)c(iv)+2ab(i,ii,iii,iv,v)c(iv); C2a(i,ii)b; D

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Cape Flats.

Habitat: Cape Flats Sand Fynbos, under moist conditions.

Rationale: A population reduction of > 80% is estimated based on habitat loss and a reduction in range (EOO) due to urban expansion, inappropriate fire management and overgrazing over the past 60 years (generation length 20 years). A small population of four wild plants remains at one location and continues to decline.

[F] **Serruria fucifolia** Salisb. ex Knight

Status: **EN** A4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Gifberg to Hopefield.

Habitat: Sand fynbos of the West Coast lowlands.

Rationale: Population reduction due to habitat loss is likely to exceed 50% over the next decade, primarily because of the recent expansion of potato cultivation

and central pivot irrigation in the south and rooibos tea cultivation in the north of the range of this species (generation length 20 years). Other threats include extraction of groundwater, overgrazing, too infrequent fires and climate change.

Serruria furcellata R.Br.

Status: **CR** A2c; B1ab(i,ii,iii,iv,v)c(iv)+2ab(i,ii,iii,iv,v)c(iv); C1+2a(i,ii)b; D

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Cape Flats.

Habitat: Coastal fynbos.

Rationale: Population estimated to have declined by nearly 100% over the past 100 years as a result of invasion by alien plants, invasive alien ants, bush clearing, mowing, urban and industrial expansion, inappropriate fire management, increased mole rat activity and trampling, and only one plant is known to remain in the wild. Generation length > 100 years.

[F] **Serruria glomerata** (L.) R.Br.

Status: **VU** A2c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Cape Peninsula and Cape Flats.

Habitat: Largely confined to Peninsula Sandstone Fynbos.

Rationale: Population reduction on lowland sites such as the Cape Flats is estimated to be > 30% over the last 60 years (generation length 20 years). In the Cape Peninsula it is virtually extinct outside nature reserves, but remaining subpopulations are well conserved and not declining at present. A subpopulation at the Kleinplaas Dam could be eliminated if the dam is enlarged.

[F] **Serruria heterophylla** Meisn.

Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Kleinmond and Kleinrivier Mountains.

Habitat: Associated with shale bands.

Rationale: EOO 75 km^2, AOO 43 km^2. Three known locations continue to decline as a result of urban development, vineyard expansion, invasion by alien plants and development of golf courses.

Serruria hirsuta R.Br.

Status: **CR** B1ab(iii)c(iv)+2ab(iii)c(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Cape Peninsula.

Habitat: Largely confined to Peninsula Sandstone Fynbos.

Rationale: EOO 4 km^2, AOO < 4 km^2. Fire-related population fluctuations occur at a single remaining location. The population of ± 1 000 mature individuals continues to decline because of ongoing habitat loss to urban development, invasion by alien plants and alien ants, firebreak clearing and inappropriate fire management.

Serruria inconspicua L.Guthrie & T.M.Salter

Status: **VU** A2c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Cape Peninsula to Houwhoek.

Habitat: Sandstone and shale fynbos.

Rationale: A population reduction of 32% is estimated based on habitat loss to vineyard expansion and invasion by alien plants over the past 60 years (generation length 20 years).

Serruria incrassata Meisn.

Status: **EN** A2c; B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Paarl.

Habitat: Most prominent in Swartland Shale Renosterveld.

Rationale: A population reduction of at least 50% over the past 100 years is suspected, but habitat loss is difficult to estimate as this is an ecotonal species and transformation of renosterveld is much higher than in fynbos, and population reduction may be as high as 80% (generation length > 100 years). Current EOO 97 km^2, AOO 20 km^2. Four severely fragmented subpopulations continue to decline because of ongoing habitat loss to agriculture, invading alien plants, mining, golf course development and overgrazing.

Serruria kraussii Meisn.

Status: **VU** A2c; B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Helderberg to Jonkershoek.

Habitat: Shale fynbos in high-rainfall areas.

Rationale: A population reduction of at least 30% is estimated based on a 38% decline in the number of subpopulations known through herbarium records due to afforestation, invasion by alien plants and agriculture over the past 60 years (generation length 20 years). EOO 132 km^2, AOO 63 km^2. The remaining 5–10 locations continue to decline.

Serruria lacunosa Rourke

Status: **CR** B1ab(i,ii,iii,iv,v)c(iv)+2ab(i,ii,iii,iv,v)c(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard,

E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

eDistribution: WC. Matsikamma Mountains.

Habitat: Confined to Bokkeveld Sandstone Fynbos.

Rationale: EOO 12 km², AOO < 1 km². The number of mature individuals continues to decline at one known location. Extreme fire-related population fluctuations of between 40 and 150 mature individuals have been observed between 1994 and 2000. Ongoing threats to this species include habitat loss to rooibos tea cultivation, too frequent fires, mining and road construction. Dormant subpopulations are easily overlooked in surveys.

Serruria leipoldtii E.Phillips & Hutch.

Status: **NT** D2

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

eDistribution: WC. Northern Cederberg Mountains.

Habitat: Largely confined to Cederberg Sandstone Fynbos.

Rationale: AOO 58 km². Potentially threatened by rooibos tea cultivation. A subpopulation at Nieuwoudtville known from herbarium records cannot be located. Subpopulations are generally small, with only one consisting of more than 100 plants.

Serruria linearis Salisb. ex Knight

Status: **EN** A3c+4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

eDistribution: WC. Mamre to Dassenberg.

Habitat: Largely confined to Atlantis Sand Fynbos.

Rationale: Land transformation models (Bomhard *et al.* 2005) indicate that this species will decline by > 50% as a result of habitat loss within the next 20 years (generation length > 100 years). There have also been past population declines estimated between 47–49%, based on habitat loss and loss of historical subpopulations over the past 100 years. Therefore, although habitat loss models tend to represent a worst-case scenario, population reduction is already close to 50% and is therefore highly likely to exceed this threshold within the next generation of this species.

Serruria meisneriana Schltr. **Plate 83**

Status: **EN** A2c; B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

eDistribution: WC. Babilonstoring.

Habitat: Largely confined to Overberg Sandstone Fynbos.

Rationale: A population reduction of at least 50% is estimated based on a 61% reduction in range (EOO) due to habitat loss to agriculture, invasion by alien plants and too frequent fires over the past 60 years (generation length 20 years). Current EOO 43 km², AOO < 43 km². One or two remaining locations continue to decline because of ongoing habitat loss to vineyard expansion.

Serruria millefolia Salisb. ex Knight

Status: **VU** A4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

eDistribution: WC. Bokkeveld to Olifants River Mountains.

Habitat: Arid sandstone fynbos.

Rationale: A population reduction of nearly 30% has already occurred over the past 20–40 years, and is very likely to exceed 30% within the next 10 years because of increasingly rapid habitat loss to rooibos tea and potato cultivation (generation length 20 years).

[F] **Serruria nervosa** Meisn.

Status: **NT** D2

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

eDistribution: WC. Kleinrivier and Bredasdorp Mountains.

Habitat: Lowland sandstone fynbos.

Rationale: AOO 45 km². Potentially threatened by invading alien plants, agriculture and urban expansion.

Serruria pinnata R.Br. **Plate 83**

Status: **CR** C2a(i,ii)b; D

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

eDistribution: WC. Paarl to Franschhoek.

Habitat: Alluvium fynbos on the lowlands adjacent to renosterveld in ecotonal areas.

Rationale: Fire-related population fluctuations occur in two small remaining subpopulations, at present consisting of 16 plants and one plant, respectively. The population continues to decline as a result of habitat loss to agriculture and afforestation, invasion by alien plants and too frequent fires.

[F] **Serruria rebeloi** Rourke

Status: **EN** B1ac(iv)+2ac(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

eDistribution: WC. Akkedisberg Mountains.

Habitat: An extremely cryptic, under-storey protea confined to Overberg Sandstone Fynbos.

Rationale: EOO and AOO 20 km². Fire-related population fluctuations occur in subpopulations at one or two known locations. This species is protected and well managed at present, but remains potentially threatened by invading alien plants, too frequent fires and vineyard expansion. Easily overlooked in surveys.

[F] **Serruria reflexa** Rourke

Status: **Rare**

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Porterville, Olifants River Mountains and Skurweberg.

Habitat: Winterhoek Sandstone Fynbos.

Rationale: A range-restricted (EOO 207 km^2) habitat specialist that is not threatened in mountainous habitat.

[F] **Serruria rosea** E.Phillips

Status: **NT** D2

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Du Toit's Kloof to Riviersonderend Mountains.

Habitat: Largely confined to Hawequas Sandstone Fynbos.

Rationale: AOO 51 km^2. Potentially threatened by afforestation, invading alien plants and is susceptible to drought-related mortality.

[F] **Serruria rostellaris** Salisb. ex Knight

Status: **NT** D2

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Grabouw to Hermanus, Groenlandberg, Caledon Swartberg and Kleinrivier Mountains.

Habitat: Overberg Sandstone Fynbos.

Rationale: AOO 99 km^2. Potentially threatened by alien pine and hakea invasion and vineyard expansion.

Serruria roxburghii R.Br.

Status: **EN** A2c; B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Riebeek Kasteel to Paarl.

Habitat: Most prominent in Atlantis Sand Fynbos.

Rationale: A population reduction of at least 50% is estimated based on a 57% reduction in range (EOO) and 75% habitat loss, mainly to crop cultivation and invasion by alien plants, over the past 60 years (generation length 20 years). Current EOO 41 km^2, AOO 29 km^2. The remaining 3–5 locations continue to decline owing to invading alien plants, agriculture, mining, too frequent fires, extraction of groundwater and overgrazing.

[F] **Serruria rubricaulis** R.Br.

Status: **NT** A2c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Hottentots Holland to Kleinrivier Mountains.

Habitat: Sandstone fynbos at lower altitudes.

Rationale: A population decline of nearly 30% is estimated based on a 32% reduction in range (EOO) and 24% habitat loss due to urban expansion and invasion by alien plants over the past 100 years (generation length > 100 years). Also threatened by alien invasive ants.

[F] **Serruria scoparia** R.Br.

Status: **CR** A2c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Malmesbury.

Habitat: Most prominent in Swartland Shale Renosterveld.

Rationale: A population reduction of > 80% is estimated based on 87% reduction in range (EOO) and 91% habitat loss due to crop cultivation, invasion by alien plants, extraction of groundwater, overgrazing and too frequent fires over the past 100 years (generation length > 100 years).

[F] **Serruria stellata** Rourke

Status: **VU** D2

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Stettynsberg to western Riviersonderend Mountains.

Habitat: High-altitude sandy flats.

Rationale: Four known locations are potentially threatened by habitat loss to protea cultivation.

Serruria trilopha Salisb. ex Knight

Status: **CR** A2c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Malmesbury to Cape Peninsula.

Habitat: Sand fynbos of the lowlands, largely confined to Cape Flats Sand Fynbos.

Rationale: A population reduction of at least 80% is estimated based on a reduction in range (EOO), habitat loss and decline of subpopulations known through herbarium records over the past 100 years (generation length > 100 years). Remaining subpopulations around Cape Town are very small, with only two out of five remaining subpopulations numbering more than 10 plants. Threats include invasion by alien plants, invasive alien ants, overgrazing, agriculture, mowing and too frequent fires.

Serruria triternata (Thunb.) R.Br.

Status: **NT** D2

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Elandskloof Mountains.

Habitat: Largely confined to Hawequas Sandstone Fynbos.

Rationale: AOO 77 km^2. Potentially threatened by alien hakea and pine invasion.

[F] **Serruria villosa** (Lam.) R.Br.

Status: **Rare**

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Cape Peninsula endemic.

Habitat: Peninsula Sandstone Fynbos.

Rationale: A range-restricted habitat specialist (EOO 240 km^2) that is protected in the Table Mountain National Park.

Serruria viridifolia Rourke

Status: **VU** D2

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Stettynsberg and western Riviersonderend Mountains.

Habitat: Sandstone fynbos in deeper sandy soils.

Rationale: AOO 34 km^2. Three known locations are potentially threatened by habitat loss to protea cultivation.

Serruria williamsii Rourke

Status: **EN** B1ac(iv)+2ac(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Riviersonderend Mountains.

Habitat: Confined to North Sonderend Sandstone Fynbos.

Rationale: EOO 28 km^2, AOO 15 km^2. Fire-related population fluctuations occur at two known locations. Potential threats include too frequent fires and habitat loss to protea cultivation. Dormant subpopulations are likely to be missed in surveys.

Serruria zeyheri Meisn.

Status: **EN** A2c; B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v); C2a(i); D

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Du Toit's Kloof to Riviersonderend Mountains.

Habitat: Sandstone fynbos.

Rationale: A population reduction of > 90% is estimated based on a reduction in range size and apparent local extinction of subpopulations known through herbarium records over the past 60 years (generation length 20 years). Many known subpopulations could not be relocated during Protea Atlas Project surveys, but the habitat is still intact and they may potentially have been overlooked. Current EOO 109 km^2, AOO 11 km^2. Less than 250 mature individuals remain at two locations and continue to decline because of invasion by alien plants and habitat loss to agriculture.

Sorocephalus R.Br.

Sorocephalus alopecurus Rourke

Status: **EN** B1ac(iv)+2ac(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Riviersonderend Mountains.

Habitat: Confined to South Sonderend Sandstone Fynbos.

Rationale: EOO 18 km^2, AOO 14 km^2. Fire-related population fluctuations occur in small subpopulations at three known locations. Potentially threatened by invading alien plants and too frequent fires.

Sorocephalus capitatus Rourke

Status: **NT** D2

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Piketberg and Onderboskloof in the Kouebokkeveld.

Habitat: Seeps on deep, sandy soil in sandstone fynbos.

Rationale: AOO 49 km^2. Potentially threatened by habitat loss to rooibos tea cultivation and is susceptible to drought-related mortality.

[F] **Sorocephalus clavigerus** (Salisb. ex Knight) Hutch.

Status: **EN** B1b(i,ii,iii,iv,v)c(iv)+2b(i,ii,iii,iv,v)c(iv); C2a(i); D

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Hottentots Holland to Kleinrivier Mountains.

Habitat: Largely confined to Kogelberg Sandstone Fynbos.

Rationale: EOO 265 km^2, AOO 23 km^2. Small subpopulations varying between 10 and 100 mature individuals are prone to extreme fire-related population fluctuations and continue to decline for unknown reasons. The population consists of less than 200 plants at present. Dormant subpopulations are easily overlooked in surveys.

Sorocephalus crassifolius Hutch.

Status: **CR** A2c; C2a(i); D

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Riviersonderend Mountains.

Habitat: High-altitude sandstone fynbos.

Rationale: A population reduction of > 80% is estimated based on an 89% decline in the number of subpopulations known through herbarium records over the past 100 years (generation length > 100 years). Despite extensive searches, two subpopulations on Jonaskop, where the habitat is still intact, could not be relocated and are presumed extinct. Last recorded flowering in the 1980s. Subpopulations are small and declining as a result of apparent recruitment failure. Only 15 plants remain. It may be misidentified as *Clutia* or *Phylica* and is easily overlooked in surveys.

Sorocephalus imbricatus (Thunb.) R.Br.

Status: **CR** B1ab(i,ii,iii,iv,v)c(iv); C2b

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Piketberg, Groot Winterhoek and Elandskloof Mountains.

Habitat: Hawequas Sandstone Fynbos.

Rationale: EOO 85 km^2. Fire-related population fluctuations occur in small, severely fragmented subpopulations. The population, which currently consists of ± 160 mature individuals, continues to decline. Most subpopulations have fewer than 10 mature individuals and high mortality of immature and mature individuals has been observed. Threatened by afforestation, invasion by alien plants, too frequent fires and dam construction. Dormant subpopulations easily overlooked in surveys.

Sorocephalus palustris Rourke

Status: **CR** D

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Kogelberg.

Habitat: Grows at high altitudes, 1 200 m, in black peaty soil that is permanently wet.

Rationale: Previously thought to be extinct as it was not found by atlassers, despite searches at the type locality. The last confirmed records are from 1984, but there is an unconfirmed sighting of 15 plants in 1995. Threatened by too frequent fires and is easily overlooked in surveys.

Sorocephalus pinifolius (Salisb. ex Knight) Rourke

Status: **EN** B1ac(iv)+2ac(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Riviersonderend Mountains.

Habitat: Largely confined to South Sonderend Sandstone Fynbos.

Rationale: EOO 30 km^2, AOO 17 km^2. Fire-related population fluctuations occur in small subpopulations at three known locations. Potentially threatened by invading alien hakeas, too frequent fires and browsing.

Sorocephalus scabridus Meisn. **Plate 83**

Status: **CR** B1ac(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Olifants River and Groot Winterhoek Mountains.

Habitat: Confined to seeps in deep sand in Winterhoek Sandstone Fynbos.

Rationale: EOO 20 km^2. Fire-related population fluctuations occur in small subpopulations at one known location. Potentially threatened by too frequent fires. Dormant subpopulations are easily overlooked in surveys.

Sorocephalus tenuifolius R.Br.

Status: **EN** B1ab(ii,iii,v)c(iv)+2ab(ii,iii,v)c(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Palmiet River Mountains between Arieskraal and Kogelberg.

Habitat: Confined to Kogelberg Sandstone Fynbos.

Rationale: EOO 22 km^2, AOO 20 km^2. Fire-related population fluctuations occur at two known locations, the third being locally extinct. Threats include agriculture, mining, invasion by alien plants, too frequent fires and dam construction. Growing plants and dormant subpopulations easily overlooked in surveys.

Sorocephalus teretifolius (Meisn.) E.Phillips

Status: **EN** B1ab(i,ii,iii,iv,v)c(iv)+2ab(i,ii,iii,iv,v)c(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Du Toit's Kloof Mountains to Blokkop.

Habitat: Confined to Hawequas Sandstone Fynbos.

Rationale: EOO 118 km^2, AOO 26 km^2. Fire-related population fluctuations occur at four known locations. The population continues to decline as a result of alien pine and hakea invasion. Dormant subpopulations easily overlooked in surveys.

Spatalla Salisb.

Spatalla argentea Rourke

Status: **EN** B1ac(iv)+2ac(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Riviersonderend Mountains, Jonaskop.

Habitat: Largely confined to North Sonderend Sandstone Fynbos.

Rationale: EOO 12 km², AOO 14 km². Fire-related population fluctuations occur at two known locations. Potentially threatened by invading alien hakeas and expanding fruit orchards.

Spatalla barbigera Salisb. ex Knight

Status: **NT** B1ab(i)+2ab(i)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Eastern Langeberg to Outeniqua Mountains and Swartberg.

Habitat: High altitudes in sandstone fynbos on the Swartberg range and low altitudes in sandstone fynbos on the Outeniqua range.

Rationale: EOO 1 936 km², AOO 108 km². Continuing decline due to invasion by alien plants and extraction of groundwater, but more than 10 locations still remain.

[F] Spatalla caudata (Thunb.) R.Br.

Status: **EN** A3c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Cederberg and Hex River Mountains.

Habitat: Sandstone fynbos on deep peaty soils in seeps.

Rationale: Not declining at present and occurs in large subpopulations in safe mountainous habitats. However, climate change models project a > 50% population reduction by 2025 (Bomhard *et al.* 2005). Given its highly sensitive seepage habitat, model predictions are being followed as a precaution. Other potential threats include extraction of groundwater, wetland drainage and susceptibility to drought-related mortality.

Spatalla colorata Meisn.

Status: **EN** B1ac(iv)+2ac(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Riviersonderend to Langeberg Mountains near Heidelberg.

Habitat: Largely confined to South Langeberg Sandstone Fynbos.

Rationale: EOO 135 km², AOO 31 km². Fire-related population fluctuations occur in small subpopulations at three known locations. Potentially threatened by invading alien hakeas and is susceptible to drought-related mortality.

[F] Spatalla curvifolia Salisb. ex Knight

Status: **NT** A2c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Kogelberg to Agulhas coast.

Habitat: Sandstone fynbos.

Rationale: The particular habitat of this species is relatively safe from transformation, and therefore estimated population reduction (33–36%) based on general transformation of the vegetation type in which it occurs and transformation of sites known from historical records is likely to be an overestimate. Declines were due to urban development, invasion by alien plants and agriculture over the past 60 years (generation length 20 years). Harvested for the cut flower industry.

Spatalla ericoides E.Phillips

Status: **EN** B1ab(iii,v)+2ab(iii,v)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Western Agulhas coast.

Habitat: Sand fynbos associated with limestone fynbos.

Rationale: EOO 50 km², AOO 37 km². Some 2 500 mature individuals at 2–4 locations continue to decline because of ongoing habitat loss to protea cultivation. Also threatened by invading alien plants and is prone to fire-related population fluctuations. Growing plants and dormant subpopulations are easily overlooked in surveys.

[F] Spatalla longifolia Salisb. ex Knight

Status: **NT** B1ab(iv)+2ab(iv); D2

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Jonkershoek Mountains to Kleinmond.

Habitat: Sandstone fynbos, very localised adjacent to but not in wet seeps.

Rationale: EOO 697 km², AOO 54 km². Small, severely fragmented subpopulations are not declining at present, but are potentially threatened by invading alien plants and too frequent fires. Dormant subpopulations are easily overlooked in surveys.

[F] Spatalla mollis R.Br.

Status: **Rare**

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Hottentots Holland Mountains to Palmiet River Mountains.

Habitat: Kogelberg Sandstone Fynbos.

Rationale: Habitat specialist with a restricted range (EOO 474 km²), but not threatened in well-protected mountainous habitat.

Spatalla nubicola Rourke

Status: **NT** D2

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

[e]**Distribution:** WC. Langeberg Mountains near Heidelberg.

Habitat: Largely confined to South Langeberg Sandstone Fynbos.

Rationale: AOO 34 km^2. Potentially threatened by too frequent fires.

Spatalla prolifera (Thunb.) Salisb. ex Knight

Status: **EN** B1ac(iv)+2ac(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

e**Distribution:** WC. Viljoen's Pass to Kleinmond.

Habitat: Confined to permanently wet peat bogs near valley floors.

Rationale: EOO 25 km^2, AOO 26 km^2. Fire-related population fluctuations occur in small, isolated, severely fragmented subpopulations. Threatened by dam construction, mining, extraction of groundwater, afforestation, invasion by alien plants, firebreak clearing and susceptibility to *Phytophthora* infection. Dormant subpopulations are easily overlooked in surveys.

Spatalla propinqua R.Br.

Status: **EN** A3c+4c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

e**Distribution:** WC. Slanghoek to Riviersonderend Mountains.

Habitat: Bottomland wetlands on sandstone fynbos.

Rationale: A range-restricted species (EOO 1 256 km^2) and severely fragmented but not declining at present. Climate change and land transformation models project a 50% population reduction due to habitat loss within the next 20 years (Bomhard *et al.* 2005), generation length 20 years.

F **Spatalla racemosa** (L.) Druce

Status: **NT** A2c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

e**Distribution:** WC. Viljoen's Pass to Kleinrivier Mountains.

Habitat: Sandstone fynbos.

Rationale: A population reduction of nearly 30% is estimated based on 24% reduction in range (EOO) and 34% habitat loss due to urban expansion, invasion by alien plants, invasive alien ants, agriculture and afforestation over the past 60 years (generation length 20 years).

Spatalla salsoloides (R.Br.) Rourke

Status: **CR** B1ac(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

e**Distribution:** WC. Du Toit's Kloof Mountains.

Habitat: Largely confined to Hawequas Sandstone Fynbos.

Rationale: EOO 76 km^2. Fire-related population fluctuations occur in small, severely fragmented subpopulations at four known locations. Potentially threatened by invading alien plants.

F **Spatalla squamata** Meisn.

Status: **NT** A2c

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

e**Distribution:** WC. Bredasdorp Mountains and Agulhas coast.

Habitat: Sandstone fynbos at lower elevations.

Rationale: A population reduction of nearly 30% is estimated based on a 16% reduction in range (EOO) and 40% habitat loss over the past 60 years (generation length 20 years). Harvested for the cut flower industry.

F **Spatalla thyrsiflora** Salisb. ex Knight

Status: **VU** D2

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

e**Distribution:** WC. Du Toit's Kloof Mountains and Caledon Swartberg.

Habitat: Granite fynbos at wet locations, usually south-facing.

Rationale: Five known locations are potentially threatened by invading alien pines.

Spatalla tulbaghensis (E.Phillips) Rourke **Plate 83**

Status: **EN** B1ab(i,ii,iii,iv,v)c(iv)+2ab(i,ii,iii,iv,v)c(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

e**Distribution:** WC. Witzenberg and Skurweberg.

Habitat: Largely confined to Winterhoek Sandstone Fynbos.

Rationale: EOO 40 km^2, AOO 17 km^2. Fire-related population fluctuations occur in small, severely fragmented subpopulations. The population continues to decline as a result of ongoing habitat loss and degradation by expanding fruit orchards, dam construction, altered drainage systems, overgrazing and invasion by alien plants. This species is susceptible to drought-related mortality and dormant subpopulations are easily overlooked in surveys.

Vexatorella Rourke

Vexatorella alpina (Salisb. ex Knight) Rourke

Status: **NT** B1ab(iii,v)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt,

C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

Distribution: NC. Namaqualand, Kamiesberg.

Habitat: Largely confined to Kamiesberg Granite Fynbos, among large granite boulders or in the open along the foothills, 1 300–1 600 m.

Rationale: EOO 36 km², AOO < 36 km². Small subpopulations at 15–20 locations are declining because of poor recruitment and too frequent fires. It is likely that subpopulations were formerly much larger, as they are confined to pockets of deep sand among granite boulders, with all other surrounding low-lying deep sandy areas ploughed for pasture. Many subpopulations are moribund and consist of senescent adults, sometimes with a few young plants. In the south on Rooiberg and Eselkop by contrast, subpopulations are burnt too frequently and appear to be declining.

Vexatorella latebrosa Rourke **Plate 81**

Status: **CR** B1ac(iv)+2ac(iv)

A.G. Rebelo, N.A. Helme, P.M. Holmes, C.N. Forshaw, S.H. Richardson, D. Raimondo, D.I.W. Euston-Brown, J.E. Victor, W. Foden, I. Ebrahim, B. Bomhard, E.G.H. Oliver, A. Johns, J. van der Venter, R. van der Walt, C. von Witt, A.B. Low, C. Paterson-Jones, J.P. Rourke, A.N. Hitchcock, L. Potter, J.H. Vlok & D. Pillay

Distribution: WC. Langeberg Mountains near Robertson.

Habitat: Confined to Breede Shale Fynbos.

Rationale: EOO and AOO 1 km². Fire-related extreme population fluctuations occur at one known location. Potentially threatened by too frequent fires.

RANUNCULACEAE

Anemone L.

F **Anemone fanninii** Harv. ex Mast.

Status: **NT** A2d

V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya

Distribution: EC FS KZN. Drakensberg Mountains and also Lesotho.

Habitat: Moist depressions near streams and along drainage lines and seeps, generally on east-facing slopes from the coast to 2 100 m.

Rationale: We estimate an overall decline of 20% in the last 30 years (generation length 10 years) as a result of harvesting for the traditional medicine trade. There are many areas within its Drakensberg range that are protected and/or inaccessible to harvesters.

Knowltonia Salisb.

F **Knowltonia bracteata** Harv. ex J.Zahlbr.

Status: **VU** A2d; B2ab(v)

V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya

Distribution: EC KZN. Eastern Cape to KwaZulu-Natal.

Habitat: In forest understorey, edges of seeps and vleis in grassland.

Rationale: This species is common on traditional medicine markets and very rare in the wild. A decline of > 30% over the past 15 years is estimated as a result of heavy trade pressure (generation length five years). AOO < 2 000 km². Severely fragmented subpopulations occur in isolated sites and continue to decline.

F **Knowltonia transvaalensis** Szyszyl. var. **filifolia** H.Rasm.

Status: **VU** D2

L. von Staden

Distribution: MP. Dullstroom and Machadodorp.

Habitat: Open montane grassland, occasionally in moist areas, 1 700–1 950 m.

Rationale: Although quite poorly known, recent collections indicate that is likely to be extant at four locations, where it is potentially threatened by harvesting for medicinal use.

RHAMNACEAE

Colubrina Rich. ex Brongn.

Colubrina nicholsonii A.E.van Wyk & Schrire

Status: **VU** D1+2

L. von Staden, J.E. Victor & A.E. van Wyk

Distribution: EC KZN. Between Port St Johns and the Umtamvuna River. Isolated occurrences as far north as the Umzinto district (KwaZulu-Natal) and as far south as the Kentani district (Eastern Cape).

Habitat: Scarp forest. Climax riverine forest, close to, and usually overhanging the water, 100–400 m.

Rationale: Known from ± 200 individuals in the wild, but more subpopulations are being discovered. This species grows in secluded, inaccessible gorges and it is very likely that there are a few undiscovered subpopulations, especially in the light of significant range extensions brought about by recent discoveries of new subpopulations. We estimate that there are more than 250 mature individuals but less than 1 000. AOO of this habitat specialist is estimated as < 20 km², and it is potentially threatened by invading alien plants at four locations. Poor recruitment is a concern, but healthy subpopulations are currently maintained by vegetative reproduction and there is no current evidence of continuing decline.

Phylica L.

Phylica affinis Sond.

Status: **EN** B1ab(iii)+2ab(iii)

N.A. Helme & D. Raimondo

Distribution: NC. Bokkeveld Mountains around Nieuwoudtville.

Habitat: Sandy flats on escarpment.

Rationale: EOO 200 km², AOO < 200 km². Ongoing habitat loss to rooibos tea cultivation and resultant changes in the fire regime are causing a continuing decline at three known locations.

Phylica agathosmoides Pillans

Status: **VU** B1ab(ii,iii,v)+2ab(ii,iii,v)

N.A. Helme & D. Raimondo

Distribution: NC. Bokkeveld Escarpment.

Habitat: Deep sand.

Rationale: EOO 200 km², AOO < 200 km². Ongoing habitat loss to rooibos tea cultivation and resultant changes in the fire regime are causing a continuing decline at six known locations.

Phylica alpina Eckl. & Zeyh.

Status: **DD**

F. Daniels

Distribution: WC. Olifants River Mountains.

Habitat: Sandstone slopes.

Rationale: Last collected in 1923. The distribution and population status of this species are too poorly known to determine its status.

[F] **Phylica alticola** Pillans

Status: **Rare**
N.A. Helme

[e]**Distribution:** WC. Groot Winterhoek Mountains.
Habitat: Upper slopes in sandstone fynbos.
Rationale: A range-restricted (EOO < 100 km^2) species with no known threats.

Phylica altigena Schltr.

Status: **Rare**
N.A. Helme

[e]**Distribution:** WC. Cederberg to Groot Winterhoek Mountains.
Habitat: Rocky slopes in fynbos.
Rationale: A poorly known high-altitude species, EOO < 500 km^2. No known threats.

Phylica amoena Pillans

Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v)
N.A. Helme, D. Raimondo & J.E. Victor

[e]**Distribution:** WC. Gansbaai to Agulhas.
Habitat: Dune slacks in stable coastal dunes.
Rationale: EOO 300 km^2, AOO < 300 km^2. Five known locations continue to decline because of coastal development and invasion by alien plants. Encroaching developments lead to habitat fragmentation and the exclusion of fire from remnants, a serious threat to this fire-dependent species. As phylicas are difficult to identify, this species is likely to be overlooked in environmental impact assessments.

Phylica ampliata Pillans

Status: **VU** D2
N.A. Helme

[e]**Distribution:** WC. Elandskloof Mountains, above Tulbagh waterfall.
Habitat: Mountain slopes in fynbos.
Rationale: One known location is potentially threatened by invading alien plants.

Phylica anomala Pillans

Status: **EN** B1ab(ii,iii)
N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Caledon to Swellendam.
Habitat: Lower slopes in sands over clays.
Rationale: EOO < 3 650 km^2. Ongoing habitat loss to crop cultivation, afforestation and invasion by alien plants is causing a continuing decline at three known locations.

Phylica apiculata Sond.

Status: **DD**D
F. Daniels

[e]**Distribution:** WC. Caledon.
Habitat: Mountain slopes.
Rationale: Known only from the type, collected in the early 1800s at an unspecified locality in 'mountains near Caledon'. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Phylica barbata Pillans

Status: **DD**D
F. Daniels

[e]**Distribution:** WC. Cederberg Mountains, Koueberg near Wuppertal.
Habitat: Dry rocky slopes.
Rationale: Known only from the type, collected in 1896. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Phylica brachycephala Sond.

Status: **DD**D
F. Daniels

[e]**Distribution:** WC. Langeberg.
Habitat: Sandstone slopes.
Rationale: Known only from the type, collected in the early 1800s at 'Cannaland, Swellendam'. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Phylica brevifolia Eckl. & Zeyh.

Status: **VU** B1ab(ii,iii,v)
N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Hermanus to Caledon and Elim.
Habitat: Sandstone slopes.
Rationale: EOO < 1 647 km^2. Ongoing habitat loss to vineyard expansion and invasion by alien plants is causing a continuing decline at an estimated 5–10 locations.

Phylica burchellii Pillans

Status: **DD**D
F. Daniels & N.A. Helme

[e]**Distribution:** WC. Riviersonderend Mountains.
Habitat: Lower mountain slopes.
Rationale: Known only from the type, collected in the 1700s. The elevation of the collecting site is unknown and the lower slopes of the Riviersonderend Mountains west of Genadendal are degraded because of a combination of past afforestation and current short fire return intervals and invasion by alien plants. If this species occurs at low altitudes, it is likely to be threatened.

[F] **Phylica calcarata** Pillans

Status: **VU** B1ab(ii,iii,v)+2ab(ii,iii,v)
N.A. Helme

[e]**Distribution:** WC. Genadendal to Swellendam.
Habitat: Lower shale slopes and stony alluvial terraces.
Rationale: EOO 800 km^2, AOO < 800 km^2. Ongoing habitat loss to crop cultivation, urban and infrastructure development and invasive alien plants is causing a continuing decline at six known locations.

Phylica chionocephala Schltr.

Status: **Rare**
N.A. Helme

[e]**Distribution:** WC. Kouebokkeveld and Hex River Mountains.
Habitat: Rocky slopes.
Rationale: A range-restricted species (EOO < 500 km^2) that is not threatened.

[F] **Phylica chionophila** Schltr.

Status: **Rare**
D. Raimondo, P.F. Matlamela & D.A. Kamundi†

[e]**Distribution:** WC. Mostertshoek Twins to Brandwacht Mountain.
Habitat: Sandstone slopes, 2 000–2 135 m.
Rationale: A range-restricted species (EOO 170 km^2) that is not threatened.

[F] **Phylica comptonii** Pillans

Status: **Rare**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

[e]**Distribution:** WC. Hex River Mountains to Witteberg.

Habitat: Dry sandstone slopes, 1 400–2 000 m.

Rationale: A high-altitude habitat specialist with no known threats.

[F] **Phylica curvifolia** Pillans **Plate 85**

Status: **Rare**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

[e]**Distribution:** WC. Outeniqua Mountains.

Habitat: Moist sandstone slopes, 610–1 260 m.

Rationale: A range-restricted species (EOO 170 km^2) with no known threats.

Phylica cuspidata Eckl. & Zeyh. var. **cuspidata**

Status: **VU** B1ab(ii,iii,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Aurora to Graafwater.

Habitat: Lowland sand flats and stony/rocky soils on mountain slopes.

Rationale: EOO < 3 000 km^2. Only 4–10 locations are known. Subpopulations on lowland sand flats are declining as a result of ongoing habitat loss to rooibos tea and potato cultivation.

[F] **Phylica cylindrica** J.C.Wendl.

Status: **VU** B1ab(ii,iii,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Olifants River Mountains and Piketberg.

Habitat: Lowland sand flats and lower mountain slopes.

Rationale: EOO < 5 000 km^2. Ongoing habitat loss to potato and rooibos tea cultivation is causing a continuing decline at nine known locations.

Phylica diosmoides Sond.

Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v)

N.A. Helme, D. Raimondo & J.E. Victor

[e]**Distribution:** WC. Houwhoek and Bot River.

Habitat: Ferricrete gravels in fynbos-renosterveld transition.

Rationale: EOO 250 km^2, AOO < 250 km^2. Three know locations remain. In 2006, 10% of one subpopulation was lost to infrastructure development. Habitat degradation as a result of invasion by alien plants is causing a continuing decline.

[F] **Phylica elimensis** Pillans

Status: **VU** B1ab(ii,iii,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Elim to Riversdale.

Habitat: Shale slopes and flats.

Rationale: EOO < 7 200 km^2. The three or four known locations are declining as a result of ongoing habitat loss to crop cultivation, urban and infrastructure development and invasion by alien plants.

[F] **Phylica floccosa** Pillans

Status: **Rare**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

[e]**Distribution:** WC. Kammanassie and Kouga Mountains.

Habitat: High-altitude rocky slopes.

Rationale: A high-altitude habitat specialist that is not threatened.

Phylica floribunda Pillans

Status: **VU** D2

N.A. Helme

[e]**Distribution:** WC. Bredasdorp.

Habitat: Rocky slopes.

Rationale: Five known locations are potentially threatened by invading alien plants and vineyard expansion.

Phylica glabrata Thunb.

Status: **DD**

D. Raimondo

[e]**Distribution:** WC. Unknown.

Habitat: Unknown.

Rationale: Known only from the type, collected in the 1700s at an unspecified locality.

Phylica greyii Pillans **Plate 85**

Status: **EN** D

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Saldanha to Vredenburg.

Habitat: Shallow granitic sands, between granite boulders within 2 km of the coast.

Rationale: Two subpopulations that together have less than 250 mature individuals are potentially threatened by coastal development.

Phylica guthriei Pillans

Status: **DD**

N.A. Helme

[e]**Distribution:** WC. Franschhoek Mountains.

Habitat: Sandstone slopes.

Rationale: Known only from the type, collected in 1895. Not enough is known about the distribution, specific habitat or population status of this species to determine its status. It occurs in an area where there has been much afforestation and is likely to be threatened.

[F] **Phylica harveyi** (Arn.) Pillans

Status: **VU** B1ab(ii,iii,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Piketberg to Cape Peninsula.

Habitat: Deep sands on flats, often near the coast.

Rationale: Herbarium specimens indicate that this species was once common on the Cape Flats and the West Coast, but most historical locations have been lost to urban expansion and wheat cultivation. Current EOO 8 000 km^2. Six remaining locations continue to decline because of ongoing habitat loss to urban development, invading alien plants and vineyards.

[F] **Phylica hirta** Pillans

Status: **NT** B1ab(ii,iii,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Nardous and Olifants River Mountains.

Habitat: Sandstone slopes and plateaus.

Rationale: EOO < 2 000 km^2. Although known from fewer than 10 locations, there is much unexplored habitat within the range of this species and we suspect that there are 10–15 locations. Some habitat has been transformed for citrus cultivation and ongoing habitat loss to rooibos tea is causing a continuing decline.

Phylica incurvata Pillans

Status: **VU** B1ab(ii,iii,v)

N.A. Helme

Distribution: WC. Pearly Beach to Riversdale.

Habitat: Coastal fynbos, on lower slopes.

Rationale: EOO < 12 000 km². Fewer than 10 remaining locations continue to decline because of ongoing habitat loss to crop cultivation, coastal development and invasion by alien plants.

F **Phylica intrusa** Pillans

Status: **Rare**

N.A. Helme

Distribution: WC. Hex River Mountains.

Habitat: High sandstone slopes on mountain peaks.

Rationale: A range-restricted species (EOO < 100 km²) that is not threatened.

Phylica laevifolia Pillans

Status: **DD**D

F. Daniels & N.A. Helme

Distribution: WC. Elim.

Habitat: Unknown.

Rationale: Known only from the type, collected in 1896 at an unspecified locality near Elim. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Phylica laevis (Eckl. & Zeyh.) Steud.

Status: **EN** B1ab(ii,iii,v)

N.A. Helme

Distribution: WC. Houwhoek to Caledon Swartberg.

Habitat: Sandstone and shale slopes.

Rationale: EOO < 800 km². Two or three locations remain after most of the habitat was lost to crop cultivation. It continues to decline as a result of severe invasions of alien plants in the remaining habitat.

Phylica lasiantha Pillans

Status: **DD**D

F. Daniels

Distribution: WC. Langeberg Mountains.

Habitat: Sandstone slopes.

Rationale: Known only from the type, collected in the early 1800s. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Phylica leipoldtii Pillans

Status: **NT** B1ab(ii,iii,v)+2ab(ii,iii,v)

N.A. Helme & D. Raimondo

Distribution: WC. Cederberg to Kouebokkeveld.

Habitat: Sandy plateaus and sandstone slopes.

Rationale: EOO 700 km², AOO < 700 km². Only 13 locations remain after much of the habitat has been lost to deciduous fruit, rooibos tea and vegetable cultivation. Ongoing habitat loss is causing a continuing decline outside protected areas.

Phylica linifolia Pillans

Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v)

D. Raimondo

Distribution: WC. Pringle Bay to Houwhoek Mountains.

Habitat: Sandstone fynbos, lower slopes.

Rationale: EOO and AOO < 500 km². Habitat and number of mature individuals at two known locations continue to decline because of expanding coastal development and invasive alien plants.

Phylica longimontana Pillans

Status: **DD**D

F. Daniels

Distribution: WC. Langeberg.

Habitat: High rocky slopes.

Rationale: Known only from the type, collected in the late 1800s. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Phylica lucens Pillans

Status: **DD**D

F. Daniels & N.A. Helme

Distribution: WC. Riviersonderend Mountains.

Habitat: Mountain slopes.

Rationale: Known only from the type, collected in 1933. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Phylica lucida Pillans

Status: **VU** D2

D. Raimondo & N.A. Helme

Distribution: WC. Stanford to Agulhas.

Habitat: Coastal flats, often near limestone.

Rationale: AOO < 20 km². Three known locations are potentially threatened by invading alien plants, wildflower harvesting and vineyard expansion.

F **Phylica mairei** Pillans

Status: **Rare**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

Distribution: WC. Langeberg Mountains.

Habitat: Sandstone slopes at medium altitude, 700–800 m.

Rationale: A range-restricted species (EOO 52 km²) with no known threats.

Phylica maximiliani Schltr.

Status: **Rare**

N.A. Helme & F. Daniels

Distribution: NC WC. Pakhuis to Bokkeveld Mountains.

Habitat: Rocky sandstone slopes.

Rationale: A range-restricted species (EOO < 460 km²) that occurs in rocky habitats where it is protected from habitat loss to rooibos tea cultivation.

Phylica natalensis Pillans **Plate 85**

Status: **VU** B1ab(iii)+2ab(iii)

J.E. Victor & A.T.D. Abbott

Distribution: EC KZN. Southern KwaZulu-Natal and Pondoland.

Habitat: Pondoland coastal grassland, in rocky sites on Msikaba Formation Sandstone.

Rationale: EOO 1 090 km², AOO < 1 090 km². Eight locations remain after much of the habitat was lost to crop cultivation and coastal development, especially in southern KwaZulu-Natal. It continues to decline in the Pondoland area as a result of ongoing habitat degradation caused by too frequent fires and overgrazing.

[F] **Phylica nigrita** Sond. **Plate 85**

Status: **NT** B1ab(ii,iii,iv,v)
N.A. Helme

[e]**Distribution:** WC. Cape Peninsula to Agulhas and Caledon.
Habitat: Gravelly slopes and shales, lower to middle slopes, also occurs on limestone.
Rationale: EOO < 10 000 km^2. The 15 known locations continue to decline because of vineyard expansion and invasion by alien plants.

Phylica nigromontana Pillans **Plate 85**

Status: **Rare**
F. Daniels & N.A. Helme

[e]**Distribution:** WC. Swartberg Mountains.
Habitat: High rocky slopes.
Rationale: A range-restricted species (EOO < 500 km^2) that is not threatened.

Phylica nodosa Pillans

Status: **Rare**
F. Daniels

[e]**Distribution:** WC. Du Toit's Kloof to Hottentots Holland Mountains.
Habitat: Rocky peaks and ridges.
Rationale: A range-restricted species (EOO < 100 km^2) that occurs in mountainous habitat where it is not threatened.

[F] **Phylica obtusifolia** Pillans

Status: **Rare**
D. Raimondo, P.F. Matlamela & D.A. Kamundi†

[e]**Distribution:** WC. Kouebokkeveld Mountains.
Habitat: Upper rocky slopes.
Rationale: A range-restricted (EOO 65 km^2), high-altitude habitat specialist that is not threatened.

Phylica parvula Pillans

Status: **EN** B1ab(iii,v)+2ab(iii,v)
D. Raimondo & N.A. Helme

[e]**Distribution:** WC. Agulhas Plain.
Habitat: Lowland shales and sands over clay, often seasonally wet.
Rationale: EOO and AOO < 150 km^2. Four known locations continue to decline owing to severe invasion by alien plants, habitat loss to crop cultivation, and grazing and trampling by livestock.

Phylica pauciflora Pillans

Status: **VU** D2
N.A. Helme

[e]**Distribution:** WC. Swartruggens.
Habitat: Rocky quartzite slopes.
Rationale: Five known locations are potentially threatened by crop cultivation and grazing by livestock.

Phylica pearsonii Pillans

Status: **Rare**
N.A. Helme

[e]**Distribution:** NC. Namaqualand.
Habitat: Granite slopes at middle elevations.
Rationale: Only two small, highly disjunct subpopulations are known. It was not relocated in the Kamiesberg during an intense survey in 2005, indicating that it is likely to be very rare.

[F] **Phylica piquetbergensis** Pillans

Status: **Rare**
N.A. Helme

[e]**Distribution:** WC. Piketberg.
Habitat: Rocky sandstone slopes.
Rationale: A range-restricted species (EOO < 300 km^2) that occurs in rocky sites where it is protected from habitat loss to agriculture.

[F] **Phylica plumosa** L. var. **horizontalis** (Vent.) Sond. **Plate 85**

Status: **VU** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)
N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Piketberg and Tulbagh.
Habitat: Lower to upper sandstone and clay slopes.
Rationale: EOO and AOO < 2 000 km^2. Fewer than 10 locations remain. Subpopulations on lower slopes continue to decline because of habitat loss to crop cultivation and urban expansion, and invasion by alien plants.

[F] **Phylica plumosa** L. var. **plumosa**

Status: **Declining**
N.A. Helme & L. von Staden

[e]**Distribution:** WC. Piketberg to Cape Peninsula and Montagu to Caledon.
Habitat: Lower to middle sandstone and clay slopes.
Rationale: EOO 22 000 km^2. This taxon has lost many subpopulations to agriculture and urban expansion, especially around Cape Town and Malmesbury, where it continues to decline because of ongoing habitat loss. However, there are still > 30 locations and it is therefore not yet considered Near Threatened.

[F] **Phylica plumosa** L. var. **squarrosa** (Vent.) Sond.

Status: **EN** A2bc; B1ab(iii,v)
N.A. Helme

[e]**Distribution:** WC. Hopefield to Cape Peninsula, Somerset West, Caledon and Bot River.
Habitat: Lower clay slopes in renosterveld.
Rationale: A population reduction of at least 50% is estimated based on > 50% habitat loss to urban expansion and crop cultivation over the past 100 years (generation length 50 years). EOO < 5 000 km^2. Fewer than five remaining locations continue to decline because of agricultural and urban expansion, infrastructure development and invasion by alien plants.

Phylica recurvifolia Eckl. & Zeyh.

Status: **DD**D
F. Daniels

[e]**Distribution:** WC. Langeberg near Swellendam.
Habitat: Sandstone slopes.
Rationale: Known only from the type, collected in the early 1800s. Too little is known about the distribution and population status of this species to determine its status.

Phylica retorta Pillans

Status: **Rare**
N.A. Helme

[e]**Distribution:** WC. Bonteberg and Witteberg.
Habitat: Dry sandstone and quartzite slopes.
Rationale: A range-restricted species (EOO < 500 km^2) that is not threatened.

Phylica retrorsa E.Mey. ex Sond. **Plate 85**

Status: **VU** D1+2
N.A. Helme

eDistribution: NC. Namaqualand, Kamiesberg.
Habitat: Granite outcrops on peaks, 1 370–1 650 m.
Rationale: A population of less than 1 000 mature individuals at one known location is potentially threatened by climate change.

Phylica reversa Pillans

Status: **DD**D
F. Daniels

eDistribution: WC. Hex River Mountains.
Habitat: Rocky sandstone slopes.
Rationale: Known from the type, collected before 1940. Too little is known about this species to determine its status.

Phylica schlechteri Pillans

Status: **CR** PE
N.A. Helme

eDistribution: WC. Cape Peninsula.
Habitat: Upper sandstone slopes.
Rationale: Occurs in a well-explored area, but last recorded > 100 years ago. Possibly extinct.

Phylica sericea Pillans

Status: **Rare**
N.A. Helme

eDistribution: WC. Klein Swartberg Mountains.
Habitat: Sandstone slopes above 1 200 m, mainly on northern aspects.
Rationale: A range-restricted species (EOO < 200 km^2) that is not threatened.

Phylica simii Pillans

Status: **VU** D2
J.E. Victor & A.P. Dold

eDistribution: EC. Stutterheim.
Habitat: Montane grasslands.
Rationale: Two known locations are potentially threatened by afforestation and invasion by alien plants.

[F] **Phylica stenantha** Pillans

Status: **Rare**
N.A. Helme

eDistribution: WC. Riviersonderend Mountains.
Habitat: Sandstone slopes in fynbos.
Rationale: A range-restricted species (EOO < 500 km^2) that is not threatened.

Phylica stenopetala Schltr. var. **stenopetala**

Status: **EN** B1ab(ii,iii,v)
N.A. Helme & D. Raimondo

eDistribution: WC. Between Piketberg, Tulbagh and Kalbaskraal.
Habitat: Clay slopes and flats in renosterveld.
Rationale: EOO < 2 000 km^2. Ten small, severely fragmented subpopulations remain after > 95% of the habitat of this taxon was lost to urban expansion and crop cultivation. It continues to decline because of invasion by alien plants, vineyard and urban expansion and infrastructure development.

[F] **Phylica stokoei** Pillans

Status: **Rare**
N.A. Helme

eDistribution: WC. Klein Swartberg Mountains.
Habitat: North-facing, upper sandstone slopes.
Rationale: A range-restricted species (EOO < 300 km^2) that is not threatened.

[F] **Phylica strigulosa** Sond.

Status: **VU** B1ab(ii,iii,v)
N.A. Helme

eDistribution: WC. Piketberg to Stellenbosch.
Habitat: Renosterveld, on stony clay and sandstone slopes at low elevation, 30–760 m.
Rationale: EOO < 3 000 km^2. Ten known locations remain after many subpopulations gave been lost to urban expansion and crop cultivation. It continues to decline on small, unprotected habitat remnants because of lack of fire and invasion by alien plants.

[F] **Phylica subulifolia** Pillans

Status: **VU** D2
N.A. Helme

eDistribution: WC. Hex River Mountains.
Habitat: Upper sandstone slopes, 1 230–1 920 m.
Rationale: This reseeding species, known to occur at only three locations, is potentially threatened by too frequent fires. One location at Audensberg and other parts of the Hex River Mountains have burnt three times between 1994 and 2006.

[F] **Phylica thunbergiana** Sond.

Status: **EN** B1ab(ii,iii,v)
D. Raimondo & N.A. Helme

eDistribution: WC. Moorreesburg to Stellenbosch.
Habitat: Renosterveld, on lower clay slopes and flats.
Rationale: EOO < 2 500 km^2. Ten small, severely fragmented subpopulations remain on isolated habitat fragments after > 95% of renosterveld within the range of this species has been transformed by urban expansion and crop cultivation. It continues to decline owing to lack of fire in small remnants and invasion by alien plants.

Phylica trachyphylla (Eckl. & Zeyh.) D.Dietr.

Status: **Rare**
F. Daniels & N.A. Helme

eDistribution: WC. Groot Winterhoek Mountains.
Habitat: Middle sandstone slopes.
Rationale: A range-restricted species (EOO < 500 km^2), with all known subpopulations protected within the Groot Winterhoek Wilderness Area.

[F] **Phylica tubulosa** Schltr.

Status: **DD**D
N.A. Helme & D. Raimondo

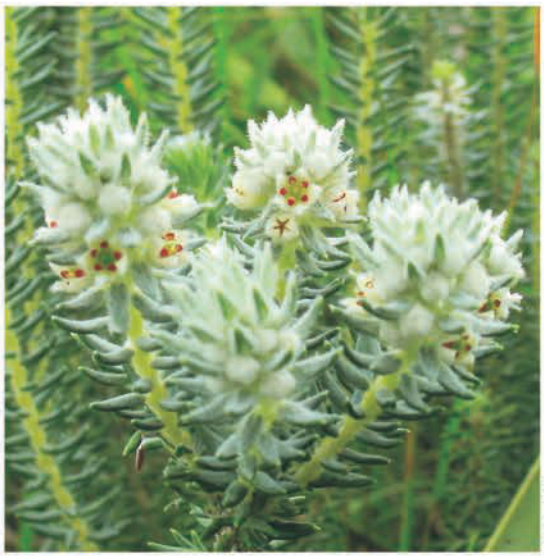
eDistribution: WC. Riviersonderend Mountains.
Habitat: High sandstone slopes.
Rationale: Known only from the type, collected in 1896. This species is likely to be threatened by invading alien plants, but not enough information is available to determine its status.

Phylica tysonii Pillans var. **brevifolia** Pillans

Status: **DD**D
L. von Staden & J.E. Victor

eDistribution: EC. Cala to Ugie and Maclear.

Plate 85



A.T.D. Abbott

Phylica natalensis VU



C. Paterson-Jones

Phylica nigrita NT



J.H. Vlok

Phylica velutina NT



J.H. Vlok

Phylica nigromontana Rare



N.A. Helme

Phylica retrorsa VU



C. Paterson-Jones

Phylica plumosa var. *horizontalis* VU



N.A. Helme

Phylica greyii EN



J.H. Vlok

Phylica curvifolia Rare

Plate 86



J.H. Vlok

Cliffortia nivenioides VU



N.A. Helme

Cliffortia anthospermoides EN



A.L. Schutte-Vlok

Cliffortia alata VU



R.C. Turner

Cliffortia ericifolia EN



N.A. Helme

Cliffortia dichotoma VU

Habitat: Unknown.
Rationale: Collections are old, and locality information is insufficient to determine the distribution and the habitat of this taxon accurately. It occurs at high altitudes (> 2 000 m), where commercial forestry plantations are a potential threat.

Phylica tysonii Pillans var. **tysonii**

Status: **DD**D
F. Daniels
[e]**Distribution:** EC. Ngele Mountain.
Habitat: Unknown.
Rationale: Known only from the type, collected in 1883. Not enough is known about the distribution and habitat of this taxon to determine its status.

[F] **Phylica variabilis** Pillans

Status: **Rare**
N.A. Helme
[e]**Distribution:** WC. Hottentots Holland Mountains.
Habitat: High sandstone slopes.
Rationale: A range-restricted species (EOO < 200 km^2) that is not threatened.

[F] **Phylica velutina** Sond. **Plate 85**

Status: **NT** A2c; B1ab(ii,iii,iv,v)
N.A. Helme
[e]**Distribution:** WC. Swellendam to Ruitersbos.
Habitat: Stony clay and sandstone slopes at low to medium elevation.
Rationale: A population reduction of 20–30% is estimated based on loss of lowland habitat to crop cultivation and urban expansion over the past 120 years (generation length > 50 years). EOO 2 850 km^2. An estimated 15–20 remaining locations continue to decline because of ongoing habitat loss.

[F] **Phylica virgata** (Eckl. & Zeyh.) D.Dietr.

Status: **Rare**
N.A. Helme
[e]**Distribution:** WC. Houwhoek to Hermanus Mountains.
Habitat: Sandstone slopes.
Rationale: A range-restricted species (EOO < 470 km^2) that has lost some habitat to afforestation in the past, but is not currently threatened or declining.

RHIZOPHORACEAE

Cassipourea Aubl.

Cassipourea flanaganii (Schinz) Alston

Status: **EN** A4acd; C1+2a(i)
V.L. Williams, D. Raimondo, A.P. Dold, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya
[e]**Distribution:** EC KZN. King William's Town to southern KwaZulu-Natal.
Habitat: Evergreen primary and secondary forest from coast to 900 m, also in southern mistbelt forest.
Rationale: A population reduction of at least 50% over the past 100 years is suspected based on volumes of bark harvested for the local traditional medicinal plant trade, and is expected to continue at the same rate for the next 50 years because of the popularity of this species (generation length 50 years). In addition, we estimate that the population consists of less than 2 500 mature individuals and that no subpopulation has more than 250 mature individuals, based on surveys conducted in the Eastern Cape Province.

[F] **Cassipourea gummiflua** Tul. var. **verticillata** (N.E.Br.) J.Lewis

Status: **VU**[*] A4acd
V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya
Distribution: EC KZN. Port St Johns to KwaZulu-Natal and through Mozambique to Tanzania and Mascarene Islands.
Habitat: Evergreen forest, riverine and swamp forest. Moist scarp forest and coastal lowland forest.
Rationale: A reduction in the national population of at least 50% is suspected to be reached within the next 50 years owing to habitat loss as a result of deforestation and the popularity of this taxon in the medicinal trade (generation length 50 years). Downgraded to VU as the taxon occurs over the border into neighbouring Mozambique.

[F] **Cassipourea malosana** (Baker) Alston

Status: **Declining**
V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya
Distribution: EC KZN LM MP. Port St Johns district in the Eastern Cape to Limpopo Province and northwards to Ethiopia.
Habitat: In the understorey of afromontane forest or in thickets on rocky outcrops in Mpumalanga, also in coastal and midland forests in KwaZulu-Natal.
Rationale: Traded locally for medicinal purposes. Subpopulations in Mpumalanga are relatively undamaged and the species is widespread. However, local declines of around 20% due to bark harvesting have been observed in some KwaZulu-Natal subpopulations over the last three generations (150 years) and an overall, continuing decline is suspected.

RHYNCHOCALYCACEAE

Rhynchocalyx Oliv.

Rhynchocalyx lawsonioides Oliv.

Status: **NT** B1ab(iii,v)
J.E. Victor, L. von Staden & A.E. van Wyk
[e]**Distribution:** EC KZN. Oribi Gorge to Port St Johns.
Habitat: Pondoland scarp forest, in upper margins of forests above deep river gorges and along the margins of kloof forests.
Rationale: EOO 2 500 km^2. An estimated more than 10 locations remain in a highly threatened and restricted habitat. Habitat quality and number of mature individuals continue to decline because of too frequent and intense grassland fires that have an impact on forest margins, harvesting for firewood and building materials, and invasion by alien plants.

ROSACEAE

Cliffortia L.

[F] **Cliffortia acanthophylla** C.M.Whitehouse

Status: **EN** B1ab(ii,iii)
P.A. Manyama & D. Raimondo
[e]**Distribution:** WC. Northern Olifants River Mountains around Graafwater and Cederberg between Sneeuberg and Middelberg.
Habitat: Fynbos on deep, well-drained sands derived from Table Mountain Sandstone, 300–1 600 m.
Rationale: A recently described species (EOO 1 300 km^2), possibly extant at three locations. It is likely to be declining because of ongoing habitat loss to rooibos tea and potato cultivation.

Cliffortia acockii Weim.

Status: **CR** B1ab(iii)+2ab(iii); C2a(i,ii); D
N.A. Helme & C.M. Whitehouse

e**Distribution:** WC. Joostenberg and Klapmuts.

Habitat: Renosterveld, on low clay hills.

Rationale: EOO 76 km^2. One small subpopulation of less than 40 plants remains at a single location after > 95% of the lowland habitat of this species has been lost to agriculture and urban expansion over the past 100 years. It continues to decline as a result of invasion by alien plants, grazing by livestock and expanding crop cultivation.

Cliffortia aculeata Weim.

Status: **Rare**
C.M. Whitehouse & J.E. Victor

e**Distribution:** WC. Groot Swartberg Mountains.

Habitat: Seepages on upper sandstone slopes.

Rationale: A range-restricted habitat specialist (EOO 375 km^2) that is not threatened.

Cliffortia alata N.E.Br. **Plate 86**

Status: **VU** D2
J.H. Vlok & D. Raimondo

e**Distribution:** WC. Langeberg Mountains.

Habitat: Lower northern slopes on shale-sandstone transition.

Rationale: Three known locations are potentially threatened by heavy grazing pressure from livestock.

F **Cliffortia anthospermoides** Fellingham **Plate 86**

Status: **EN** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)
N.A. Helme & D. Raimondo

e**Distribution:** WC. Gansbaai.

Habitat: Fynbos on brown, sandy soil on slight slopes, 50–250 m.

Rationale: EOO 50 km^2, AOO < 50 km^2. Known from four locations. A subpopulation at one location was lost to road widening, two are threatened by coastal development and invading alien plants, and the last subpopulation is protected within the private nature reserve at Grootbos.

F **Cliffortia apiculata** Weim.

Status: **CR** A2ac; B1ab(iii)+2ab(iii)
C.M. Whitehouse & D. Raimondo

e**Distribution:** WC. Palmiet River Valley, between Elgin, Arieskraal and Fairy Glen.

Habitat: Lower shale slopes.

Rationale: A population reduction of at least 80% is estimated based on > 90% habitat loss to apple orchards in the Elgin Valley over the past 70 years (generation length 50 years). EOO 55 km^2, AOO < 3 km^2. Five severely fragmented remaining subpopulations continue to decline as a result of invasion by alien plants.

Cliffortia arborea Marloth

Status: **VU** B1ab(iii,v)
C.M. Whitehouse & D. Raimondo

e**Distribution:** WC. Hantamsberg Mountain to Nuweveld Mountains.

Habitat: Cliffs and ledges of dolerite, sandstone, and shale escarpment.

Rationale: EOO 7 600 km^2. Fewer than 10 known locations continue to decline because of inappropriate fire management and harvesting for firewood.

Cliffortia burgersii E.G.H.Oliv. & Fellingham

Status: **EN** D
C.M. Whitehouse & J.E. Victor

e**Distribution:** WC. De Hoop Nature Reserve.

Habitat: Limestone and adjacent sands.

Rationale: Only one subpopulation of between 100 and 200 mature individuals is known.

Cliffortia carinata Weim.

Status: **Rare**
C.M. Whitehouse & J.E. Victor

e**Distribution:** WC. Cape Peninsula.

Habitat: Sandstone slopes in fynbos.

Rationale: A range-restricted Peninsula endemic (EOO < 150 km^2) that is not threatened.

F **Cliffortia ceresana** C.M.Whitehouse

Status: **Rare**
P.A. Manyama

e**Distribution:** WC. Hex River Mountains, north through the Witzenberg range to Groot Winterhoek Mountains.

Habitat: Fynbos on rocky shale slopes and amongst rocks, 350–1 850 m.

Rationale: A range-restricted species (EOO < 500 km^2) that is not threatened as it is a resprouter and is not vulnerable to too frequent fires.

Cliffortia conifera E.G.H.Oliv. & Fellingham

Status: **EN** D
C.M. Whitehouse & J.E. Victor

e**Distribution:** WC. Anysberg.

Habitat: Cliffs on upper sandstone slopes.

Rationale: One subpopulation of less than 250 mature individuals is known.

F **Cliffortia crassinervis** Weim.

Status: **Rare**
C.M. Whitehouse & J.E. Victor

e**Distribution:** WC. Klein Swartberg Mountains.

Habitat: Fynbos, upper sandstone slopes.

Rationale: A range-restricted species (EOO < 50 km^2) that is not threatened.

F **Cliffortia cruciata** C.M.Whitehouse

Status: **VU** D2
P.A. Manyama

e**Distribution:** WC. Wildepaardeberg on the northern slopes of Jonaskop in the Riviersonderend Mountains.

Habitat: Deep sandy plateau, acid sands from Table Mountain Sandstone, 900–1 000 m.

Rationale: A very narrow endemic (EOO and AOO < 10 km^2), known from one location where it is potentially threatened by too frequent fires.

Cliffortia curvifolia Weim.

Status: **EN** B1ab(ii,iii)
C.M. Whitehouse & D. Raimondo

e**Distribution:** WC. Bredasdorp region, Elim to Potberg.

Habitat: Acid sand flats.

Rationale: EOO 1 150 km^2. Four known locations continue to decline because of ongoing habitat loss and degradation as a result of expanding vineyards and protea cultivation, overgrazing, invasion by alien plants and inappropriate fire management.

[F] **Cliffortia dichotoma** Fellingham **Plate 86**

Status: **VU** D2

N.A. Helme & D. Raimondo

[e]**Distribution:** NC. Bokkeveld Escarpment.

Habitat: Arid fynbos on sandstone soils, growing in a narrow band on the edge of steep cliffs.

Rationale: EOO and AOO < 5 km^2. One subpopulation occurring along a narrow band on the edge of the Bokkeveld Escarpment is potentially threatened by climate change.

Cliffortia ericifolia L.f. **Plate 86**

Status: **EN** B1ab(ii,iii,v)

N.A. Helme, C.M. Whitehouse, D. Raimondo & J.E. Victor

[e]**Distribution:** WC. Philadelphia to Cape Peninsula and Agulhas Plain.

Habitat: Seasonally wet sands over clays, or acid sands.

Rationale: Specimen records indicate that it was once common on seasonally inundated areas on the Cape Flats, but it now remains on four small fragments, three of which are declining as a result of urban expansion and invasion by alien plants. A recent (2006) discovery of this species on the Agulhas Plain has extended its range considerably (EOO 3 500 km^2), but subpopulations on the Agulhas Plain are also threatened by invading alien plants.

[F] **Cliffortia esterhuyseniae** Weim.

Status: **Rare**

C.M. Whitehouse & J.E. Victor

[e]**Distribution:** WC. Hex River Mountains.

Habitat: Shale band beneath sandstone cliffs and in fire-free areas on the cliffs.

Rationale: A range-restricted habitat specialist (EOO 418 km^2) that is not threatened.

[F] **Cliffortia grandifolia** Eckl. & Zeyh. var. **grandifolia**

Status: **Rare**

C.M. Whitehouse & J.E. Victor

[e]**Distribution:** WC. Langeberg and Garcia's Pass.

Habitat: Moist mountain slopes, southern aspects at medium altitude.

Rationale: EOO < 500 km^2. Restricted to the southern slopes of the Langeberg around Swellendam, with a single collection further east from near Meul River. There probably are no more subpopulations as it is a prominent and distinctive taxon that is unlikely to have been overlooked. No known threats.

[F] **Cliffortia heterophylla** Weim.

Status: **Rare**

C.M. Whitehouse & J.E. Victor

[e]**Distribution:** WC. Kogelberg Nature Reserve.

Habitat: Fynbos, on south-facing sandstone slopes.

Rationale: A range-restricted species (EOO < 200 km^2) that is not threatened.

[F] **Cliffortia hirta** Burm.f.

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

C.M. Whitehouse, D. Raimondo & N.A. Helme

[e]**Distribution:** WC. Bokbaai to Cape Peninsula.

Habitat: Seasonally wet sands over clays, or acid sands.

Rationale: EOO 320 km^2, AOO < 320 km^2. Six severely fragmented remaining subpopulations continue to decline because of habitat loss to urban development and invasion by alien plants.

[F] **Cliffortia incana** Weim.

Status: **VU** D2

C.M. Whitehouse & J.E. Victor

[e]**Distribution:** WC. Mouth of the Breede River.

Habitat: Neutral sands with underlying limestone.

Rationale: One known location (AOO and AOO 5 km^2) is potentially threatened by invasive alien plants.

[F] **Cliffortia integerrima** Weim.

Status: **VU** A2abc

C.M. Whitehouse, D. Raimondo & D.A. Kamundi†

[e]**Distribution:** WC. Cape Peninsula.

Habitat: Clay soil on shale bands in Table Mountain Sandstone.

Rationale: A population reduction of at least 30% is estimated based on local extinctions of subpopulations known through historical records due to urban expansion on the lower slopes of Table Mountain over the past 120 years (generation length 70 years).

[F] **Cliffortia lanceolata** Weim.

Status: **Rare**

C.M. Whitehouse & J.E. Victor

[e]**Distribution:** WC. Langeberg Mountains, between Leeurivierberg and Suurbraak and at Garcia Forest Station.

Habitat: Moist montane fynbos, often on shale bands.

Rationale: A range-restricted habitat specialist (EOO < 500 km^2) that is not threatened.

Cliffortia longifolia (Eckl. & Zeyh.) Weim.

Status: **VU** B1ab(ii,iii,iv,v)

C.M. Whitehouse & D. Raimondo

[e]**Distribution:** WC. Coastal areas between Saldanha Bay and Gouritsmond.

Habitat: Wetlands on alkaline coastal sands.

Rationale: EOO 4 500 km^2. Nine known locations continue to decline as a result of ongoing habitat loss to coastal development.

[F] **Cliffortia marginata** Eckl. & Zeyh.

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

C.M. Whitehouse, D. Raimondo & N.A. Helme

[e]**Distribution:** WC. Durbanville to Somerset West.

Habitat: Seasonally wet clay and sand flats.

Rationale: EOO 500 km^2, AOO < 500 km^2. Four locations remain after most of the habitat has been lost to urban development. It continues to decline because of ongoing habitat loss to housing developments, expanding crop cultivation, invasion by alien plants and quarrying.

Cliffortia monophylla Weim.

Status: **VU** B1ab(ii,iii)

C.M. Whitehouse, D. Raimondo & N.A. Helme

[e]**Distribution:** WC. Houwhoek to Napier to Swellendam.

Habitat: Fairly moist shale slopes in lowlands.

Rationale: EOO 2 320 km^2. Nine locations remain after most of the habitat has been lost to wheat cultivation over the past 70 years. It continues to decline as a result of expanding crop cultivation, urban development, lack of fire caused by habitat fragmentation, and invasion by alien plants.

Cliffortia montana Weim.

Status: **Rare**

C.M. Whitehouse, D. Raimondo & N.A. Helme

Distribution: EC WC. Swartberg Mountains and Sneeuberg Mountains around Graaff-Reinet.

Habitat: Sandstone slopes, often in seepage areas.

Rationale: A habitat specialist known from two disjunct areas in the Western and Eastern Cape.

Cliffortia multiformis Weim.

Status: **NT** A4bc; B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

C.M. Whitehouse & D. Raimondo

Distribution: WC. Hermanus to Elim.

Habitat: Lower to middle slopes on shales or sandstone.

Rationale: A population reduction of nearly 30% is projected to be reached within the next 50 years, as this species has already lost 25% of its habitat to crop cultivation, urban expansion and invasion by alien plants over the past 100 years (generation length 50 years). EOO 1 400 km^2, AOO < 1 400 km^2. The remaining 15 locations continue to decline.

Cliffortia nivenioides Fellingham **Plate 86**

Status: **VU** D1

C.M. Whitehouse & D. Raimondo

Distribution: WC. Groot Swartberg Mountains.

Habitat: Seepages on upper sandstone slopes.

Rationale: Known from two sites, each with less than 200 plants.

F **Cliffortia oligodonta** C.M.Whitehouse

Status: **Rare**

C.M. Whitehouse, D. Raimondo & D.A. Kamundi†

Distribution: WC. Wemmershoek Mountains.

Habitat: South-facing slopes and in the shelter of rocks at high altitude, in well-drained rocky soil from Table Mountain Sandstone, 1 450–1 800 m.

Rationale: A range-restricted (EOO < 10 km^2), high-altitude resprouter that is not threatened.

F **Cliffortia ovalis** Weim.

Status: **Rare**

C.M. Whitehouse & J.E. Victor

Distribution: WC. Confined to a very small area in the Hottentots Holland Mountains between the head of the Jonkershoek Valley, Somerset Sneeukop and Victoria Peak.

Habitat: Seepages on upper sandstone slopes.

Rationale: A range-restricted (EOO < 15 km^2) resprouter that is not threatened by too frequent fires.

F **Cliffortia phillipsii** Weim.

Status: **VU** D2

N.A. Helme, C.M. Whitehouse & D. Raimondo

Distribution: WC. Hottentots Holland Mountains, between Helderberg and Franschhoek.

Habitat: Lower clay slopes.

Rationale: Fewer than five remaining locations are potentially threatened by a too frequent fires and invading alien plants. Subpopulations near Paarl and Klapmuts are now locally extinct because of crop cultivation, forestry and urban development, but the remaining population appears stable.

F **Cliffortia pilifera** Bolus

Status: **VU** D2

C.M. Whitehouse & J.E. Victor

Distribution: WC. Bain's Kloof Mountains.

Habitat: Moist sandstone fynbos.

Rationale: A range-restricted species (EOO and AOO < 18 km^2), occurring at two known locations where it is potentially threatened by too frequent fires and invasion by alien plants.

F **Cliffortia prionota** C.M.Whitehouse

Status: **Rare**

C.M. Whitehouse, D. Raimondo & D.A. Kamundi†

Distribution: WC. Kogelberg Nature Reserve.

Habitat: Clayish soil on shale bands of Table Mountain Sandstone rocks in full sun, 50–350 m.

Rationale: A range-restricted resprouter (EOO 98 km^2) that is protected within the Kogelberg Biosphere Reserve and not threatened by too frequent fires.

F **Cliffortia recurvata** (Weim.) C.M.Whitehouse

Status: **VU** D2

C.M. Whitehouse & D. Raimondo

Distribution: WC. Kogelberg, between Steenbras and Palmiet Rivers.

Habitat: Sandstone slopes.

Rationale: A rare, range-restricted reseeder (EOO 16 km^2, AOO 5 km^2) that is potentially threatened by too frequent fires.

F **Cliffortia reniformis** (Weim.) C.M.Whitehouse

Status: **VU** D2

C.M. Whitehouse & J.E. Victor

Distribution: WC. Langeberg Mountains, Garcia's Pass.

Habitat: Fynbos, on lower sandstone slopes.

Rationale: A range-restricted species (EOO and AOO < 20 km^2), known to occur at one location where it is potentially threatened by invading alien plants and inappropriate fire management.

F **Cliffortia ruscifolia** L. var. **purpurea** Weim.

Status: **Rare**

C.M. Whitehouse & J.E. Victor

Distribution: NC. Bokkeveld Escarpment near Nieuwoudtville.

Habitat: Acid sands from Table Mountain Sandstone.

Rationale: A range-restricted taxon (EOO < 10 km^2) that is protected within the Oorlogskloof Nature Reserve.

F **Cliffortia scandens** C.M.Whitehouse

Status: **VU** D2

N.A. Helme & P.A. Manyama

Distribution: WC. Riviersonderend Mountains.

Habitat: Fynbos on rocky south-facing slopes, 650–1 250 m.

Rationale: Two known locations are potentially threatened by invading alien plants and too frequent fires.

F **Cliffortia schlechteri** (Weim.) C.M.Whitehouse

Status: **NT** B1ab(iii)

P.A. Manyama & D. Raimondo

Distribution: WC. Widespread on the Agulhas Plain from Gansbaai to Gouritsmond.

Habitat: Fynbos on very well-drained, windblown sand and limestone-derived soil, 0–300 m.

Rationale: EOO 6 000 km^2. A fairly common species in suitable habitat that is suspected to occur at 10–20 locations. It is declining as a result of ongoing habitat loss to crop cultivation and coastal development, invasion by alien plants and too frequent fires.

[F] **Cliffortia setifolia** Weim.

Status: **Rare**

C.M. Whitehouse & J.E. Victor

[e]**Distribution:** WC. Klein Swartberg and Groot Swartberg Mountains.

Habitat: South-facing rocky areas on mountain peaks at high altitudes.

Rationale: A high-altitude habitat specialist that occurs in fire refugia and is not threatened.

[F] **Cliffortia sp. nov.**

Voucher: *Whitehouse 145* BOL

Status: **CR** A2c; B1ab(ii,iii,v)+2ab(ii,iii,v)

N.A. Helme, C.M. Whitehouse & D. Raimondo

[e]**Distribution:** WC. Bot River to Bot River Vlei.

Habitat: Ferricrete gravels with associated shales and acid sand.

Rationale: Although this is a recently discovered species, a past population reduction of at least 80% is suspected based on > 95% habitat loss to crop cultivation and urban expansion over the past 100 years (generation length > 50 years). EOO 20 km^2, AOO < 5 km^2. Three isolated, severely fragmented remaining subpopulations are expected to continue to decline as a result of infrastructure development and invasion by alien plants. Some 10% of one subpopulation is to be lost to the development of a polo field.

Cliffortia strigosa Weim.

Status: **Rare**

C.M. Whitehouse & J.E. Victor

[e]**Distribution:** WC. Limietberg.

Habitat: Moist sandstone fynbos, often on shaded slopes.

Rationale: A range-restricted resprouter (EOO < 15 km^2) that is not threatened by too frequent fires.

[F] **Cliffortia tenuis** Weim.

Status: **VU** A2ac; B1ab(ii,iii,v)+2ab(ii,iii,v)

N.A. Helme, C.M. Whitehouse & D. Raimondo

[e]**Distribution:** WC. Elim Flats.

Habitat: Lowland clays, often seasonally wet.

Rationale: A population reduction of at least 30% over the past 120 years is estimated based on > 30% habitat loss to crop cultivation (generation length > 50 years). EOO 1 742 km^2, AOO < 1 742 km^2. Six remaining locations continue to decline because of ongoing habitat loss to vineyard expansion and protea cultivation.

[F] **Cliffortia verrucosa** Weim.

Status: **Rare**

C.M. Whitehouse & J.E. Victor

[e]**Distribution:** WC. Northern slopes of the Swartberg.

Habitat: Middle to upper sandstone slopes in arid fynbos.

Rationale: A range-restricted species (EOO 137 km^2) that is not threatened.

[F] **Cliffortia viridis** Weim.

Status: **VU** D2

C.M. Whitehouse & D. Raimondo

[e]**Distribution:** WC. Kogelberg.

Habitat: Damp, shaded sandstone gullies, 300–1 000 m.

Rationale: Two known locations are potentially threatened by invading alien plants and too frequent fires. This area has experienced at least three fires in the past 10 years. These recent fires have been hot summer fires that burn into the damp kloof habitat where this fire-sensitive species occurs.

[F] **Cliffortia weimarckii** C.M.Whitehouse

Status: **Rare**

P.A. Manyama

[e]**Distribution:** WC. Hex River Mountains and the highest peaks of the Kouebokkeveld and Groot Winterhoek Mountains, possibly also Baviaansberg and Langberg in the Cederberg.

Habitat: Montane fynbos on well-drained acid sands derived from Table Mountain Sandstone, 1 200–2 250 m.

Rationale: A high-altitude habitat specialist that occurs in widely disjunct subpopulations, but is not threatened.

Prunus L.

[F] **Prunus africana** (Hook.f.) Kalkman **Plate 78**

Status: **VU** A4acd; C1+2a(i)

V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya

Distribution: EC FS G KZN LM MP NW WC. Widespread in Africa from the southern Cape, through KwaZulu-Natal, Swaziland and northwards into Zimbabwe and central Africa and the islands of Madagascar and Comoros.

Habitat: Evergreen forests near the coast, inland mistbelt forests and afromontane forests up to 2 100 m.

Rationale: The bark of *P. africana* is popular in traditional medicine, and this species is over-exploited in at least half the countries where it occurs. The popularity of *P. africana* bark in South African traditional medicinal trade is increasing, and there has already been a 50% population reduction in KwaZulu-Natal, where it is now locally extinct in more than half the forests in which it used to occur. Tree densities in South African forests are low, and it is reported to be declining or scarce in at least 40% of the quarter degree squares in which it has been recorded. It is inferred that a reduction in the South African population will exceed 30% within the next 60 years, as a continuation of population declines over the past 60 years (generation length 40 years). Surveys indicate that subpopulations are small, with between 40 and 400 trees per quarter degree square and based on this evidence, it is suspected that the South African population does not exceed 10 000 mature individuals. As a result of the overexploitation and decline of this species elsewhere in the range, the national assessment is not downgraded.

Rubus L.

[F] **Rubus intercurrens** Gust.

Status: **DD**

D. Raimondo & F. Cholo

[e]**Distribution:** EC. Fort Cunningham Station.

Habitat: Unknown.

Rationale: Known only from the type, collected in 1898. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

RUBIACEAE

Alberta E.Mey.

Alberta magna E.Mey. **Plate 78**

Status: **NT** B2ab(ii,iii,v)

L. von Staden & C.R. Scott-Shaw

[e]**Distribution:** EC KZN. Lusikisiki to Nkandla, and Ngome.

Habitat: Evergreen bush and forest margins, and wooded ravines, usually near streams or on moist soils in drainage lines, from the coast up to 1 300 m.
Rationale: Restricted to a highly specialised habitat on the margins of scarp forests in KwaZulu-Natal and Pondoland. Although quite widespread (EOO 22 000 km^2) and fairly common (known from 20–40 locations), the AOO is small (< 550 km^2) and there is a continuing decline due to too frequent grassland fires that have an impact on forest margins. Although forest patches are fairly isolated in many areas, subpopulations are not considered to be severely fragmented as seeds are wind dispersed.

Anthospermum L.

[F] **Anthospermum ericifolium** (Licht. ex Roem. & Schult.) Kuntze

Status: **EN** B1ab(ii,iii,iv,v)
P.A. Manyama & D. Raimondo

[e]**Distribution:** WC. Malmesbury to Cape Flats and Caledon.
Habitat: Sandy to gravelly soil, mostly in sandveld fynbos.
Rationale: EOO 1 700 km^2. Five locations remain after significant amounts of habitat were lost to urban development, crop cultivation and afforestation. It continues to decline owing to invasion by alien plants and urban expansion.

[F] **Anthospermum esterhuysenianum** Puff var. **hirsutum** Puff

Status: **Rare**
D. Raimondo, F. Cholo & D.A. Kamundi†

[e]**Distribution:** WC. Central Cederberg and the Skurweberg in the northern Kouebokkeveld.
Habitat: Rocky places.
Rationale: A range-restricted taxon (EOO 10 km^2) with no known threats.

Anthospermum streyi Puff

Status: **Rare**
L. von Staden

[e]**Distribution:** EC KZN. Pondoland endemic, Oribi Gorge to Cutweni.
Habitat: Sheets of exposed Msikaba Formation Sandstone rock in Pondoland coastal grassland, at the edges of cliffs and along forest margins, 100–600 m.
Rationale: A habitat specialist that occurs in a sheltered habitat among rocks where it is unlikely to be affected by too frequent and intense fires, cultivation or grazing.

Canthium Lam.

[F] **Canthium vanwykii** Tilney & Kok

Status: **NT** B1ab(iii,v)+2ab(iii,v)
L. von Staden & A.T.D. Abbott

[e]**Distribution:** EC KZN. Oribi Gorge to Lusikisiki.
Habitat: Forest margins or more rarely in fire-protected rocky crevices in grassland on Msikaba Formation Sandstone.
Rationale: EOO 2 000 km^2, AOO < 2 000 km^2. A range-restricted Pondoland endemic occurring in a highly threatened and restricted habitat, but suspected to occur at more than 10 locations. It continues to decline because of habitat loss and degradation caused by too frequent and intense grassland fires that have an impact on forest margins.

Carpacoce Sond.

Carpacoce gigantea Puff

Status: **Rare**
N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Langeberg Mountains near Swellendam.
Habitat: Moist, well-drained mountain slopes.
Rationale: A range-restricted species (EOO < 70 km^2) with no known threats.

[F] **Carpacoce scabra** (Thunb.) Sond. subsp. **rupestris** Puff

Status: **Rare**
D. Raimondo, F. Cholo & D.A. Kamundi†

[e]**Distribution:** WC. Mountains around Worcester and on the Witzenberg range.
Habitat: High-altitude rocky slopes and ledges.
Rationale: A high-altitude habitat specialist with no known threats.

Eriosemopsis Robyns

Eriosemopsis subanisophylla Robyns

Status: **VU** A2c; B1ab(iii)+2ab(iii)
L. von Staden

[e]**Distribution:** EC KZN. Southern KwaZulu-Natal and Pondoland, from Umgai in the Umzinto district southwards to the Mtentu River.
Habitat: Sandstone grasslands, including Natal Group and Msikaba Formation. Gentle slopes and plateaus and well-drained soils, 200–900 m.
Rationale: A population reduction of at least 30% is estimated based on habitat loss, local extinction of subpopulations known through historical records and range reduction over the past 100 years. This is a long-lived, woody, suffrutescent grassland forb, and generation length is estimated as at least 50 years. Former EOO 1 040 km^2, but may now be as little as 360 km^2 as a result of extensive declines in the northern parts of the range and along the KwaZulu-Natal south coast, mainly due to habitat loss to sugarcane cultivation and coastal development, and fewer than 10 locations remain. It continues to decline because of ongoing habitat loss and degradation caused by coastal development, subsistence agriculture, overgrazing and too frequent fires.

Galium L.

Galium bredasdorpense Puff

Status: **Rare**
D. Raimondo

[e]**Distribution:** WC. Agulhas to Infanta.
Habitat: Confined to inland limestone cliffs.
Rationale: A range-restricted (EOO < 50 km^2, AOO < 10 km^2) habitat specialist that is not threatened in its inaccessible habitat.

[F] **Galium rourkei** Puff

Status: **Critically Rare**
N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Kogelberg.
Habitat: Grows in permanent shade under damp cliffs.
Rationale: Known to occur in one small area (EOO 2 km^2) in the Kogelberg Biosphere Reserve where it is not threatened.

[F] **Galium subvillosum** Sond. var. **subglabrum** Puff

Status: **Rare**

D.A. Kamundi†, N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Bain's Kloof to Lemoenshoek Peak in the Langeberg.

Habitat: Grows in damp, shady places at the base of cliffs along watercourses.

Rationale: A rare habitat specialist that has no known threats.

Nenax Gaertn.

[F] **Nenax elsieae** Puff

Status: **Rare**

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Swartruggens to Bonteberg.

Habitat: Dry, rocky fynbos on quartzite.

Rationale: A range-restricted species (EOO < 500 km^2) with no known threats.

[F] **Nenax hirta** (Cruse) T.M.Salter subsp. **calciphila** Puff

Status: **NT** B1ab(ii,iii,v)+2ab(ii,iii,v)

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Jacobsbaai to Saldanha to Yzerfontein.

Habitat: Strandveld on calcrete.

Rationale: EOO and AOO < 800 km^2. Less than 20 locations continue to decline because of coastal and industrial development and mining. There has been a 10% reduction of the population due to housing developments at Jacobsbaai and development around the iron ore terminal in Saldanha.

[F] **Nenax sp. nov.**

Voucher: *Levyns 9200* BOL

Status: **VU** D2

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Riviersonderend Mountains.

Habitat: Sandstone slopes.

Rationale: One known location (EOO < 10 km^2) is potentially threatened by invasive alien plants.

Pavetta L.

[F] **Pavetta tshikondeni** N.Hahn

Status: **Rare**

P.A. Manyama

[e]**Distribution:** LM. Near the Levuvhu and Mutale Rivers in the vicinity of Punda Maria, northern Kruger National Park.

Habitat: Rocky areas, often on steep slopes, in *Androstachys* woodland.

Rationale: A rare, range-restricted species (EOO 60 km^2) that is not threatened.

[F] **Pavetta zeyheri** Sond. subsp. **microlancea** (K.Schum.) P.P.J.Herman

Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v)

P.A. Manyama

[e]**Distribution:** MP. Sabie, Komatipoort and Crocodile Bridge.

Habitat: Rocky slopes or loamy flats.

Rationale: EOO and AOO < 32 km^2. Three known locations continue to decline because of habitat loss to sugarcane cultivation.

[F] **Pavetta zeyheri** Sond. subsp. **middelburgensis** (Bremek.) P.P.J.Herman

Status: **VU** D2

P.A. Manyama & D. Raimondo

[e]**Distribution:** MP. Middelburg district.

Habitat: Outcrops of rocks and boulders or rocky sheets.

Rationale: EOO < 100 km^2, AOO < 20 km^2. Three known locations are potentially threatened by mining and expanding forestry plantations and crop cultivation.

Tricalysia A.Rich. ex DC.

Tricalysia africana (Sim) Robbr.

Status: **EN** C2a(i)

L. von Staden & A.T.D. Abbott

[e]**Distribution:** EC. Mtentu River to Magwa Gorge.

Habitat: Pondoland scarp forest, in margins and forest undergrowth on Msikaba Formation Sandstone.

Rationale: A range-restricted species that occurs in small subpopulations of less than 20 mature individuals in highly threatened forest margins along four river gorges in Pondoland. Total population is estimated not to exceed 1 000 mature individuals. There is a continuing decline as a result of harvesting for firewood and too frequent and intense grassland fires that have an impact on the forest margins. Also potentially threatened by invasive alien plants.

Vangueria Comm. ex Juss.

[F] **Vangueria soutpansbergensis** N.Hahn

Status: **Rare**

F. Cholo & D.A. Kamundi†

[e]**Distribution:** LM. Soutpansberg Mountains.

Habitat: Mixed woodlands on rocky slopes, found only on soils derived from quartzite, 1 440 m.

Rationale: A locally common but range-restricted (EOO 186 km^2) species that is not threatened.

RUTACEAE

Acmadenia Bartl. & H.L.Wendl.

Acmadenia alternifolia Cham.

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

D. Raimondo & J.E. Victor

[e]**Distribution:** WC. Knysna River and Keurbooms River.

Habitat: Coastal headlands and steep slopes, exposed positions on dry coastal cliffs from Knysna to Plettenberg Bay.

Rationale: EOO 800 km^2, AOO 14 km^2. Small, severely fragmented subpopulations at four known locations continue to decline because of coastal development and invasion by alien plants.

Acmadenia argillophila I.Williams

Status: **VU** D2

D. Raimondo & T. Trinder-Smith

[e]**Distribution:** WC. Touwsrivier and Anysberg Nature Reserve.

Habitat: Renosterveld on shales.

Rationale: There has been a severe decline at the type locality, Boesmansgat quarry, over the past 30 years as a result of quarrying, with only seven plants now remaining at this location, but the threat has ceased. Four known locations are potentially threatened by grazing by livestock.

F **Acmadenia bodkinii** (Schltr.) Strid

Status: **Rare**

N.A. Helme & D. Raimondo

e**Distribution:** WC. Cederberg.

Habitat: Rock crevices on upper slopes.

Rationale: A range-restricted species (EOO < 18 km^2) that occurs at high altitudes in a fire refuge habitat where it is not threatened.

F **Acmadenia burchellii** Dummer

Status: **Rare**

J.E. Victor & N.A. Helme

e**Distribution:** WC. Langeberg Mountains near Riversdale.

Habitat: Mesic proteoid fynbos.

Rationale: A range-restricted species (EOO 198 km^2) with no known threats.

Acmadenia candida I.Williams

Status: **EN** D

A. Johns, C. Paterson-Jones, T. Trinder-Smith & D. Raimondo

e**Distribution:** WC. Hottentots Holland Mountains.

Habitat: Marsh in level areas, amongst low, dense restios, 1 070 m.

Rationale: Formerly thought extinct, but two small subpopulations of less than 100 mature individuals in total have been rediscovered. Potentially threatened by too frequent fires, invading alien pines and trampling by hikers.

Acmadenia densifolia Sond.

Status: **NT** B1ab(ii,iii,iv,v)

D. Raimondo

e**Distribution:** WC. Bredasdorp to Still Bay and Albertinia.

Habitat: Limestone hills.

Rationale: EOO < 2 250 km^2. The 15 known locations continue to decline because of invasion by alien plants, overgrazing and coastal development around Still Bay.

F **Acmadenia faucitincta** I.Williams

Status: **VU** D2

J.E. Victor & N.A. Helme

e**Distribution:** WC. Blokkop above Villiersdorp.

Habitat: Sandstone slopes in fynbos.

Rationale: EOO and AOO < 10 km^2. One known location is potentially threatened by too frequent fires and invasive alien plants.

F **Acmadenia fruticosa** I.Williams **Plate 87**

Status: **VU** B1ab(iii,v); D1

J.H. Vlok & D. Raimondo

e**Distribution:** WC. Montagu to Ladismith.

Habitat: Dry, shallow quartzite soils on Table Mountain Sandstone series, 600–1 200 m.

Rationale: EOO 3 776 km^2. A population of less than 1 000 mature individuals continues to decline at 10 known locations because of expanding crop cultivation and overgrazing.

Acmadenia gracilis Dummer

Status: **VU** D2

J.E. Victor, J.H. Vlok & D. Raimondo

e**Distribution:** WC. Outeniqua Mountains.

Habitat: Mountain summit and north-facing slopes close to wet areas.

Rationale: Four known locations are potentially threatened by invasive alien plants.

Acmadenia kiwanensis I.Williams

Status: **CR** B1ab(iii)

J.E. Victor

e**Distribution:** EC. Between the Keiskamma and Chalumna Rivers.

Habitat: Relict fynbos surrounded by mixed grassland in shallow soil on flat quartzitic sandstone.

Rationale: EOO < 100 km^2. One subpopulation at one known location is declining because of overgrazing and inappropriate fire management.

F **Acmadenia latifolia** I.Williams **Plate 87**

Status: **VU** D2

D. Raimondo & N.A. Helme

e**Distribution:** WC. Gysmanshoek Pass and Muiskraal.

Habitat: North-facing sandstone slopes below 500 m.

Rationale: Three known locations are potentially threatened by invading alien plants and expanding crop cultivation.

Acmadenia laxa I.Williams **Plate 87**

Status: **EN** B1ab(iii)+2ab(iii)

D. Raimondo & J.H. Vlok

e**Distribution:** WC. Swellendam and Buffeljagsrivier.

Habitat: Dry rocky ground, 100–300 m.

Rationale: EOO 165 km^2, AOO < 165 km^2. Fewer than five locations remain after much of the habitat has been lost to crop cultivation and urban expansion in the Swellendam area. It continues to decline owing to invasion by alien plants and only one subpopulation is protected in the Bontebok National Park.

Acmadenia macradenia (Sond.) Dummer

Status: **NT** D2

D. Raimondo

e**Distribution:** WC. Wolseley and Piketberg.

Habitat: Summits of rocky ridges in mountains.

Rationale: Six known locations are potentially threatened by afforestation and invading alien plants.

Acmadenia macropetala (P.E.Glover) Compton **Plate 87**

Status: **VU** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

J.E. Victor

e**Distribution:** WC. Bredasdorp to Cloete's Pass.

Habitat: Quartz outcrops on shale hills.

Rationale: EOO 2 000 km^2, AOO < 2 000 km^2. Fewer than 10 locations continue to decline because of expanding crop cultivation, overgrazing and inappropriate fire management.

Acmadenia maculata I.Williams **Plate 87**

Status: **NT** B1ab(ii,iii,iv,v)

J.E. Victor & D. Raimondo

e**Distribution:** WC. Outeniqua and Kammanassie Mountains.

Habitat: South-facing slopes 600–762 m.

Rationale: EOO < 5 000 km^2. The 10–15 locations continue to decline as a result of expanding crop cultivation and invasion by alien plants.

Acmadenia matroosbergensis E.Phillips

Status: **Rare**

J.E. Victor

e**Distribution:** WC. Kouebokkeveld and Hex River Mountains to Waboomsberg.

Habitat: High altitudes in very rocky places.
Rationale: A high-altitude habitat specialist with no known threats.

Acmadenia mundiana Eckl. & Zeyh. Plate 87

Status: **Rare**
J.E. Victor
e**Distribution:** WC. De Hoop Vlei and Potberg.
Habitat: Limestone hills.
Rationale: A range-restricted species (EOO < 200 km^2) with no known threats.

Acmadenia nivea I.Williams

Status: **VU** D2
J.E. Victor
e**Distribution:** WC. Hottentots Holland Mountains and Kogelberg.
Habitat: Marshy ground in peaty soil, among restios, 1 365 m.
Rationale: EOO and AOO < 20 km^2. Fewer than five known locations are potentially threatened by too frequent fires.

Acmadenia nivenii Sond. Plate 87

Status: **VU** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)
J.H. Vlok & D. Raimondo
e**Distribution:** WC. Langeberg Mountains.
Habitat: Lower northern slopes.
Rationale: EOO and AOO < 60 km^2. Eight known locations continue to decline as a result of invasion by alien plants and too frequent fires.

F **Acmadenia rourkeana** I.Williams

Status: **Rare**
D. Raimondo, F. Cholo & D.A. Kamundi†
e**Distribution:** WC. Central Cederberg.
Habitat: Fynbos, amongst rocks, 900–1 200 m.
Rationale: A range-restricted species (EOO 216 km^2) that occurs in high-altitude sites where it is not threatened.

Acmadenia rupicola I.Williams

Status: **CR** A2a
J.H. Vlok & D. Raimondo
e**Distribution:** WC. Robinson Pass.
Habitat: On rocky sandstone outcrops on a west-facing rocky ridge in montane fynbos, 850 m.
Rationale: A population reduction of > 80% due to too frequent fires and lack of recruitment has been observed over the past 10 years (generation length 30 years). Less than 100 mature individuals remain.

Acmadenia tenax I.Williams

Status: **Critically Rare**
J.E. Victor
e**Distribution:** WC. Hex River Mountains.
Habitat: Vertical cliffs on ledges, or in cracks in Table Mountain Sandstone.
Rationale: Known from one site where it is not threatened as it occurs in a fire refuge habitat.

F **Acmadenia tetracarpellata** I.Williams

Status: **Rare**
J.E. Victor & N.A. Helme
e**Distribution:** WC. Cederberg.
Habitat: Sandy flats, in rocky gullies, often seasonally wet, 900–1 300 m.
Rationale: A range-restricted species (EOO < 200 km^2) with no known threats.

Acmadenia tetragona (L.f.) Bartl. & H.L.Wendl. Plate 87

Status: **VU** B1ab(iii,v)+2ab(iii,v)
J.H. Vlok, A.L. Schutte-Vlok & D. Raimondo
e**Distribution:** WC. Outeniqua Mountains.
Habitat: Sandstone mountain slopes.
Rationale: EOO 100 km^2, AOO < 100 km^2. Seven locations remain after habitat loss to afforestation and invasion by alien plants. It continues to decline because of invading alien plants and ongoing habitat loss to pasture cultivation.

Adenandra Willd.

Adenandra dahlgrenii Strid

Status: **Rare**
J.E. Victor
e**Distribution:** WC. Anysberg.
Habitat: Between rocks and in sandstone fissures on northern slopes, 1 200–1 400 m.
Rationale: A range-restricted (EOO < 100 km^2) habitat specialist with no known threats.

Adenandra gracilis Eckl. & Zeyh.

Status: **DD**D
T. Trinder-Smith & D. Raimondo
e**Distribution:** WC. Riviersonderend Mountains, Pilaarkop.
Habitat: Marshy ground on plateaus above 1 000 m.
Rationale: Last collected in 1947, and not relocated despite botanical surveys of the area. This species is possibly threatened by too frequent fires.

F **Adenandra lasiantha** Sond.

Status: **Rare**
D. Raimondo, F. Cholo & D.A. Kamundi†
e**Distribution:** WC. Bredasdorp and Kleinrivier Mountains.
Habitat: Sandstone fynbos, 90–430 m.
Rationale: A range-restricted species (EOO < 500 km^2) with no known threats.

Adenandra marginata (L.f.) Roem. & Schult. subsp. **mucronata** Strid

Status: **Rare**
J.E. Victor & D. Raimondo
e**Distribution:** WC. Pakhuis Pass and Pakhuis Mountains.
Habitat: In sandy and rocky places on mountain slopes, 700–1 100 m.
Rationale: A range-restricted taxon (EOO < 500 km^2) with no known threats.

Adenandra multiflora Strid

Status: **VU** B1ab(ii,iii,v)+2ab(ii,iii,v)
D. Raimondo
e**Distribution:** WC. Kogelberg to Houwhoek.
Habitat: Shale fynbos on wet slopes.
Rationale: EOO and AOO < 1 200 km^2. Nine known locations are declining because of invasion by alien plants, grazing by livestock and crop cultivation. Afforestation has caused habitat loss in the past.

Adenandra odoratissima Strid subsp. **odoratissima** Plate 89

Status: **VU** D2
J.E. Victor
e**Distribution:** WC. Agulhas National Park, Soetanysberg.

Habitat: Limestone outcrops in restionaceous vegetation.
Rationale: One known location is potentially threatened by invading alien plants. Alien invasions are currently cleared within protected areas, but may re-invade if management practices were to change.

Adenandra odoratissima Strid subsp. **tenuis** Strid

Status: **CR** B1ab(iii)+2ab(iii)
D. Raimondo

[e]**Distribution:** WC. Soetanysberg.
Habitat: Slightly moist sandy flats near coast.
Rationale: EOO and AOO < 10 km^2. This taxon has not been recorded for 25 years at the only known location, which is densely invaded by alien plants.

Adenandra rotundifolia Eckl. & Zeyh. Plate 89

Status: **NT** B1ab(ii,iii,iv,v)
T. Trinder-Smith, N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Agulhas to Cape Infanta.
Habitat: Limestone hills and flats.
Rationale: EOO < 2 700 km^2. The 10–15 locations continue to decline because of severe invasions of alien plants, limestone mining and urban development. Some subpopulations are protected within the De Hoop Nature Reserve.

Adenandra schlechteri Dummer

Status: **EN** B1ab(iii)+2ab(iii)
N.A. Helme, D.I.W. Euston-Brown & D. Raimondo

[e]**Distribution:** WC. Elim.
Habitat: Rocky hills at low altitudes.
Rationale: EOO and AOO < 20 km^2. Two known locations continue to decline as a result of ongoing habitat degradation caused by invasive alien plants. Habitat loss to expanding vineyards is a potential threat: new vineyards have recently been established on the lower slopes of the hills where this species occurs.

Adenandra villosa (P.J.Bergius) Licht. ex Roem. & Schult. subsp. **apiculata** Strid

Status: **Rare**
D. Raimondo & T. Trinder-Smith

[e]**Distribution:** WC. Riviersonderend Mountains and the Langeberg above Swellendam.
Habitat: Dry sandstone sand between rocks, 450–1 500 m.
Rationale: A habitat specialist with no known threats.

Adenandra villosa (P.J.Bergius) Licht. ex Roem. & Schult. subsp. **imbricata** Strid

Status: **Rare**
D. Raimondo

[e]**Distribution:** WC. Slanghoek Mountains.
Habitat: Rocky slopes in shale bands at high altitudes, 1 500–2 200 m.
Rationale: A range-restricted (EOO < 100 km^2), high-altitude, shale band habitat specialist with no known threats.

Adenandra villosa (P.J.Bergius) Licht. ex Roem. & Schult. subsp. **pedicellata** Strid

Status: **Rare**
J.E. Victor & D. Raimondo

[e]**Distribution:** WC. Twenty-Four Rivers, Olifants River and Porterville Mountains.
Habitat: Crags and crevices in massive rocks on mountain slopes, 1 000 m.
Rationale: A range-restricted taxon (EOO < 500 km^2) that occurs in a fire refuge habitat where it is not threatened.

Adenandra villosa (P.J.Bergius) Licht. ex Roem. & Schult. subsp. **robusta** Strid

Status: **Rare**
J.E. Victor

[e]**Distribution:** WC. Rooiels to Kleinmond.
Habitat: Sandstone rocks at low to moderate altitudes.
Rationale: A range-restricted taxon (EOO < 300 km^2) with no known threats.

Agathosma Willd.

Agathosma abrupta Pillans

Status: **VU** D2
N.A. Helme, D.I.W. Euston-Brown & D. Raimondo

[e]**Distribution:** WC. Die Kelders to Groot Hagelkraal.
Habitat: Limestone ridge, 45–300 m.
Rationale: Five known locations are potentially threatened by invasive alien plants.

[F] **Agathosma acocksii** Pillans

Status: **VU** D2
T. Trinder-Smith, D. Raimondo & J.E. Victor

[e]**Distribution:** WC. Bontberg.
Habitat: Among rocks on sandstone slopes and ridges, 760–1 360 m.
Rationale: One known location is potentially threatened by trampling and grazing by livestock.

Agathosma acutissima Dummer

Status: **VU** D2
T. Trinder-Smith & D. Raimondo

[e]**Distribution:** EC. Hankey to Uitenhage.
Habitat: Pale sand over gravel in thicket vegetation.
Rationale: Three known locations are potentially threatened by invasive alien plants and overgrazing.

Agathosma adenandriflora Schltr. Plate 88

Status: **NT** B1ab(ii,iii,iv,v)
J.H. Vlok, T. Trinder-Smith & D. Raimondo

[e]**Distribution:** WC. Cederberg, Kouebokkeveld, Hex River Mountains, Anysberg and Witteberg.
Habitat: Lower northern slopes in arid fynbos.
Rationale: EOO < 18 000 km^2. The 14 known locations continue to decline because of overgrazing.

[F] **Agathosma aemula** Schltr.

Status: **Rare**
T. Trinder-Smith & D. Raimondo

[e]**Distribution:** WC. Northern Cederberg.
Habitat: Seeps on gentle sandstone slopes.
Rationale: A range-restricted species (EOO 10 km^2) with no known threats.

Agathosma alaris Cham.

Status: **DD**D
T. Trinder-Smith & J.E. Victor

[e]**Distribution:** WC. Plettenberg Bay.
Habitat: Unknown.
Rationale: Known only from the type collection, without precise locality. Too little is known about the distribution, habitat and population status of this species to determine its status.

[F] **Agathosma alligans** Williams

Status: **Rare**
T. Trinder-Smith & J.E. Victor

[e]**Distribution:** WC. Skurweberge.

Habitat: Sandstone ridges, in minute crevices.
Rationale: A range-restricted species (EOO < 100 km²) with no known threats.

[F] **Agathosma bathii** (Dummer) Pillans

Status: **Rare**
T. Trinder-Smith & D. Raimondo
[e]Distribution: WC. Cederberg and Olifants River Mountains.
Habitat: Rocky middle to upper slopes.
Rationale: A rare species occurring in small subpopulations or as scattered individuals. It has no known threats.

[F] **Agathosma betulina** (P.J.Bergius) Pillans

Status: **Declining**
T. Trinder-Smith & D. Raimondo
[e]Distribution: WC. Cederberg to Groot Winterhoek Mountains including the Piketberg.
Habitat: Rocky sandstone slopes, 300–700 m.
Rationale: EOO 4 624 km². Recorded from over 40 locations, this species has been heavily affected by harvesting for its essential oils throughout its range. Although local declines in some subpopulations have been reported, the population is not suspected to have lost > 10% of individuals. This species is a resprouter and is able to recover from moderate levels of harvesting. Only severe repeat harvesting of the same individuals in some areas has caused declines. Current provincial legislation managing the trade has resulted in cultivated material being promoted and most wild subpopulations are therefore no longer targeted.

Agathosma bicolor Dummer

Status: **VU** D1+2
T. Trinder-Smith & J.E. Victor
[e]Distribution: WC. Pakhuis Mountains.
Habitat: Coarse white sand derived from Table Mountain Sandstone, between boulders.
Rationale: Less than 1 000 mature individuals occurring at a single location are potentially threatened by too frequent fires.

[F] **Agathosma bicornuta** R.A.Dyer

Status: **EN** A2ac; B1ab(i,ii,iii,iv,v)
A.P. Dold, T. Trinder-Smith & J.E. Victor
[e]Distribution: EC. Grahamstown.
Habitat: Transition between grassy fynbos (on Ecca quartz) and Nama-Karoo (on Dwyka Formation) on south-facing ridges.
Rationale: A population reduction of at least 50% is estimated based on the local extinction of 50% of subpopulations known through historical records due to overgrazing and too frequent fires over the past 40 years (generation length 20 years). EOO < 600 km². Four remaining locations continue to decline because of ongoing habitat degradation as a result of overgrazing.

[F] **Agathosma bodkinii** Dummer

Status: **VU** D2
T. Trinder-Smith & D. Raimondo
[e]Distribution: WC. Central Cederberg.
Habitat: Marshy sites in arid fynbos.
Rationale: A slow-maturing reseeder that is potentially threatened by too frequent fires at five known locations. Fire frequency within the distribution range of this species has increased over the past three decades.

Agathosma capitata Sond.

Status: **VU** D2
T. Trinder-Smith & D. Raimondo
[e]Distribution: WC. Piketberg.
Habitat: Gravelly, sandy soils on sandstone plateaus.
Rationale: Two known locations remain after some of the habitat was lost to deciduous fruit cultivation. It is not declining at present, but further expansion of fruit cultivation remains a potential threat.

[F] **Agathosma collina** Eckl. & Zeyh. **Plate 88**

Status: **NT** B1ab(ii,iii,iv,v)
T. Trinder-Smith & D. Raimondo
[e]Distribution: WC. Agulhas to Still Bay.
Habitat: Restricted to coastal dunes.
Rationale: EOO < 20 000 km². Altogether 15–20 locations continue to decline outside De Hoop Nature Reserve because of ongoing habitat loss to coastal development and invasion by alien plants.

Agathosma concava Pillans

Status: **Rare**
T. Trinder-Smith & J.E. Victor
[e]Distribution: WC. Hex River Mountains.
Habitat: High-altitude shale bands in montane fynbos, 1 800–2 000 m.
Rationale: A range-restricted species (EOO < 500 km²) with no known threats.

Agathosma conferta Pillans

Status: **EN** D
J.E. Victor & T. Trinder-Smith
[e]Distribution: WC. Cederberg, Krakadou Peak.
Habitat: Moist and sandy areas in rock gullies, 1 800 m.
Rationale: Less than 250 mature individuals occur at one known site.

Agathosma cordifolia Pillans

Status: **Rare**
T. Trinder-Smith & J.E. Victor
[e]Distribution: WC. Kouebokkeveld Mountains.
Habitat: Seeps and streambanks, eastern aspects above 1 100 m.
Rationale: A range-restricted habitat specialist (EOO < 100 km²) with no known threats.

Agathosma corymbosa (Montin) G.Don

Status: **EN** A2c; B1ab(i,ii,iii,iv,v)
D. Raimondo & T. Trinder-Smith
[e]Distribution: WC. Hopefield to Cape Peninsula.
Habitat: Seasonally wet lowland acid sands.
Rationale: A population reduction of at least 50% is estimated based on local extinctions of known subpopulations and habitat loss to urban expansion on the Cape Flats and crop cultivation in the area between Malmesbury and Cape Town over the past 60 years (generation length 20 years). EOO < 2 500 km². Remaining subpopulations are severely fragmented and continue to decline owing to invasion by alien plants, mining and mowing of road verges.

[F] **Agathosma crenulata** (L.) Pillans **Plate 88**

Status: **Declining**
T. Trinder-Smith & D. Raimondo
[e]Distribution: WC. Western Cape, from Tulbagh to Kleinrivier Mountains.

Habitat: Along streams or in very moist sites.
Rationale: EOO 6 400 km². Known from > 20 locations. It has been heavily affected by harvesting for essential oils throughout its range. Although local declines in some subpopulations have been reported, the population is not suspected to have been reduced by > 20%. As a result of current provincial legislation managing the trade, most wild subpopulations are no longer targeted.

Agathosma decurrens Pillans

Status: **Rare**
T. Trinder-Smith & J.E. Victor
[e]**Distribution:** WC. Slanghoek Mountains.
Habitat: Shale band in montane fynbos, 1 100–1 400 m.
Rationale: A range-restricted habitat specialist (EOO < 500 km²) with no known threats.

Agathosma dentata Pillans

Status: **Rare**
T. Trinder-Smith & J.E. Victor
[e]**Distribution:** WC. Cederberg.
Habitat: Sandy valleys and plateaus.
Rationale: A range-restricted species (EOO < 500 km²) with no known threats.

Agathosma distans Pillans

Status: **VU** D2
T. Trinder-Smith & D. Raimondo
[e]**Distribution:** WC. Northern Cederberg, Pakhuis Mountain.
Habitat: Amongst rocks in arid fynbos.
Rationale: A reseeder that is potentially threatened by too frequent fires at one known location.

Agathosma dregeana Sond.

Status: **EN** D
N.A. Helme, T. Trinder-Smith & D. Raimondo
[e]**Distribution:** WC. Gifberg and Matsikamma Mountains.
Habitat: Shallow, seasonally moist soils at plateau edge.
Rationale: A single known subpopulation of 70 mature individuals is potentially threatened by too frequent fires and climate change.

Agathosma elata Sond.

Status: **EN** B1ab(ii,iii,iv,v)
T. Trinder-Smith, D. Raimondo & J.E. Victor
[e]**Distribution:** WC. Gifberg and Nardous Mountain.
Habitat: Deep alluvial sand.
Rationale: EOO 710 km². Two or three known locations continue to decline because of habitat loss to rooibos tea and cash crop cultivation.

Agathosma eriantha (Steud.) Steud.

Status: **VU** B1ab(ii,iii,iv,v)
T. Trinder-Smith & D. Raimondo
[e]**Distribution:** WC. Bredasdorp to Still Bay.
Habitat: Sea level flats in dry clay soil interspersed with limestone chips.
Rationale: EOO 3 400 km². Ten known locations continue to decline because of crop cultivation, coastal development, grazing and trampling by livestock and invasion by alien plants.

[F] Agathosma esterhuyseniae Pillans

Status: **Rare**
T. Trinder-Smith & D. Raimondo
[e]**Distribution:** WC. Cederberg to Kouebokkeveld.
Habitat: High peaks, amongst rocks above 1 500 m.
Rationale: A high-altitude habitat specialist with no known threats.

Agathosma florida Sond.

Status: **Rare**
T. Trinder-Smith & D. Raimondo
[e]**Distribution:** WC. Langeberg Mountains.
Habitat: Rocky ledges on mountain slopes.
Rationale: A range-restricted species (EOO < 200 km²) with no known threats.

Agathosma florulenta Sond.

Status: **EN** B1ab(iii)+2ab(iii)
N.A. Helme, T. Trinder-Smith, D.I.W. Euston-Brown & D. Raimondo
[e]**Distribution:** WC. Arniston.
Habitat: Seasonally wet limestone flats.
Rationale: EOO < 100 km², AOO < 10 km². Two known locations continue to decline as a result of habitat degradation caused by invasive alien plants reducing the availability of water.

[F] Agathosma foetidissima (Bartl. & H.L.Wendl.) Steud.

Status: **NT** A2c
T. Trinder-Smith & J.E. Victor
[e]**Distribution:** WC. Bredasdorp to Riversdale.
Habitat: Shale-derived clay soils.
Rationale: Although it has a fairly wide distribution (EOO 20 000 km²), it is restricted to clay, gravel and shale soils. Much of its habitat has been transformed to agriculture and continues to be degraded by grazing and trampling by livestock. We suspect a 20–30% population reduction based on habitat loss over the past 45 years (generation length 15 years).

Agathosma foleyana Dummer

Status: **Rare**
T. Trinder-Smith & D. Raimondo
[e]**Distribution:** WC. Matroosberg summit and Roodeberg.
Habitat: High-altitude mountain slopes on shale bands.
Rationale: A habitat specialist with no known threats.

[F] Agathosma fraudulenta Sond.

Status: **DD**
D. Raimondo, F. Cholo & D.A. Kamundi†
[e]**Distribution:** WC. Unknown.
Habitat: Unknown.
Rationale: Known only from the type, collected at an unspecified locality in the 'Cape district, South Africa'. The habitat and distribution range of this species are unknown and its status cannot be determined.

Agathosma geniculata Pillans

Status: **NT** B1ab(ii,iii,iv,v)
T. Trinder-Smith & J.E. Victor
[e]**Distribution:** WC. Stanford to Still Bay.
Habitat: Limestone outcrops.
Rationale: EOO < 5 000 km². The 12 known locations continue to decline because of coastal development and invasion by alien plants.

Agathosma glabrata Bartl. & H.L.Wendl.

Status: **EN** B1ab(iii)
T. Trinder-Smith, N.A. Helme & D. Raimondo
[e]**Distribution:** WC. Darling to Cape Peninsula.

Habitat: Lowland sand fynbos.
Rationale: EOO 2 000 km². Three known locations continue to decline as a result of expanding crop cultivation, urban expansion and invasion by alien plants.

Agathosma glandulosa (Thunb.) Sond.

Status: **EN** A2c; B1ab(ii,iii,iv,v)
T. Trinder-Smith & D. Raimondo

eDistribution: WC. Malmesbury.
Habitat: Renosterveld on Malmesbury shales.
Rationale: A population reduction of at least 50% is estimated based on 70% habitat loss to wheat and vineyard cultivation over the past 70 years (generation length > 50 years). EOO < 2 000 km². Eight severely fragmented remaining subpopulations continue to decline because of ongoing habitat loss to urban development, expanding crop cultivation and overgrazing.

Agathosma gnidiiflora Dummer Plate 88

Status: **CR** D
J.H. Vlok & D. Raimondo

eDistribution: WC. Riversdale.
Habitat: Adjacent to silcrete outcrops on weathered shale.
Rationale: Previously known only from the type locality, where it is now locally extinct because of heavy grazing by livestock too soon after fire. A second subpopulation of 20 mature individuals was discovered recently.

F Agathosma gonaquensis Eckl. & Zeyh.

Status: **CR** B1ab(ii,iii,iv,v)
T. Trinder-Smith & D. Raimondo

eDistribution: EC. Uitenhage to Port Elizabeth.
Habitat: Coastal grassland with fynbos elements.
Rationale: A large number of old herbarium collections indicate that this species was once common around Port Elizabeth, but only two small, severely fragmented subpopulations remain after most of the habitat has been lost to urban expansion. EOO 100 km². It continues to decline because of invasion by alien plants and ongoing urban expansion.

F Agathosma hirsuta Pillans

Status: **Rare**
D. Raimondo, F. Cholo & D.A. Kamundi†

eDistribution: WC. Hottentots Holland Mountains, between Somerset Sneeukop and the Triplets.
Habitat: Montane fynbos on sandstone slopes.
Rationale: A range-restricted species (EOO 5 km²) with no known threats.

F Agathosma hispida (Thunb.) Bartl. & H.L.Wendl.

Status: **NT** B1ab(ii,iii,iv,v)
T. Trinder-Smith & D. Raimondo

eDistribution: WC. Paarl Mountain and Paardeberg.
Habitat: Renosterveld on granite.
Rationale: EOO < 5 000 km². The 10–20 locations continue to decline as a result of ongoing habitat loss to olive, wheat and vineyard expansion and invasion by alien plants.

F Agathosma hookeri Sond.

Status: **Rare**
T. Trinder-Smith & J.E. Victor

eDistribution: WC. Cape Peninsula to Betty's Bay.
Habitat: Sandy flats at foot of mountains.
Rationale: This species always occurs as small, scattered subpopulations. It has no known threats and most subpopulations are within protected areas.

F Agathosma insignis (Compton) Pillans

Status: **Rare**
T. Trinder-Smith & J.E. Victor

eDistribution: WC. Elandskloof Mountains and Upper Olifants River Valley.
Habitat: Among rocks along streamsides.
Rationale: A habitat specialist with no known threats.

Agathosma involucrata Eckl. & Zeyh.

Status: **CR** PE
T. Trinder-Smith & D. Raimondo

eDistribution: WC. Olifants River Valley.
Habitat: Reddish, coarse sand on well-drained slopes, 300–400 m.
Rationale: Last recorded in 1984, when it was on the verge of extinction as only six plants were found after two days of searching. They were found between two newly ploughed fields and plants were heavily grazed. The species is quite likely to be extinct, although further surveys are still required.

F Agathosma joubertiana Schltdl.

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)
T. Trinder-Smith & D. Raimondo

eDistribution: WC. Bredasdorp, on and around Soetanysberg.
Habitat: Ferricrete gravel flats and lower slopes below 90 m.
Rationale: EOO and AOO < 380 km². Four known locations remain after most of the habitat has been ploughed for vineyard and protea cultivation. It continues to decline because of ongoing habitat loss to agriculture and invasion by alien plants.

F Agathosma kougaense Pillans

Status: **Rare**
T. Trinder-Smith & J.E. Victor

eDistribution: EC WC. Kouga Mountains.
Habitat: Montane fynbos on sandstone ridges.
Rationale: A range-restricted species (EOO < 100 km²) with no known threats.

F Agathosma krakadouwensis Dummer

Status: **Rare**
T. Trinder-Smith & J.E. Victor

eDistribution: WC. Northern Cederberg.
Habitat: Moist sand over sandstone bedrock.
Rationale: A range-restricted species (EOO < 120 km²) with no known threats.

Agathosma lancifolia Eckl. & Zeyh.

Status: **DD**
T. Trinder-Smith & D. Raimondo

eDistribution: WC. Tulbagh Kloof.
Habitat: Low rocky slopes.
Rationale: Last collected in 1952. The site description of 'Mountains near Tulbagh Kloof' cannot be accurately located on maps, although we suspect Tulbagh Kloof refers to Nuwekloof. Threats to this species are unknown.

F Agathosma latipetala Sond. Plate 88

Status: **EN** B1ab(i,ii,iii,iv,v)
T. Trinder-Smith & D. Raimondo

eDistribution: WC. Swartland.
Habitat: Gravelly sand or granite, lower slopes.

Rationale: The large number of herbarium records collected before 1940 indicates that this species was once common in the Swartland. Most of its habitat, however, has been transformed for the cultivation of wheat, and only four known locations remain (EOO < 1 000 km²) and continue to decline because of ongoing agricultural expansion, urban expansion and habitat degradation caused by a lack of fire on small habitat remnants.

Agathosma leptospermoides Sond.

Status: **VU** D2

T. Trinder-Smith & D. Raimondo

e**Distribution:** WC. Mountains north of Genadendal and Poesjenels River near Robertson.

Habitat: Rocky outcrops on arid north-facing slopes.

Rationale: A slow-maturing reseeder that is potentially threatened by too frequent fires. The area where it occurs has burnt twice over the past 10 years.

Agathosma linifolia (Roem. & Schult.) Licht. ex Bartl. & H.L.Wendl.

Status: **Rare**

T. Trinder-Smith & J.E. Victor

e**Distribution:** WC. Swellendam to Tradouw Pass.

Habitat: South-facing slopes near streamsides.

Rationale: A range-restricted (EOO < 500 km²) habitat specialist with no known threats.

Agathosma longicornu Pillans

Status: **Rare**

T. Trinder-Smith & D. Raimondo

e**Distribution:** WC. Central and southern Cederberg.

Habitat: Shallow, red gravel on gentle west-facing slopes.

Rationale: A habitat specialist with scattered, localised subpopulations. It has no known threats.

Agathosma marifolia Eckl. & Zeyh.

Status: **NT** B1ab(ii,iii,iv,v)

T. Trinder-Smith & D. Raimondo

e**Distribution:** WC. Nieuwoudtville, Vanrhynsdorp, and Clanwilliam to Darling.

Habitat: Deep sands between rocks.

Rationale: EOO 15 600 km². About 20 known locations continue to decline because of ongoing habitat loss to rooibos tea cultivation.

F **Agathosma microcalyx** Dummer

Status: **NT** A2c; B1ab(ii,iii,iv,v)

T. Trinder-Smith & D. Raimondo

e**Distribution:** WC. Cederberg, Gifberg and Nieuwoudtville.

Habitat: Dry fynbos on rocky Table Mountain Sandstone-derived soil.

Rationale: A population reduction of 20–30% is estimated based on the loss of mature individuals at three out of 10–15 locations over the past 10 years (generation length 15 years). EOO 4 800 km². It continues to decline on flat areas that are being transformed for rooibos tea cultivation, while others that occur on slopes are safe from ploughing.

F **Agathosma microcarpa** (Sond.) Pillans

Status: **VU** B1ab(i,ii,iii,iv,v)

T. Trinder-Smith & D. Raimondo

e**Distribution:** WC. Potberg to Mossel Bay.

Habitat: Rocky outcrops on dolomitic soils in renosterveld.

Rationale: EOO 7 000 km². Small, severely fragmented subpopulations on isolated renosterveld remnants continue to decline as a result of overgrazing, invasion by alien plants and ongoing wheat and vineyard expansion.

Agathosma minuta Schltdl.

Status: **EN** B1ab(ii,iii,iv,v)

T. Trinder-Smith, N.A. Helme, D.I.W. Euston-Brown & D. Raimondo

e**Distribution:** WC. Bredasdorp and Swellendam.

Habitat: Coastal flats that are seasonally wet, on shales in renosterveld.

Rationale: EOO < 2 000 km². Fewer than five known locations continue to decline owing to habitat loss to crop cultivation, overgrazing and invasion by alien plants.

F **Agathosma muirii** E.Phillips

Status: **VU** A4abc

J.H. Vlok, A.L. Schutte-Vlok & D. Raimondo

e**Distribution:** WC. Still Bay to Mossel Bay.

Habitat: Deep sands on coastal dunes associated with limestone.

Rationale: A population reduction of > 30% is projected to be reached within the next seven years, based on a continuation of rates of population decline and habitat loss to coastal development and invading alien acacias over the past 23 years (generation length 10 years).

Agathosma namaquensis Pillans

Status: **VU** D1

T. Trinder-Smith & D. Raimondo

e**Distribution:** NC. Namaqualand, Kamiesberg.

Habitat: Dry granitic soils between rocks above 1 000 m.

Rationale: A population of 1 000 mature individuals occurs as four small subpopulations within a restricted range (EOO < 100 km²). This species has no known threats.

Agathosma orbicularis (Thunb.) Bartl. & H.L.Wendl.

Status: **CR** D

T. Trinder-Smith, N.A. Helme, A. Hanekom, I. Ebrahim & D. Raimondo

e**Distribution:** WC. Caledon to Langeberg Mountains.

Habitat: Low slopes, transition between shale and sandstone soils.

Rationale: This species has not been recorded at one known location on the Caledon Swartberg since 1932 and was thought extinct because of invasion by alien plants, urban expansion and inappropriate fire management. A small subpopulation of 50 mature individuals was rediscovered in August 2008.

F **Agathosma ovalifolia** Pillans

Status: **Rare**

T. Trinder-Smith & D. Raimondo

e**Distribution:** EC WC. Swartberg Mountains to Willowmore.

Habitat: Cracks in rocky quartzitic upper slopes on Witteberg formations.

Rationale: Six mall, scattered subpopulations have no known threats.

Agathosma pallens Pillans

Status: **CR** PE

T. Trinder-Smith & D. Raimondo

e**Distribution:** WC. Albertinia.

Habitat: Sandy flats.
Rationale: Last recorded in 1940 in an area that has now been extensively transformed by agriculture and invasive alien plants. It is quite likely to be extinct, but small remaining habitat fragments have not yet been thoroughly searched.

Agathosma pattisoniae Dummer

Status: **DD**D
T. Trinder-Smith & D. Raimondo
e**Distribution:** WC. Cederberg, Krom River.
Habitat: Unknown.
Rationale: Known only from the type, collected in 1913. The distribution and habitat of this species are too poorly known to determine its status.

Agathosma phillipsii Dummer

Status: **Rare**
T. Trinder-Smith & J.E. Victor
e**Distribution:** WC. Matroosberg to Rooiberg Mountains.
Habitat: Grows in rock crevices, on a shale band at high altitudes, 2 000 m.
Rationale: A rare habitat specialist with no known threats.

F Agathosma propinqua Sond.

Status: **CR** PE
T. Trinder-Smith & D. Raimondo
e**Distribution:** WC. Bottelary Hills to Stellenbosch and Paarl.
Habitat: Lowland sandy flats.
Rationale: Last recorded in 1940 in an area now extensively transformed by urban expansion, agriculture and invasion by alien plants. It is quite likely to be extinct, but small remaining habitat fragments have not yet been thoroughly searched.

Agathosma pulchella (L.) Link

Status: **VU** D2
T. Trinder-Smith & D. Raimondo
e**Distribution:** WC. Cape Peninsula, Table Mountain.
Habitat: Peaty slopes amongst dense bush on southern and southwestern aspects.
Rationale: A small population at one known location (EOO < 10 km^2) is potentially threatened by too frequent fires.

F Agathosma rehmanniana Dummer

Status: **Rare**
D. Raimondo, F. Cholo & D.A. Kamundi†
e**Distribution:** WC. Montagu Pass near George.
Habitat: Sandstone slopes.
Rationale: A range-restricted species (EOO 10 km^2) with no known threats.

F Agathosma riversdalensis Dummer **Plate 88**

Status: **VU** B1ab(ii,iii,iv,v)
J.H. Vlok & D. Raimondo
e**Distribution:** WC. Arniston to Albertinia.
Habitat: Arid transitions between limestone and sand plain fynbos.
Rationale: EOO 2 300 km^2. Fewer than 10 known locations continue to decline outside De Hoop Nature Reserve owing to habitat degradation caused by invasive alien plants and vegetation management for thatch harvesting.

F Agathosma robusta Eckl. & Zeyh.

Status: **VU** D2
T. Trinder-Smith & J.E. Victor
e**Distribution:** WC. Cape Infanta to Still Bay.
Habitat: Limestone fynbos on dry, sandy soil overlying limestone.
Rationale: AOO < 10 km^2. Four known locations are potentially threatened by urban expansion around Still Bay and by invasive alien plants throughout the range.

F Agathosma rubricaulis Dummer

Status: **VU** D2
T. Trinder-Smith & J.E. Victor
e**Distribution:** WC. Cederberg.
Habitat: Seepage areas on high-altitude rocky shale bands.
Rationale: AOO < 10 km^2. Fewer than five known locations are potentially threatened by too frequent fires.

Agathosma salina Eckl. & Zeyh.

Status: **EN** B1ab(ii,iii,v)
T. Trinder-Smith & J.E. Victor
e**Distribution:** WC. Cederberg.
Habitat: Deep, pale sand on gentle slopes.
Rationale: EOO < 5 000 km^2. The 3–5 locations continue to decline because of habitat loss to rooibos tea cultivation.

Agathosma scaberula Dummer

Status: **NT** B1ab(ii,iii,iv,v)
T. Trinder-Smith & D. Raimondo
e**Distribution:** WC. Agulhas to Still Bay.
Habitat: Sands over limestone.
Rationale: EOO < 5 000 km^2. About 20 locations continue to decline because of habitat loss to crop cultivation and coastal development, and invasion by alien plants.

Agathosma sedifolia Schltdl.

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)
T. Trinder-Smith, N.A. Helme, D.I.W. Euston-Brown & D. Raimondo
e**Distribution:** WC. Agulhas Plain.
Habitat: Vlei areas on the edge of perennial pools, in fine grey sand.
Rationale: EOO and AOO < 200 km^2. Fewer than 10 severely fragmented subpopulations continue to decline because of habitat loss to crop cultivation, trampling and grazing by livestock, drainage of wetlands and invasion by alien plants.

F Agathosma serratifolia (Curtis) Spreeth

Status: **VU** D2
T. Trinder-Smith & D. Raimondo
e**Distribution:** WC. Langeberg.
Habitat: Mountain slopes and damp kloofs.
Rationale: This species, known to occur at only four locations, is closely related to *A. crenulata* and *A. betulina* and is suitable for harvesting of essential oil, but decline due to harvesting has not yet been noted. It is also potentially threatened by invasive alien plants.

F Agathosma sladeniana P.E.Glover

Status: **Rare**
T. Trinder-Smith & D. Raimondo
e**Distribution:** WC. Citrusdal to Piketberg.

Habitat: Hard, sandy ground on Table Mountain Sandstone.
Rationale: A range-restricted species (EOO 200 km^2) that is not threatened as it occurs in habitats unsuitable for rooibos tea cultivation, the main threat within its range.

[F] **Agathosma sp. nov.**
Voucher: *Bean 475* BOL
Status: **Rare**
T. Trinder-Smith & D. Raimondo
[e]**Distribution:** WC. Rooiberg and Outeniqua Mountains.
Habitat: Dry renosterveld, in stony sand, in Fynbos-Succulent Karoo ecotone.
Rationale: A range-restricted species (EOO 263 km^2) with no known threats.

[F] **Agathosma sp. nov.**
Voucher: *Bean 808* BOL
Status: **VU** D1
T. Trinder-Smith & D. Raimondo
[e]**Distribution:** WC. De Hoop.
Habitat: Stony, calcareous sand over limestone.
Rationale: Less than 1 000 mature individuals occur at one known location.

[F] **Agathosma sp. nov.**
Voucher: *Bean 810* BOL
Status: **VU** D2
N.A. Helme, T. Trinder-Smith, D.I.W. Euston-Brown & D. Raimondo
[e]**Distribution:** WC. De Hoop Nature Reserve.
Habitat: Stable sands over limestone outcrops.
Rationale: EOO and AOO < 10 km^2. Five known locations are potentially threatened by invasive alien plants.

[F] **Agathosma sp. nov.**
Voucher: *Bean 1056* BOL
Status: **Critically Rare**
T. Trinder-Smith & D. Raimondo
[e]**Distribution:** WC. Mount Lebanon near Grabouw.
Habitat: Sandstone mountain slopes in sheltered, damp, shady spots, 1 180 m.
Rationale: One known subpopulation (EOO < 1 km^2) has no known threats.

[F] **Agathosma sp. nov.**
Voucher: *Bean 3082* BOL
Status: **Critically Rare**
T. Trinder-Smith & D. Raimondo
[e]**Distribution:** EC. Uitenhage, Elandsberg.
Habitat: Grassy fynbos on clay loam soil on steep, south-facing slopes.
Rationale: A range-restricted species (EOO < 10 km^2), known from one subpopulation. It has no known threats.

[F] **Agathosma sp. nov.**
Voucher: *Bean 3088* BOL
Status: **VU** D2
T. Trinder-Smith & D. Raimondo
[e]**Distribution:** WC. Avila to Hagelkraal.
Habitat: Limestone hills in crevices.
Rationale: Three known locations of this range-restricted species (EOO < 20 km^2) are potentially threatened by invasive alien plants.

[F] **Agathosma sp. nov.**
Voucher: *Bean and Trinder-Smith 2868* BOL
Status: **Rare**
T. Trinder-Smith & D. Raimondo
[e]**Distribution:** WC. Riviersonderend Mountains to McGregor.
Habitat: North-facing sandstone slopes.
Rationale: A range-restricted species (EOO < 200 km^2) with no known threats.

[F] **Agathosma sp. nov.**
Voucher: *Esterhuysen 27654* BOL
Status: **Critically Rare**
T. Trinder-Smith & D. Raimondo
[e]**Distribution:** WC. Worcester, Kwadous Mountain.
Habitat: Rock crevices in sandstone cliffs at high altitudes.
Rationale: A range-restricted species (EOO < 10 km^2), known from one subpopulation. It has no known threats.

[F] **Agathosma sp. nov.**
Voucher: *Oliver 6085* BOL
Status: **VU** D2
T. Trinder-Smith & D. Raimondo
[e]**Distribution:** WC. Wuppertal.
Habitat: Sandy flats on seeps in short fynbos.
Rationale: One known location is potentially threatened by rooibos tea cultivation, as the habitat is suitable. Surveys are required to determine whether cultivation is affecting the population.

[F] **Agathosma sp. nov.**
Voucher: *Viviers 1238* BOL
Status: **Critically Rare**
T. Trinder-Smith & D. Raimondo
[e]**Distribution:** WC. Citrusdal, Hexberg.
Habitat: Shade amongst rocks in gullies between cliffs at high altitudes.
Rationale: One known subpopulation (EOO < 10 km^2) has no known threats.

[F] **Agathosma sp. nov.**
Voucher: *Viviers 1251* BOL
Status: **VU** D2
T. Trinder-Smith & D. Raimondo
[e]**Distribution:** WC. Cederberg, Algeria Forest Station.
Habitat: Gravelly soil.
Rationale: One known location is potentially threatened by afforestation and housing development.

[F] **Agathosma sp. nov.** **Plate 88**
Voucher: *Vlok 835* BOL
Status: **Rare**
T. Trinder-Smith, J.H. Vlok & D. Raimondo
[e]**Distribution:** WC. Anysberg.
Habitat: In very dry, rocky sand in arid fynbos, 675–1 200 m.
Rationale: A range-restricted (EOO 67 km^2) species occurring in small subpopulations consisting of scattered individuals. It has not known threats.

[F] **Agathosma sp. nov.**
Voucher: *Williams 2616* BOL
Status: **Critically Rare**
T. Trinder-Smith & D. Raimondo
[e]**Distribution:** WC. Langeberg Mountains.

Habitat: Rocky Table Mountain Sandstone outcrops.
Rationale: One known subpopulation (EOO < 10 km²) has no known threats.

Agathosma spinosa Sond.

Status: **Rare**
T. Trinder-Smith & D. Raimondo
[e]**Distribution:** EC WC. Uniondale.
Habitat: Low slopes.
Rationale: A range-restricted species (EOO < 120 km²) that is unlikely to be threatened by grazing livestock as it is very spiny.

[F] Agathosma stenopetala (Steud.) Steud.

Status: **VU** B1ab(iii)
T. Trinder-Smith & J.E. Victor
[e]**Distribution:** EC. Humansdorp to Port Elizabeth.
Habitat: Tertiary sands.
Rationale: EOO < 5 000 km². Fewer than 10 locations continue to decline as a result of urban development and invasion by alien plants.

Agathosma stenosepala Pillans

Status: **Rare**
T. Trinder-Smith & J.E. Victor
[e]**Distribution:** WC. Franschhoek Forest Reserve.
Habitat: Lower fynbos slopes.
Rationale: A range-restricted species (EOO < 100 km²) with no known threats.

Agathosma stokoei Pillans

Status: **Rare**
T. Trinder-Smith & J.E. Victor
[e]**Distribution:** WC. Hottentots Holland Mountains.
Habitat: Mountain slopes in fynbos.
Rationale: A range-restricted species (EOO < 500 km²) with no known threats.

Agathosma subteretifolia Pillans

Status: **Rare**
T. Trinder-Smith & D. Raimondo
[e]**Distribution:** WC. Kiesiesberg near Montagu and Langeberg.
Habitat: Shale bands in montane fynbos.
Rationale: A range-restricted species (EOO < 500 km²) with no known threats.

Agathosma thymifolia Schltdl. Plate 88

Status: **VU** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)
T. Trinder-Smith & D. Raimondo
[e]**Distribution:** WC. Vredenburg to Yzerfontein.
Habitat: Deep sand on calcified dunes, in exposed areas, 100 m.
Rationale: EOO and AOO < 850 km². Fewer than 10 known locations continue to decline because of habitat loss to crop cultivation and coastal development and invasion by alien plants.

[F] Agathosma trichocarpa Holmes

Status: **CR** PE
T. Trinder-Smith & D. Raimondo
[e]**Distribution:** WC. Piketberg.
Habitat: Sandy soils overlying Table Mountain Sandstone bedrock.
Rationale: This species was last recorded > 60 years ago in an area that has now been extensively transformed for deciduous fruit cultivation. It is quite likely to be extinct, but remaining habitat has not yet been thoroughly searched.

[F] Agathosma tulbaghensis Dummer

Status: **Rare**
T. Trinder-Smith & J.E. Victor
[e]**Distribution:** WC. Groot Winterhoek Mountains.
Habitat: Windswept, rocky, south-facing slopes.
Rationale: A range-restricted species (EOO < 200 km²) with no known threats.

Agathosma umbonata Pillans

Status: **Rare**
T. Trinder-Smith & J.E. Victor
[e]**Distribution:** WC. Langeberg Mountains.
Habitat: Moist peaty south-facing slopes, 1 200–1 380 m.
Rationale: A range-restricted species (EOO < 100 km²) with no known threats.

Agathosma zwartbergense Pillans

Status: **VU** D2
T. Trinder-Smith, J.H. Vlok & D. Raimondo
[e]**Distribution:** WC. Swartberg Mountains.
Habitat: Moist, shallow sand on rocky outcrops on south-facing slopes.
Rationale: Three known locations are potentially threatened by too frequent fires.

Coleonema Bartl. & H.L.Wendl.

Coleonema pulchrum Hook.

Status: **Rare**
D. Raimondo
Distribution: EC WC. Langeberg Mountains, Tradouw Pass to Grootvadersbosch.
Habitat: Southern slopes in rocky places, 50–1 340 m.
Rationale: A range-restricted species (EOO < 30 km²) that is not threatened or declining at present. Part of the population was lost to road construction in the 1980s.

Coleonema virgatum (Schltdl.) Eckl. & Zeyh.

Status: **Rare**
J.E. Victor
[e]**Distribution:** WC. Langeberg Mountains between Swellendam and Riversdale.
Habitat: Crevices in moist cliffs at high elevations, 800 m.
Rationale: A range-restricted Langeberg endemic (EOO 150 km²), restricted to a localised habitat. It has no known threats.

Diosma L.

Diosma arenicola I.Williams Plate 89

Status: **EN** B1ab(iii)+2ab(iii)
D. Raimondo & N.A. Helme
[e]**Distribution:** WC. Bredasdorp to Hagelkraal.
Habitat: Sandy soil closely associated with limestone deposits, often in seepage areas.
Rationale: EOO and AOO < 225 km². Five known locations continue to decline outside Agulhas National Park because of invasion by alien plants. Continued management of invasive alien plants inside the park is essential for the survival of this species.

Diosma aristata I.Williams

Status: **CR** B1ab(iii,v)+2ab(iii,v); C2a(ii)

J.E. Victor

Distribution: WC. Mossel Bay.

Habitat: Deep sandy soil or amongst rocks in coastal fynbos.

Rationale: EOO and AOO < 2 km^2. Less than 250 mature individuals occur at one known location, where they continue to decline as a result of invasion by alien plants.

Diosma aspalathoides Lam. **Plate 89**

Status: **NT** B1ab(ii,iii,iv,v)

J.E. Victor

Distribution: WC. Milnerton to Langebaan.

Habitat: Deep sands, close to the sea.

Rationale: EOO < 5 000 km^2. The 13–20 locations continue to decline because of coastal development and invasion by alien plants.

Diosma awilana I.Williams

Status: **VU** D2

D. Raimondo

Distribution: WC. Baardskeerdersbos.

Habitat: Deep, sandy soil with little humus, associated with limestone, 45–60 m.

Rationale: AOO < 20 km^2. Potentially threatened by habitat loss to agriculture and invasion by alien plants.

Diosma demissa I.Williams **Plate 89**

Status: **VU** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

D. Raimondo

Distribution: WC. Cape Peninsula and Stanford to Hagelkraal.

Habitat: Small sandy pockets in the tertiary limestone that overlies sandstones along coastal cliffs.

Rationale: EOO and AOO < 820 km^2. Fewer than 10 locations continue to decline because of coastal development and invasion by alien plants.

Diosma dichotoma P.J.Bergius

Status: **VU** B1ab(i,ii,iii,iv,v)

J.E. Victor & D. Raimondo

Distribution: WC. Faure to Hopefield.

Habitat: Sandy plains, close to the coast.

Rationale: EOO < 5 000 km^2. Eight locations remain after many subpopulations around Cape Town declined as a result of urban expansion. Ongoing habitat loss to crop cultivation, urban expansion and invasion by alien plants is causing a continuing decline.

Diosma fallax I.Williams

Status: **EN** A2bc

J.H. Vlok & D. Raimondo

Distribution: WC. Bontebok National Park.

Habitat: Bokkeveld shale in renosterveld.

Rationale: A population reduction of at least 50% is estimated based on habitat loss to wheat cultivation over the past 70 years (generation length 50 years). One subpopulation remains within a reserve, with all surrounding areas now transformed.

Diosma guthriei P.E.Glover **Plate 89**

Status: **VU** B1ab(ii,iii,v)

D. Raimondo, N.A. Helme & T. Trinder-Smith

Distribution: WC. Agulhas Plain and between Paternoster and Jacobsbaai.

Habitat: Limestone hills, tertiary limestone deposits.

Rationale: EOO 18 747 km^2. The 10–15 severely fragmented subpopulations continue to decline owing to habitat loss to crop cultivation, coastal development and invasion by alien plants. This species is concentrated on the Agulhas Plain, but there have been recent collections of a similar looking species from limestone patches of the Vredenburg Peninsula. This disjunction of 250 km is most unusual in the Rutaceae and it is possible that the Vredenburg collections represent a different taxon. However, until DNA studies have been undertaken, the collections are treated as one species.

Diosma haelkraalensis I.Williams **Plate 89**

Status: **EN** B1ab(ii,iii,iv,v)

T. Trinder-Smith & D. Raimondo

Distribution: WC. Pearly Beach to Hagelkraal and Saldanha.

Habitat: Limestone hills.

Rationale: EOO < 1 000 km^2. Known from three locations, one of which is highly disjunct (250 km away from other subpopulations). The subpopulation on Prospect Hill, Saldanha, is declining as a result of urban development.

Diosma parvula I.Williams **Plate 89**

Status: **EN** B1ab(iii,v)+2ab(iii,v)

J.E. Victor & D. Raimondo

Distribution: WC. Bredasdorp and Potberg.

Habitat: Dark sandy soil near seepage areas.

Rationale: EOO and AOO < 300 km^2. Two known locations continue to decline because of overgrazing and invasion by alien plants.

Diosma passerinoides Steud.

Status: **VU** C2a(i)

D. Raimondo

Distribution: WC. Greyton and Bredasdorp to Albertinia, Montagu and Uniondale.

Habitat: Occurs in dry clayish soils in renosterveld, associated with patches of silcrete.

Rationale: The population is estimated to consist of less than 10 000 mature individuals, based on observations indicating that ± 25 known subpopulations generally consist of less than 50 mature individuals. It continues to decline as a result of habitat loss to crop cultivation and invasion by alien plants.

Diosma pedicellata I.Williams

Status: **NT** A2c

D. Raimondo & T. Trinder-Smith

Distribution: WC. Bokkeveld Mountains to False Bay.

Habitat: Deep sandy soils.

Rationale: A population reduction of at least 25% is suspected based on declines or local extinctions in six out of 17 known subpopulations due to habitat loss to rooibos tea and potato cultivation and invasion by alien plants over the past 90 years (generation length 30 years).

Diosma strumosa I.Williams

Status: **EN** A2c; B1ab(iii); D

J.H. Vlok & D. Raimondo

Distribution: WC. Barrydale.

Habitat: Renosterveld on Bokkeveld shales.

Rationale: A population reduction of at least 50% is estimated based on habitat loss to wheat cultivation over the past 150 years (generation length > 50 years).

Current EOO 38 km². Less than 250 mature individuals remaining at two known locations continue to decline because of lack of fire in small habitat fragments and overgrazing.

Diosma tenella I.Williams **Plate 89**

Status: **VU** B1ab(ii,iii,iv,v)
D. Raimondo

e**Distribution:** WC. De Hoop and Langeberg between Heidelberg and Albertinia.
Habitat: Sandy soils associated with a variety of formations including Bokkeveld shales, ferricretes and silcretes.
Rationale: EOO < 5 000 km². Ten known locations remain after habitat loss to afforestation and crop cultivation. Invasive alien plants and agricultural expansion around Albertinia are causing a continuing decline.

Diosma thyrsophora Eckl. & Zeyh.

Status: **VU** D2
D. Raimondo

e**Distribution:** WC. Olifantskloof in the Riviersonderend Mountains.
Habitat: Montane fynbos on upper slopes.
Rationale: One known location is potentially threatened by invasive alien pines.

Empleurum Sol. ex Aiton

Empleurum fragrans P.E.Glover

Status: **Rare**
N.A. Helme & D. Raimondo

e**Distribution:** WC. Heidelberg, Strawberry Hill and Lemoenshoek Peak.
Habitat: Sandstone fynbos, in dampish places at high elevations, in restioid tussock marsh vegetation.
Rationale: A range-restricted habitat specialist (EOO 140 km²) with no known threats.

Euchaetis Bartl. & H.L.Wendl.

F **Euchaetis albertiniana** I.Williams

Status: **EN** A2c
J.H. Vlok & D. Raimondo

e**Distribution:** WC. Albertinia.
Habitat: Deep red sands over limestone.
Rationale: A population reduction of at least 50% is estimated based on 55% habitat loss to urban expansion and crop and pasture cultivation over the past 40–60 years (generation length 15–20 years). Invasion by alien plants and habitat degradation as a result of vegetation management for thatch harvesting are causing a continuing decline.

Euchaetis avisylvana I.Williams

Status: **VU** A2ace; D2
J.E. Victor & D. Raimondo

e**Distribution:** WC. South slopes of Langeberg from Tradouw Pass eastwards for 17 km.
Habitat: Rocky or stony places in well-drained acid soil derived from Table Mountain Sandstone.
Rationale: A population reduction of at least 30% is estimated based on the local extinction of 30% of known subpopulations due to infrastructure development and afforestation over the past 30 years (generation length 10 years). AOO < 20 km². Five remaining locations are potentially threatened by inappropriate fire management and invasion by alien plants.

F **Euchaetis cristagalli** I.Williams

Status: **Rare**
D. Raimondo, F. Cholo & D.A. Kamundi†

e**Distribution:** EC. Groot Winterhoek Mountains.
Habitat: Sandstone slopes, 600–1 220 m.
Rationale: A range-restricted species (EOO 60 km²) with no known threats.

Euchaetis diosmoides (Schltr.) I.Williams

Status: **NT** B1ab(ii,iii,iv,v)
D. Raimondo

e**Distribution:** WC. Agulhas Plain, from Elim to Potberg.
Habitat: Loamy soils associated with ferricrete substrates.
Rationale: EOO 2 400 km². Less than 15 known locations continue to decline because of invasion by alien plants and habitat loss to crop cultivation.

F **Euchaetis glabra** I.Williams

Status: **Rare**
D. Raimondo, F. Cholo & D.A. Kamundi†

e**Distribution:** WC. Jonkershoek to Kogelberg.
Habitat: Sandstone slopes in seasonally moist areas, 800–1 350 m.
Rationale: A range-restricted (EOO 90 km²) habitat specialist with no known threats.

Euchaetis intonsa I.Williams

Status: **Rare**
D. Raimondo

e**Distribution:** WC. De Hoop Nature Reserve.
Habitat: Coastal fynbos, southeast-facing slopes.
Rationale: A range-restricted species (EOO < 100 km²) protected within the De Hoop Nature Reserve.

Euchaetis laevigata Turcz.

Status: **VU** B1ab(iii)
D. Raimondo

e**Distribution:** WC. Cape Agulhas to Potberg.
Habitat: Sparse fynbos dominated by restios and *Leucadendron* species, in sandy pockets between limestone rocks.
Rationale: EOO < 5 000 km². Fewer than 10 known locations continue to decline because of invasion by alien plants.

Euchaetis longicornis I.Williams

Status: **CR** B1ab(iii)+2ab(iii); C2a(ii)
D. Raimondo

e**Distribution:** WC. Riversdale.
Habitat: Ferricrete rock chips on hard, dry, whitish grey clay soil.
Rationale: EOO 11 km², AOO < 10 km². One or two remaining locations continue to decline as a result of ongoing habitat degradation caused by overgrazing, inappropriate fire management and invasion by alien plants. It is highly likely that the severely grazed and regularly burnt subpopulation at Plaatjieskops is extinct. When last surveyed in the 1980s, there were less than 200 mature individuals.

Euchaetis pungens (Bartl. & H.L.Wendl.) I.Williams

Status: **VU** A2ac
N.A. Helme & J.E. Victor

e**Distribution:** WC. Upper Breede River Valley, on flats and low slopes in the mountains of the Worcester district.

Habitat: Breede Alluvium Fynbos, seasonally waterlogged, sandy soils.
Rationale: A population reduction of at least 30% is estimated based on habitat loss to vineyard and deciduous fruit orchard expansion, drainage of seasonal wetlands, and invasion by alien plants over the past 30 years (generation length 10 years). Habitat loss is ongoing.

Euchaetis schlechteri Schinz

Status: **VU** B1ab(iii,v)+2ab(iii,v)
D. Raimondo

[e]**Distribution:** WC. Sir Lowry's Pass to Bredasdorp.
Habitat: Clay soils, 120–290 m.
Rationale: EOO and AOO < 2 000 km^2. Fewer than 10 locations remain after habitat loss to wheat cultivation. It continues to decline because of inappropriate fire management and invasion by alien plants.

Euchaetis tricarpellata I.Williams

Status: **Rare**
J.E. Victor

[e]**Distribution:** WC. Piketberg to Olifants River Mountains.
Habitat: Hard quartzitic soil amongst Table Mountain Sandstone rocks.
Rationale: A range-restricted species (EOO < 500 km^2) that is not threatened as it occurs in a nonarable habitat.

Macrostylis Bartl. & H.L.Wendl.

Macrostylis barbigera (L.f.) Bartl. & H.L.Wendl.

Status: **Rare**
J.E. Victor & D. Raimondo

[e]**Distribution:** WC. Kouebokkeveld Mountains.
Habitat: Dry, hard, stony or rocky ground derived from Table Mountain Sandstone on slopes.
Rationale: A range-restricted species (EOO 240 km^2) with no known threats.

Macrostylis cassiopoides (Turcz.) I.Williams subsp. **cassiopoides**

Status: **EN** B1ab(ii,iii,iv,v)
D. Raimondo

[e]**Distribution:** WC. Clanwilliam district, Nardous Kloof to Bergvallei River.
Habitat: Sandy and flat rocky soils.
Rationale: EOO < 1 390 km^2. Five known locations continue to decline because of habitat loss to potato and rooibos tea cultivation.

Macrostylis cassiopoides (Turcz.) I.Williams subsp. **dregeana** (Sond.) I.Williams

Status: **EN** B1ab(i,ii,iii,iv)+2ab(i,ii,iii,iv)
J.E. Victor & D. Raimondo

[e]**Distribution:** WC. Darling to Bellville.
Habitat: Acid sands.
Rationale: EOO 516 km^2, AOO < 500 km^2. Four or five locations remain after extensive habitat loss to urban expansion, wheat and vineyard cultivation and invading alien acacias. This formerly common and widespread taxon continues to decline.

Macrostylis cauliflora I.Williams

Status: **EN** B1ab(ii,iii,iv,v)
D. Raimondo

[e]**Distribution:** WC. Elim to Bredasdorp.
Habitat: Ferricrete outcrops in very shallow soils.
Rationale: EOO 680 km^2. Six severely fragmented subpopulations continue to decline as a result of invading alien acacias and habitat loss to crop cultivation.

[F] **Macrostylis crassifolia** Sond.

Status: **VU** B1ab(ii,iii,iv,v)
N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Lambert's Bay to Hopefield.
Habitat: Sandy flats.
Rationale: EOO 8 900 km^2. The 7–10 known locations continue to decline because of ongoing habitat loss to potato and rooibos tea cultivation.

Macrostylis hirta E.Mey. ex Sond.

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)
D. Raimondo

[e]**Distribution:** WC. Redelinghuys to Graafwater.
Habitat: Well-drained sandy soils.
Rationale: EOO 350 km^2, AOO < 350 km^2. Fewer than five remaining locations continue to decline because of ongoing habitat loss to rooibos tea and potato cultivation.

Macrostylis ramulosa I.Williams

Status: **VU** D2
D. Raimondo & J.E. Victor

[e]**Distribution:** WC. Kouebokkeveld Mountains.
Habitat: Grows on gravelly, sandy soil derived from Table Mountain Sandstone, 700 m.
Rationale: This reseeder, known to occur at four locations (EOO 70 km^2), is potentially threatened by too frequent fires.

Macrostylis villosa (Thunb.) Sond. subsp. **minor** I.Williams

Status: **EX**
J.E. Victor

[e]**Distribution:** WC. Bottelary hills.
Habitat: Gravelly and clay soil on lower northern slopes.
Rationale: All habitat at the only known location has been converted to agriculture and extensive searches have failed to relocate surviving individuals.

Macrostylis villosa (Thunb.) Sond. subsp. **villosa** **Plate 87**

Status: **EN** A2ab; B1ab(ii,iii,iv,v)
D. Raimondo

[e]**Distribution:** WC. Cape Peninsula to Mamre.
Habitat: Sandy soils.
Rationale: A population reduction of at least 50% is estimated based on the local extinction of known subpopulations and habitat loss to urban expansion, agriculture and invasion by alien plants over the past 140 years (generation length > 50 years). EOO < 1 800 km^2. Small, severely fragmented remaining subpopulations continue to decline.

Sheilanthera I.Williams

[F] **Sheilanthera pubens** I.Williams

Status: **Rare**
J.E. Victor

[e]**Distribution:** WC. Kouebokkeveld Mountains.
Habitat: Amongst rocks on mountain summits.
Rationale: A range-restricted species (EOO 20 km^2) that is not likely to be threatened as it occurs in a fire refuge habitat.

Plate 87



N.A. Helme

Acmadenia laxa EN



J.H. Vlok

Acmadenia macropetala VU



J.H. Vlok

Acmadenia nivenii VU



R.C. Turner

Acmadenia latifolia VU



J.H. Vlok

Acmadenia maculata NT



J.H. Vlok

Acmadenia tetragona VU



J.H. Vlok

Acmadenia fruticosa VU



C. Paterson-Jones

Acmadenia mundiana Rare



C. Paterson-Jones

Macrostylis villosa subsp. *villosa* EN

Plate 88



C. Paterson-Jones

Agathosma riversdalensis VU



C. Paterson-Jones

Agathosma collina NT



C. Paterson-Jones

Agathosma thymifolia VU



C. Paterson-Jones

Agathosma adenandriflora NT



C. Paterson-Jones

Agathosma latipetala EN



J.H. Vlok

Agathosma gnidiiflora CR



C. Paterson-Jones

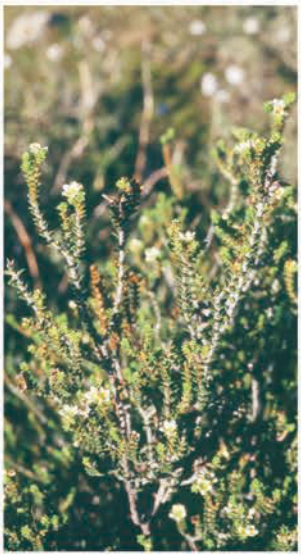
Agathosma crenulata Declining



J.H. Vlok

Agathosma sp. nov. *'Vlok JHJ 835'* Rare

Plate 89



C. Paterson-Jones

Diosma guthriei VU



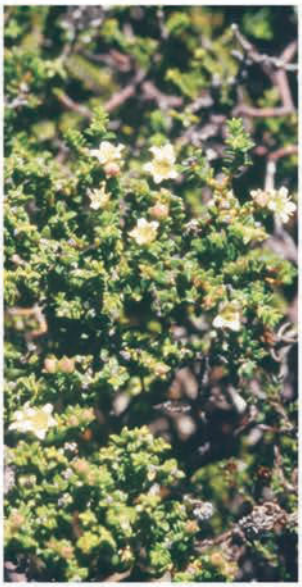
C. Paterson-Jones

Adenandra rotundifolia NT



C. Burgers

Adenandra odoratissima subsp. *odoratissima* VU



C. Paterson-Jones

Diosma haelkraalensis EN



C. Burgers

Diosma tenella VU



C. Burgers

Diosma parvula EN



C. Paterson-Jones

Diosma aspalathoides NT



C. Burgers

Diosma demissa VU



C. Burgers

Diosma arenicola EN

SALICACEAE

Pseudoscolopia Gilg

Pseudoscolopia polyantha Gilg

Status: **NT** B1ab(iii,v)

L. von Staden & A.T.D. Abbott

e**Distribution:** EC KZN WC. Mainly Pondoland between Oribi Gorge and Port St Johns. Isolated occurrences at Little Noodsberg and Ngoye (KwaZulu-Natal) and the Groot Winterhoek Mountains (Western Cape).

Habitat: Sandstones. Along forest margins, or in rock outcrops usually on cliffs (Pondoland and KwaZulu-Natal). In the Western Cape it occurs along a rocky streambank in montane fynbos.

Rationale: Restricted to a highly threatened habitat in southern KwaZulu-Natal and Pondoland. EOO ± 13 500 km^2. A suspected 10–20 locations continue to decline as a result of frequent and intense grassland fires that affect forest margins. Although three isolated subpopulations occur in KwaZulu-Natal and the Western Cape, subpopulations in Pondoland are not severely fragmented.

SANTALACEAE

Osyris L.

F **Osyris speciosa** (A.W.Hill) J.C.Manning & Goldblatt

Status: **VU** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

e**Distribution:** WC. Houwhoek to Agulhas.

Habitat: Coastal limestone and sandstone flats and slopes below 250 m.

Rationale: EOO and AOO < 1 000 km^2. Small, scattered subpopulations at nine known locations continue to decline as a result of invasion by alien plants, coastal development, agriculture and sand quarrying. Only three subpopulations are protected within reserves.

Thesium L.

Thesium davidsonae Brenan

Status: **VU** D2

P.M. Burgoyne, F. Daniels & R.C. Turner

e**Distribution:** LM. Abel Erasmus Pass.

Habitat: Bushveld, on dolomites.

Rationale: Two known locations are potentially threatened by overgrazing.

F **Thesium ecklonianum** Sond.

Status: **EN** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

R.C. Turner

e**Distribution:** WC. Cape Peninsula to Bredasdorp.

Habitat: Sand flats.

Rationale: EOO 250 km^2, AOO < 250 km^2. Two remaining locations continue to decline because of habitat loss to urban expansion, crop cultivation and invading alien hakeas.

Thesium fallax Schltr.

Status: **EN** B1ab(i,ii,iii,iv,v)+2ab(i,ii,iii,iv,v)

P.M. Burgoyne, F. Daniels & R.C. Turner

e**Distribution:** WC. Cape Peninsula to Agulhas Plain.

Habitat: Lowland coastal flats.

Rationale: EOO and AOO < 200 km^2. Fewer than five remaining locations continue to decline as a result of habitat loss to wheat and vineyard expansion, overgrazing, invasion by alien plants and coastal housing development.

Thesium gracilentum N.E.Br.

Status: **VU** D2

D. Raimondo

e**Distribution:** LM. Woodbush and Lekgalameetse.

Habitat: Serpentine soils in northern escarpment bushveld.

Rationale: Fewer than five known locations are potentially threatened by expanding forestry plantations and invasion by alien plants.

Thesium jeanae Brenan

Status: **Rare**

D. Raimondo & C.R. Scott-Shaw

e**Distribution:** KZN. Lebombo Mountains.

Habitat: Savanna, rocky, open woodland, 430 m.

Rationale: A poorly known species from an underexplored area. Only one record from the Lebombo Mountains is known, but it is likely to occur at a few other places within the range.

Thesium litoreum Brenan

Status: **CR** B1ab(ii,iii,v)

P.M. Burgoyne, J.E. Victor & R.C. Turner

e**Distribution:** WC. Melkbosstrand.

Habitat: Sandy coastal flats.

Rationale: EOO < 100 km^2. Ongoing habitat loss to housing and industrial development is likely to cause a continuing decline at one known location.

F **Thesium micropogon** A.DC.

Status: **DD**

R.C. Turner

e**Distribution:** WC. Caledon Swartberg.

Habitat: Clay slopes.

Rationale: Known only from the type, collected 1915. The distribution and habitat of this species are too poorly known to determine its status.

F **Thesium patersonae** A.W.Hill

Status: **DD**

J.E. Victor & R.C. Turner

e**Distribution:** EC. Port Elizabeth to Uitenhage.

Habitat: Unknown.

Rationale: Although conserved in the Groendal Wilderness Area, this species may have been eradicated in areas such as Walmer and is under continuing threat from urban expansion in the greater Port Elizabeth-Uitenhage region. EOO < 600 km^2. Known from three historical sites, at least one of which has been lost to urban development. It is not known where this parasite still persists, as it is an ephemeral, dependent on the host plant for survival, is under-collected and difficult to identify.

Thesium polygaloides A.W.Hill

Status: **VU** D2

P.M. Burgoyne & F. Daniels

e**Distribution:** KZN. Lake St Lucia to Swaziland.

Habitat: Swamps.

Rationale: Four known locations are potentially threatened by urban development.

F **Thesium repandum** A.W.Hill

Status: **DD**

R.C. Turner

e**Distribution:** WC. Malmesbury to Paarl.

Habitat: Flats and lower slopes.
Rationale: Last collected in 1946 at unspecified localities in an area that has been now extensively transformed by urban expansion and agriculture. Not enough is known about the distribution range and habitat of this species to determine its status, but it is highly likely to be threatened.

[F] **Thesium schumannianum** Schltr.

Status: **DD**D
R.C. Turner
[e]**Distribution:** WC. Cape Peninsula to Houwhoek.
Habitat: Lower sandstone slopes.
Rationale: Last collected in 1963. The distribution and habitat of this species is too poorly known to determine its status.

[F] **Thesium subsimile** N.E.Br.

Status: **DD**D
J.E. Victor & M. Lötter
[e]**Distribution:** MP. Dullstroom.
Habitat: Inundated grassland, 1 600–200 m.
Rationale: The type specimen was until recently the only record. It was collected again in 2001 near Dullstroom, Mpumalanga, but the full extent of the range and habitat of this species remains poorly known.

[F] **Thesium susannae** A.W.Hill

Status: **Rare**
R.C. Turner
[e]**Distribution:** WC. Langeberg Mountains.
Habitat: Sandstone slopes.
Rationale: A range-restricted (EOO 500 km^2) species that is unlikely to be threatened in its mountainous habitat.

SAPINDACEAE

Atalaya Blume

Atalaya natalensis R.A.Dyer

Status: **NT** B2ab(v)
C.R. Scott-Shaw, A.E. van Wyk, L. von Staden & J.E. Victor
[e]**Distribution:** EC KZN. Eastern Cape coast from The Haven to Umtamvuna, and Ngoye, Nkandla and Ngome forests in KwaZulu-Natal.
Habitat: Scarp forest. Occurs in rocky areas on steep slopes or groves where there is less competition for light from taller overstorey trees.
Rationale: AOO < 200 km^2. Known from 10–15 severely fragmented subpopulations. A rare forest tree species that occurs in a highly specific habitat within isolated forest areas. There is no evidence of continuing decline, but poor recruitment in some areas is of concern.

SAPOTACEAE

Manilkara Adans.

Manilkara nicholsonii A.E.van Wyk

Status: **EN** B1ab(iii,v); C2a(i)
L. von Staden, A.E. van Wyk, C.R. Scott-Shaw, A.T.D. Abbott & J.E. Victor
[e]**Distribution:** EC KZN. Mzimkhulu River to Msikaba River.
Habitat: Pondoland scarp forest. Occurs on the margins of drier forests, especially along the upper edge of cliffs above the deep forested gorges, as well as along the margins of kloof forests.
Rationale: EOO 1 400 km^2. Small, severely fragmented subpopulations consisting of no more than 10 mature individuals continue to decline as a result of too frequent and intense grassland fires affecting forest margins. The population is estimated to consist of less than 2 000 mature individuals. Because of widespread parasitisation of flowers, fruit set is very poor and recruitment and dispersal are limited.

Vitellariopsis Baill. ex Dubard

Vitellariopsis dispar (N.E.Br.) Aubrév.

Status: **Rare**
J.E. Victor
Distribution: KZN. Tugela basin.
Habitat: Closed woodland and dry riverine forest, 800–1 200 m.
Rationale: Occurs as sparsely scattered individuals, but is not threatened.

SCROPHULARIACEAE

Alonsoa Ruíz & Pav.

Alonsoa peduncularis (Kunze) Wettst.

Status: **Rare**
K. Naidoo & D. Raimondo
[e]**Distribution:** EC WC. Rooiberg Pass, Touwsberg and Uitenhage.
Habitat: South-facing slopes, clay soil in rock crevices or at the foot of boulders where it is slightly shady and moist.
Rationale: Small, scattered subpopulations have no known threats.

Bowkeria Harv.

Bowkeria citrina Thode **Plate 90**

Status: **Rare**
K.E. Steiner & K. Naidoo
[e]**Distribution:** KZN MP. Between Groenvlei, Wakkerstroom and Luneberg.
Habitat: Forest margins and cliff edges on cool slopes, 1 400–1 800 m.
Rationale: A range-restricted (EOO 77 km^2) habitat specialist with no known threats.

Chaenostoma Benth.

Chaenostoma longipedicellatum (Hilliard) Kornhall

Status: **Rare**
D. Raimondo
[e]**Distribution:** NC. Bokkeveld Escarpment, near Nieuwoudtville.
Habitat: Among rock outcrops.
Rationale: A range-restricted endemic to the Bokkeveld Escarpment (EOO 130 km^2). Not threatened as its habitat is nonarable.

Chaenostoma multiramosum (Hilliard) Kornhall

Status: **VU** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)
D. Raimondo
[e]**Distribution:** WC. Olifants River to Lambert's Bay.
Habitat: Sand among rock outcrops.
Rationale: EOO 400 km^2, AOO < 400 km^2. The 5–10 suspected locations continue to decline because of ongoing habitat loss to crop cultivation, coastal development and heavy-mineral sand mining.

Chaenostoma platysepalum (Hiern) Kornhall

Status: **Rare**

J.E. Victor

e**Distribution:** KZN. Entumeni to the Uvongo River.

Habitat: Crevices in cliffs at the upper margins of forest patches, often in river gorges, or under overhanging rocks on steep grassy slopes, 450–850 m.

Rationale: A habitat specialist that is not threatened because of the inaccessibility of its habitat.

Chaenostoma racemosum Benth.

Status: **DD**D

K. Naidoo

e**Distribution:** EC. Suurberg, Eastern Cape.

Habitat: Shelter of rocks, partly shaded.

Rationale: Known from the type, collected in 1829 on the Suurberg. Not enough is known about this species to determine its status.

Chaenostoma titanophilum (Hilliard) Kornhall

Status: **VU** D2

K.E. Steiner & K. Naidoo

e**Distribution:** WC. De Hoop Vlei.

Habitat: Cracks in the limestone cliffs.

Rationale: Known from only one location where it is potentially threatened by invasive alien acacias.

Chamaecrypta Schltr. & Diels

F **Chamaecrypta diasciifolia** Schltr. & Diels

Status: **DD**D

D. Raimondo, P.A. Manyama & D.A. Kamundi†

e**Distribution:** NC. Bokkeveld Escarpment.

Habitat: Rocky slopes.

Rationale: Known from an 1897 Schlechter collection from the Bokkeveld Escarpment. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Charadrophila Marloth

Charadrophila capensis Marloth

Status: **Rare**

J.E. Victor & K.E. Steiner

e**Distribution:** WC. Hottentots Holland and Kogelberg Mountains.

Habitat: Moist, shaded streambanks, on rock faces or under overhanging rocks.

Rationale: A habitat specialist known from five subpopulations. No threats are known to have an impact on this species.

Chenopodiopsis Hilliard

F **Chenopodiopsis chenopodioides** (Diels) Hilliard

Status: **Rare**

N.A. Helme & D. Raimondo

e**Distribution:** WC. Clanwilliam, Botterkloof Pass.

Habitat: Damp clay slopes and flats.

Rationale: A range-restricted species (EOO 150 km^2), known from only two subpopulations but as it is an inconspicuous species, there are likely to be a few more undiscovered subpopulations. Although it has lost habitat to wheat cultivation in the past, it is not threatened at present.

F **Chenopodiopsis retrorsa** Hilliard

Status: **VU** D2

N.A. Helme & D. Raimondo

e**Distribution:** WC. Caledon Swartberg.

Habitat: Lower sandstone slopes.

Rationale: Known from one location and potentially threatened by invading alien plants and quarrying.

Cromidon Compton

F **Cromidon gracile** Hilliard

Status: **Rare**

P.A. Manyama

e**Distribution:** WC. Hex River and Swartberg Mountains.

Habitat: Grows in the shelter of overhanging rocks along cliff faces, 2 000–2 200 m.

Rationale: A high-altitude habitat specialist (EOO 1 900 km^2) known from three collections. Not threatened.

F **Cromidon hamulosum** (E.Mey.) Hilliard

Status: **DD**D

D. Raimondo, P.A. Manyama & D.A. Kamundi†

e**Distribution:** NC. Northern Namaqualand.

Habitat: Unknown.

Rationale: Known only from the type, collected in northern Namaqualand in the early 1800s. The locality, Haazenkraals River, cannot be precisely located. Not enough is known about the distribution, habitat and current status of the population of this species to determine its status.

Diascia Link & Otto

F **Diascia aliciae** Hiern

Status: **EN** B1ab(iii,iv)

K.E. Steiner & D. Raimondo

e**Distribution:** EC. Kentani.

Habitat: Along streams in damp sheltered places in forests.

Rationale: EOO < 200 km^2. Known from fewer than five locations. It continues to decline because of habitat loss and degradation as a result of overgrazing by livestock and wood harvesting. There is also habitat loss to road construction and small-scale subsistence crop cultivation.

F **Diascia glandulosa** E.Phillips var. **glandulosa**

Status: **DD**D

D. Raimondo & F. Cholo

e**Distribution:** WC. Vanrhynsdorp, Gifberg.

Habitat: Rocky slopes, 305–610 m.

Rationale: Known from the 1911 Phillips type collection from the Gifberg. Not enough is known about the distribution, specific habitat or population status of this taxon to determine its status.

Diascia insignis K.E.Steiner

Status: **VU** D2

K.E. Steiner, S. Todd, E. Marinus & D. Raimondo

e**Distribution:** NC. Bokkeveld Escarpment.

Habitat: Dwyka tillite clays.

Rationale: Known from three locations and potentially threatened by crop cultivation, grazing by livestock, invasive alien grasses and loss of specialist oil-collecting bee pollinators because of fragmentation of its habitat. At least 80% of its habitat has been lost to wheat cultivation.

Diascia lewisiae K.E.Steiner

Status: **VU** D1+2

K.E. Steiner, S. Todd, E. Marinus & D. Raimondo

e**Distribution:** NC. Nieuwoudtville.

Habitat: Loamy tillite soil.

Rationale: EOO 64 km², AOO 5.4 km². Known from five small subpopulations that together consist of less than 1 000 mature individuals. Four of the five subpopulations occur on private land and are potentially threatened by crop cultivation and road widening.

Diascia pentheri Schltr.

Status: **DD**

K.E. Steiner & J.E. Victor

e**Distribution:** Unknown.

Habitat: Unknown.

Rationale: The type specimen of this species was destroyed when the Berlin Herbarium burnt down. No specimens can be matched with the 1903 species description.

Diascia ramosa Scott-Elliot

Status: **VU** D2

J.E. Victor, A.P. Dold & K.E. Steiner

e**Distribution:** EC. Somerset East, Boschberg.

Habitat: Mountain slopes in Amathole Montane Grassland.

Rationale: Known from one location and potentially threatened by invasive alien plants.

Diascia tugelensis Hilliard & B.L.Burtt

Status: **Rare**

J.E. Victor, C.R. Scott-Shaw, K.E. Steiner & S.J. Smithies

e**Distribution:** KZN. Drakensberg Mountains.

Habitat: Montane and subalpine grassland, often in moist rocky sites, 1 800–3 300 m.

Rationale: A Drakensberg endemic that occurs as small, scattered subpopulations, often with less than 40 plants. All three known sites fall within protected areas. Not known to be declining.

Dischisma Choisy

F **Dischisma crassum** Rolfe

Status: **VU** B1ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

e**Distribution:** WC. Lambert's Bay to St Helena Bay.

Habitat: Dunes close to the sea.

Rationale: EOO < 780 km². Known from fewer than 10 locations. The population is declining as a result of extensive use of off-road vehicles in the Elands Bay and Lambert's Bay areas.

F **Dischisma fruticosum** (L.f.) Rolfe

Status: **DD**

N.A. Helme & D. Raimondo

e**Distribution:** WC. Unknown, possibly Paleisheuwel.

Habitat: Sandy soils.

Rationale: Known only from the type, collected in 1842. The locality is difficult to pinpoint as it reads Lambert's or Alexander Kloof. We suspect that this species is from the Paleisheuwel area in the sandveld, where there has been extensive habitat loss to potato cultivation. Not enough is known about the distribution, habitat and current status of the population to assess this species.

F **Dischisma leptostachyum** E.Mey.

Status: **NT** B1ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

e**Distribution:** NC WC. Port Nolloth to Lambert's Bay.

Habitat: Sands, often coastal.

Rationale: EOO < 8 000 km². Known from less than 15 locations. A small part of its range is affected by crop cultivation, especially around Lambert's Bay. Habitat in the northern part of its range is also being lost to diamond mining.

F **Dischisma squarrosum** Schltr.

Status: **EN** B1ab(ii,iii,iv,v)

N.A. Helme & D. Raimondo

e**Distribution:** NC WC. Southern Namaqualand to Clanwilliam.

Habitat: Sandy flats.

Rationale: EOO 1 800 km². Known from fewer than five locations. At least 60% of the sandy habitat where this species occurs has been lost to agriculture (rooibos, potatoes, vines, tomatoes and onion cultivation). Loss is continuing.

Freylinia Colla

Freylinia crispa Van Jaarsv.

Status: **VU** D2

E.J. van Jaarsveld & D. Raimondo

e**Distribution:** EC. Kouga Valley near Joubertina.

Habitat: Well-drained, steep, east-facing rocky scree in dry fynbos.

Rationale: A range-restricted endemic (EOO 10 km²), known from two locations. Potentially threatened by invading alien plants.

F **Freylinia helmei** Van Jaarsv. **Plate 90**

Status: **VU** D2

N.A. Helme, E.J. van Jaarsveld & D. Raimondo

e**Distribution:** WC. Bot River.

Habitat: Steep slopes and shale outcrops in renosterveld.

Rationale: Known from three locations and potentially threatened by crop cultivation, loss of pollinators due to fragmentation and an incorrect fire regime.

Freylinia longiflora Benth. **Plate 90**

Status: **CR** A2bc

E.J. van Jaarsveld & D. Raimondo

e**Distribution:** WC. Elgin Valley.

Habitat: Transition soils between Elgin Shale Fynbos and Kogelberg Sandstone Fynbos.

Rationale: A long-lived resprouter (generation length 100 years) that has lost 80% of its habitat over the past 120 years to deciduous fruit and vineyard expansion. This species remains extant at only three sites.

Freylinia tropica S.Moore **Plate 90**

Status: **Rare**

E.J. van Jaarsveld & D. Raimondo

Distribution: LM. Waterberg and Chimanimani Mountains (Zimbabwe).

Habitat: Riverbanks and streamsides, 1 800 m.

Rationale: EOO < 500 km². Known from fewer than 10 subpopulations in South Africa, none of which are threatened.

Plate 90



C. Paterson-Jones

Nemesia strumosa NT



C. Paterson-Jones

Manulea caledonica NT



E. van Jaarsveld

Freylinia tropica Rare



E. van Jaarsveld

Freylinia visseri CR



J.H. Vlok

Freylinia vlokii EN



E. van Jaarsveld

Freylinia longiflora CR



N.A. Helme

Freylinia helmei VU



M. Lötter

Bowkeria citrina Rare

Plate 91



R. Koopman

Lachnaea aurea VU



N.A. Helme

Gnidia insignis EN



C. Paterson-Jones

Passerina ericoides VU



C. Paterson-Jones

Passerina paludosa EN



C. Paterson-Jones

Lachnaea capitata VU

Freylinia visseri Van Jaarsv. **Plate 90**

Status: **CR** D

E.J. van Jaarsveld & D. Raimondo

[e]**Distribution:** WC. Velddrif and Hopefield.

Habitat: Strandveld.

Rationale: A very rare, long-lived resprouter, known from two subpopulations. One was lost to wheat cultivation in 1954. The second subpopulation consists of 24 mature individuals and is potentially threatened by potato cultivation.

Freylinia vlokii Van Jaarsv. **Plate 90**

Status: **EN** D

E.J. van Jaarsveld, J.H. Vlok & D. Raimondo

[e]**Distribution:** WC. Little Karoo, Rooiberg.

Habitat: South-facing screes in acidic soils derived from quartzitic sandstone in seasonally wet streambeds.

Rationale: Known from one site (EOO < 1 km^2), where there are less than 250 mature individuals, this species is potentially threatened by extraction of groundwater.

Globulariopsis Compton

[F] **Globulariopsis obtusiloba** Hilliard

Status: **Critically Rare**

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Groot Winterhoek Mountains.

Habitat: Fynbos mountain slopes, 1 000–1 300 m.

Rationale: EOO < 10 km^2. Known from one site. Not threatened because of the inaccessibility of its high-altitude habitat.

[F] **Globulariopsis pumila** Hilliard

Status: **CR** PE

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Piketberg.

Habitat: Sandy plateau.

Rationale: Known from one collection in 1935 from the plateau on top of the Piketberg at Kapteinskloof. It is highly likely to be extinct because of conversion of its habitat to orchards.

Globulariopsis wittebergensis Compton

Status: **Rare**

J.E. Victor & K. Naidoo

[e]**Distribution:** WC. Bontberg, north of Touws River to Witberge, south of Matjiesfontein.

Habitat: Rocky sandstone slopes, 1 200–1 525 m.

Rationale: EOO 480 km^2. Known from fewer than five sites and not threatened.

Halleria L.

[F] **Halleria ovata** Benth.

Status: **Rare**

N.A. Helme & D. Raimondo

[e]**Distribution:** WC. Olifants River Mountains.

Habitat: Streamsides.

Rationale: EOO < 500 km^2. Known from three collections and not threatened.

Hebenstretia L.

[F] **Hebenstretia dregei** Rolfe

Status: **DD**D

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

[e]**Distribution:** WC. Genadendal to Swellendam.

Habitat: Stony mountain slopes.

Rationale: Known only from collections from the late 1800s. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

Hemimeris L.f.

[F] **Hemimeris sp. nov.**

Voucher: *Helme 4464* NBG

Status: **NT** B1ab(ii,iii,iv,v)+2ab(ii,iii,iv,v)

D. Raimondo & N.A. Helme

[e]**Distribution:** WC. Langebaan Peninsula to Saldanha.

Habitat: Granite and limestone outcrops.

Rationale: EOO 524 km^2, AOO 85.6 km^2. About 20 known locations continue to decline as a result of coastal development.

Jamesbrittenia Kuntze

[F] **Jamesbrittenia bergae** P.Lemmer

Status: **VU** D2

D. Raimondo

[e]**Distribution:** LM. Thabazimbi.

Habitat: Mixed bushveld, in crevices on ferricrete outcrops with a southern aspect, 1 056–1 106 m.

Rationale: EOO 4 km^2. Known from one location near Thabazimbi and potentially threatened by the construction of power lines.

Jamesbrittenia incisa (Thunb.) Hilliard

Status: **VU** B1ab(iii,v)

D. Raimondo & R.C. Turner

[e]**Distribution:** NC. Calvinia to Swartputs and Breekbeenkolk, and Sutherland to Fraserburg.

Habitat: Among boulders in karroid vegetation.

Rationale: EOO < 3 000 km^2. Known from seven locations. Declining in habitat quality and number of mature individuals because of grazing by livestock.

Jamesbrittenia macrantha (Codd) Hilliard

Status: **NT** B1ab(iii)

J.E. Burrows, S. Burns & L. von Staden

[e]**Distribution:** LM MP. Sekhukhuneland.

Habitat: Grassy slopes with other scattered shrubs, restricted to norite.

Rationale: EOO 1 800 km^2. Known from 11 locations. A Sekhukhuneland endemic with a very restricted range in the southeastern parts of the region. Declining because of expanding mining activities.

Jamesbrittenia megaphylla Hilliard

Status: **Rare**

R.C. Turner, J.E. Victor, S.J. Smithies & K. Naidoo

Distribution: NC. Vioolsdrif on the Orange River.

Habitat: Among rocks or at the foot of cliffs on mountain slopes.

Rationale: A range-restricted Richtersveld and southern Namibian species (EOO < 500 km^2). Not threatened because of the inaccessibility of its habitat.

Lyperia Benth.

Lyperia formosa Hilliard

Status: **VU** D2

J.E. Victor & K. Naidoo

[e]**Distribution:** WC. Montagu.

Habitat: Riverbank in shallow soil over rock.

Rationale: Known from one location and potentially threatened by crop cultivation.

Manulea L.

Manulea acutiloba Hilliard

Status: **DD**D

D. Raimondo & K. Naidoo

e**Distribution:** NC. Between Garies and Springbok.

Habitat: Unknown.

Rationale: Known only from the type collection, which has a vague site description 'Between Garies and Springbok', its habitat is unknown. Not enough is known about the distribution, habitat and current status of the population to assess this species.

Manulea annua (Hiern) Hilliard

Status: **NT** B1ab(ii,iii,iv,v)

D. Raimondo

e**Distribution:** WC. Pakhuis Pass to Porterville.

Habitat: Hillsides and valley bottoms, usually in damp sandy places.

Rationale: EOO 2 600 km^2. Known from 15 locations from the Olifants River Valley and sandveld. Threatened by the ongoing conversion of its habitat for rooibos tea and potato cultivation.

Manulea arabidea Schltr. ex Hiern

Status: **DD**D

D. Raimondo & R.C. Turner

e**Distribution:** WC. Pakhuis and Clanwilliam.

Habitat: Sandy riverbanks.

Rationale: Known from two collections, it has not been recorded for over 100 years. Not enough is known about the current status of the population to assess this species but subpopulations are likely to be threatened by crop cultivation and invasive alien plants.

Manulea augei (Hiern) Hilliard

Status: **EN** B1ab(ii,iii,iv,v)

D. Raimondo & R.C. Turner

e**Distribution:** WC. Malmesbury, Saldanha Bay and Langebaan.

Habitat: Sandy lowlands on calcrete.

Rationale: EOO < 600 km^2. Known from fewer than five locations. Threatened by ongoing habitat loss to coastal development.

F **Manulea caledonica** Hilliard **Plate 90**

Status: **NT** B1ab(ii,iii,iv,v)

D. Raimondo

e**Distribution:** WC. Hermanus to Still Bay.

Habitat: Sandy, calcareous soils on flats and slopes.

Rationale: EOO < 2 636 km^2. Known from 15 locations. Experiencing ongoing loss of habitat and subpopulations to coastal development, crop cultivation and invasion by alien acacias.

Manulea cinerea Hilliard

Status: **VU** B1ab(ii,iii,v)

N.A. Helme & D. Raimondo

e**Distribution:** NC WC. Lambert's Bay to Orange River.

Habitat: Grows on coastal dunes, usually semistable, up to 500 m inland.

Rationale: EOO < 600 km^2. Known from fewer than 10 locations. Experiencing ongoing habitat loss to heavy-mineral sand and diamond mining.

F **Manulea corymbosa** L.f.

Status: **VU** B1ab(ii,iii,iv,v)

R.C. Turner

e**Distribution:** WC. Velddrif to the Cape Peninsula.

Habitat: Sandy soils near the coast.

Rationale: EOO < 1 880 km^2. The habitat of this annual species has been severely fragmented and transformed by urban and coastal development, agriculture and encroachment by invasive alien vegetation. At least 30% of its habitat has been lost and decline is continuing.

Manulea derustiana Hilliard

Status: **VU** D2

J.H. Vlok & D. Raimondo

e**Distribution:** WC. De Rust.

Habitat: South-facing slopes, in deep sandy soil.

Rationale: Known from two locations and potentially threatened by overgrazing and by sand quarrying.

Manulea deserticola Hilliard

Status: **DD**D

J.E. Victor

e**Distribution:** FS NC. Fauresmith and Modder River.

Habitat: Sandy soils.

Rationale: A poorly known species recorded from three collections, two of which cannot be localised precisely. All collections were made before 1935. Not enough is known about the current status of the population to assess this species.

F **Manulea exigua** Hilliard

Status: **VU** B1ab(i,ii,iii,iv,v)

R.C. Turner

e**Distribution:** WC. Betty's Bay to Gansbaai.

Habitat: Sandy flats and slopes.

Rationale: EOO < 400 km^2. Known from five locations but suspected to be under-collected and to occur at 6–10 locations. Its habitat has been severely fragmented and transformed by coastal housing development and invasion by alien plants. Loss is continuing.

Manulea flanaganii Hilliard

Status: **DD**D

D. Raimondo & J.E. Victor

e**Distribution:** FS. Orange River near Bethulie.

Habitat: Unknown.

Rationale: Known from the type specimen collected over 100 years ago near Bethulie. Not enough is known about the distribution, habitat and current status of the population to assess this species.

Manulea florifera Hilliard & B.L.Burtt

Status: **NT** B1ab(iii)

D. Raimondo

e**Distribution:** EC KZN. Southern KwaZulu-Natal Drakensberg Mountains and outlying mountains, including the Suurberg in East Griqualand as far south as Ngele.

Habitat: Damp or marshy montane grassland, 1 800–2 100 m.

Rationale: EOO < 7 400 km^2. Known from less than 15 locations. Around 30% of its habitat has been lost to afforestation. Loss is ongoing.

Manulea glandulosa E.Phillips

Status: **NT** B1ab(ii,iii,iv,v)

D. Raimondo

e**Distribution:** NC WC. Gifberg to northern Cederberg Mountains.

Habitat: Sandy restionaceous flats.
Rationale: EOO 975 km². Known from less than 15 locations. Threatened by ongoing habitat loss to rooibos tea cultivation.

Manulea incana Thunb.

Status: **DD**D
D. Raimondo & K. Naidoo
e**Distribution:** NC. Roggeveld Escarpment.
Habitat: Sandstone slopes.
Rationale: A Roggeveld endemic, known from four collections but only two that have site descriptions. Last collected by Acocks in 1953. Not enough is known about the current status of the population to assess this species.

F Manulea juncea Benth.

Status: **Rare**
D. Raimondo, P.F. Matlamela & D.A. Kamundi†
e**Distribution:** WC. Cederberg and Kouebokkeveld.
Habitat: Rocky sandstone slopes, on shale bands.
Rationale: A habitat specialist, known from fewer than 10 subpopulations. Not threatened.

Manulea leptosiphon Thell.

Status: **DD**D
D. Raimondo & K. Naidoo
Distribution: NC. Rietfontein.
Habitat: Kalahari sands.
Rationale: Known only from the type, collected in 1889 at Rietfontein in the Kalahari on the border of the Cape and present-day Namibia. Not enough is known about the distribution and current status of the population to assess this species.

Manulea minor Diels

Status: **DD**D
D. Raimondo, J.E. Victor & L. Potter
e**Distribution:** WC. Hex River Valley.
Habitat: Sands.
Rationale: Known from two collections by Bolus from the Hex River in 1893. Possibly extinct owing to extensive vineyards. There are two doubtful records, one from Orchards by E. Esterhuysen in 1944 and another by Rogers from Bellville. Not enough is known about the current status of the population to assess this species.

F Manulea montana Hilliard

Status: **Rare**
R.C. Turner
e**Distribution:** WC. Northern Cederberg.
Habitat: Mountain slopes.
Rationale: A range-restricted endemic (EOO < 500 km²), this rare high-altitude annual is well conserved in the Cederberg Wilderness Area.

Manulea ovatifolia Hilliard

Status: **Rare**
D. Raimondo
e**Distribution:** WC. Piketberg Mountain.
Habitat: Rocky slopes.
Rationale: A range-restricted Piketberg endemic (EOO 190 km²). Although last collected by Esterhuysen in 1963, all three historical sites are well described, easy to trace and occur on rocky habitat that is not threatened.

F Manulea paucibarbata Hilliard

Status: **Rare**
D. Raimondo, P.F. Matlamela & D.A. Kamundi†
e**Distribution:** WC. Botterkloof to Northern Cederberg Mountains.
Habitat: Sandy or stony slopes, 180–900 m.
Rationale: Known from fewer than five sites from a restricted range (EOO < 400 km²). This species has no recorded threats.

F Manulea pillansii Hilliard

Status: **EN** B1ab(iii)
R.C. Turner
e**Distribution:** WC. Lambert's Bay to Clanwilliam.
Habitat: Sandveld on deep, sandy soils.
Rationale: EOO 3 380 km². Known from fewer than five locations. About 65% of its habitat is now under cultivation as a result of strip potato cultivation. Habitat loss to crop cultivation is ongoing.

Manulea ramulosa Hilliard

Status: **CR** PE
D. Raimondo
e**Distribution:** WC. Klawer.
Habitat: Rocky hills in sandy areas.
Rationale: Last collected in 1926. Much of the area around Klawer is now under cultivation because of the introduction of irrigation schemes. The surrounding mountain slopes have also been severely overgrazed by livestock. This species may be extinct.

Melanospermum Hilliard

Melanospermum italae Hilliard

Status: **VU** B1ab(iii)
C.R. Scott-Shaw, I.M. Johnson & L. von Staden
Distribution: KZN MP. Louwsburg, Piet Retief and near Mbabane (Swaziland).
Habitat: Mistbelt grassland, in sandy or gritty places around or on rock sheets and around extensive rock outcrops, 1 200–1 500 m.
Rationale: Known from fewer than 10 locations within an EOO of 6 700 km². The habitat is being affected by severe overgrazing, which is likely cause continuing decline of the population.

Melanospermum swazicum Hilliard

Status: **Rare**
J.E. Victor
Distribution: KZN. Ngome in KwaZulu-Natal, also occurs in Swaziland.
Habitat: Moist, shaded, peaty soil in the shelter of granite rocks, 1 050–1 375 m.
Rationale: Known from one site in South Africa. Not threatened because of the inaccessibility of its habitat.

Microdon Choisy

F Microdon capitatus (P.J.Bergius) Levyns

Status: **EN** B1ab(ii,iii,iv,v)
N.A. Helme & D. Raimondo
e**Distribution:** WC. Clanwilliam to Cape Peninsula.
Habitat: Deep sands.
Rationale: EOO < 1 300 km². Known from fewer than five locations. Declining as a result of wheat, vineyard, and rooibos cultivation, coastal development and invasion by alien plants.

Microdon nitidus (E.Mey.) Hilliard

Status: **Rare**
N.A. Helme & K. Naidoo
e**Distribution:** WC. Cape Peninsula, Table Mountain.
Habitat: Rocky sandstone slopes at base of cliffs, 500–1 000 m.
Rationale: A range-restricted Table Mountain endemic (EOO < 10 km^2) known from two sites. Occurs within the Table Mountain National Park and is not threatened.

F **Microdon orbicularis** Choisy

Status: **NT** B1ab(ii,iii,iv,v)
N.A. Helme & D. Raimondo
e**Distribution:** NC WC. Bokkeveld Escarpment to Clanwilliam.
Habitat: Clay and sandy soils.
Rationale: EOO < 3 000 km^2. Known from 11 locations and likely to occur at a few more. It has lost habitat in the past and continues to lose habitat to citrus, potato, rooibos tea, grape and wheat cultivation.

Nemesia Vent.

F **Nemesia acornis** K.E.Steiner

Status: **Rare**
N.A. Helme
e**Distribution:** WC. Piketberg.
Habitat: Upper rocky slopes in fynbos.
Rationale: EOO < 250 km^2. Known from four sites. Occurs in rocky areas and therefore not threatened by crop cultivation.

F **Nemesia hemiptera** K.E.Steiner

Status: **Critically Rare**
P.A. Manyama
e**Distribution:** NC. Namaqualand, Kamiesberg.
Habitat: Sandy loam soils under and around shrubs at the foot of large granite outcrops.
Rationale: A recently described species known from one site. It has no recorded threats.

Nemesia micrantha Hiern

Status: **EX**
K.E. Steiner & J.E. Victor
e**Distribution:** WC. Hout Bay, Cape Peninsula.
Habitat: Wet rocks.
Rationale: Known from one collection at Hout Bay by Dodd in 1897. Dodd saw only one plant and described the site as 'pools near fish factory', but this site has been developed. This species is therefore considered extinct.

Nemesia picta Schltr.

Status: **Rare**
K.E. Steiner & D. Raimondo
e**Distribution:** WC. Bain's Kloof Mountains.
Habitat: Rocky sandstone slopes.
Rationale: A very rare species known from the protected area of Bain's Kloof. There have been no collections since 1928. It flowers after fire. No threats are likely.

Nemesia saccata E.Mey. ex Benth.

Status: **Rare**
K.E. Steiner & D. Raimondo
e**Distribution:** NC. Northwestern Namaqualand.
Habitat: Sandy areas.
Rationale: Known from nine sites. Appears to occur in sparsely scattered subpopulations. Not threatened.

F **Nemesia sp. nov.**
Voucher: *Fourcade 1594* BOL
Status: **CR** B1ab(iii,v)
J.H. Vlok & D. Raimondo
e**Distribution:** WC. Outeniqua Mountains.
Habitat: Moist rocky slopes in montane fynbos.
Rationale: Known from one location at the top of Montagu Pass. This species appears to be naturally rare as a number of additional searches in suitable habitat and at the appropriate time after fire have been conducted, but without success. It is threatened by infrastructural development (roads and railways), infestation by alien plants and inappropriate fire management. It flowers only after fire and requires intense burns. Recently fires have been managed and intense fires are now rare.

Nemesia strumosa (Herb.Banks ex Benth.) Benth. **Plate 90**

Status: **NT** B1ab(ii,iii,iv,v)
D. Raimondo, J.E. Victor & K.E. Steiner
e**Distribution:** WC. Hopefield to Melkbos.
Habitat: Sandy flats, often in sandveld.
Rationale: EOO < 700 km^2. Suspected to occur at less than 20 locations. This annual species has lost over 80% of its habitat to wheat cultivation. Decline is continuing because of invasion by alien plants and coastal development.

F **Nemesia zimbabwensis** Rendle

Status: **EN** B1ab(ii,iii)
P.A. Manyama & D. Raimondo
Distribution: LM. Sekhukhuneland, Haenertsburg and Zimbabwe.
Habitat: Associated with rocky outcrops, often on moist, rocky ledges in forest where the plants grow in pockets of sandy humus, 1 800 m.
Rationale: Within South Africa it has a restricted distribution and was known from three locations (EOO 300 km^2), two of which may have been lost as a result of afforestation around Haenertsburg. The third location (in Sekhukhuneland) is threatened by ongoing habitat degradation due to deforestation. The status of the population in Zimbabwe is too poorly known to conduct a global assessment. The national assessment is not downgraded based on the regional criteria as there is a large disjunction between the nearest known population in Zimbabwe, Inyangani Mountain, and Haenertsburg.

Oftia Adans.

F **Oftia glabra** Compton

Status: **Rare**
D. Raimondo, P.F. Matlamela & D.A. Kamundi†
e**Distribution:** WC. Witteberg and Warmwaterberg.
Habitat: Rocky sandstones slopes, 760–1 220 m.
Rationale: A range-restricted endemic (EOO 328 km^2), known from three subpopulations. This species has no recorded threats.

Phyllopodium Benth.

F **Phyllopodium alpinum** N.E.Br.

Status: **Rare**
D. Raimondo, P.F. Matlamela & D.A. Kamundi†
e**Distribution:** WC. Skurweberg to Riviersonderend Mountains.
Habitat: Sandstone slopes, 600–1 750 m.

Rationale: Known from seven subpopulations from high-altitude rocky slopes in the mountains forming an arc between the Skurweberg and Riviersonderend Mountains (EOO 417 km^2). Not threatened.

[F] **Phyllopodium caespitosum** Hilliard

Status: **Rare**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

[e]**Distribution:** WC. Cederberg and Hex River Mountains.

Habitat: Rock ledges and shallow basins, 1 200–2 075 m.

Rationale: A habitat specialist known from seven subpopulations. This species has no recorded threats.

Phyllopodium capillare (L.f.) Hilliard

Status: **NT** B1ab(ii,iii,iv,v)

D. Raimondo

[e]**Distribution:** WC. Lambert's Bay to Albertinia, including the Cape Peninsula.

Habitat: Sandy or stony places below 120 m.

Rationale: EOO < 5 400 km^2. Recorded from 12 locations but extinct at many of them. Threatened by ongoing habitat loss to coastal development, agriculture and invasion by alien plants. This is an annual species that is likely to be under-collected and we therefore suspect that there are 15–20 locations.

Phyllopodium dolomiticum Hilliard

Status: **VU** D2

J.E. Victor & R.C. Turner

[e]**Distribution:** WC. Oudtshoorn.

Habitat: Dolomite hills in pockets of humic, loamy soil, between dolomite boulders.

Rationale: Known only from two collections at the type locality near Rust-en-Vrede in the Little Karoo. Potentially threatened by overgrazing.

Phyllopodium hispidulum (Thell.) Hilliard

Status: **VU** D2

R.C. Turner

Distribution: NC. Orange River.

Habitat: Dunes, in sandy soil.

Rationale: Known from fewer than five locations. Potentially threatened by diamond and heavy-mineral sand mining.

Phyllopodium lupuliforme (Thell.) Hilliard

Status: **DD**D

K. Naidoo & R.C. Turner

[e]**Distribution:** NC. Namaqualand.

Habitat: Hill slopes, 900 m.

Rationale: Known from the collections made by Max and Rudolf Schlechter at Karoechas and Zabies (Sabies) near Steinkopf in the northern part of Namaqualand in 1897. The only information given is 'in collibus' (on hills) at ± 900 m. It has not been collected again in 110 years. Too little is known about its habitat and current population status to determine its status.

[F] **Phyllopodium mimetes** Hilliard

Status: **VU** B1ab(i,ii,iii,iv,v)

R.C. Turner & D. Raimondo

[e]**Distribution:** WC. Het Kruis and Aurora to Mamre.

Habitat: Sandy soils.

Rationale: EOO < 4 200 km^2. A sandveld species known from fewer than 10 locations. The habitat has been severely transformed by wheat and potato cultivation and over 70% has been lost over the past 100 years. Loss to potato cultivation in the northern parts of its range continues.

Phyllopodium pubiflorum Hilliard

Status: **DD**D

D. Raimondo & K. Naidoo

[e]**Distribution:** NC WC. Pakhuis Pass to Nieuwoudtville.

Habitat: Sandy slopes.

Rationale: Last collected in 1940 and site and habitat descriptions not precise enough to determine whether it is threatened by rooibos tea cultivation.

Phyllopodium tweedense Hilliard

Status: **DD**D

D. Raimondo & K. Naidoo

[e]**Distribution:** WC. Laingsburg.

Habitat: Unknown.

Rationale: Known from Tweedside near Laingsburg and last collected in 1940. Too little is known about the ecology of this species for it to be assessed.

Phyllopodium viscidissimum Hilliard

Status: **DD**D

D. Raimondo & K. Naidoo

[e]**Distribution:** WC. Ceres.

Habitat: Ledges at the base of high cliffs.

Rationale: Known from the type collection made on the Baviaansberg near Ceres by Esterhuysen in 1962. An area seldom explored. More collections are required to determine the distribution and rarity of this species.

Polycarena Benth.

[F] **Polycarena capensis** (L.) Benth.

Status: **NT** B1ab(ii,iii,iv,v)

D. Raimondo

[e]**Distribution:** WC. Hopefield to the Cape Peninsula.

Habitat: Sandy flats.

Rationale: EOO < 2 000 km^2. Known from less than 20 locations. It has lost 50% of recorded subpopulations to urban expansion and crop cultivation. There is continuing decline of remaining subpopulations due to invasion by alien plants as well as coastal development and crop cultivation.

Polycarena comptonii Hilliard

Status: **DD**D

K. Naidoo & D. Raimondo

[e]**Distribution:** WC. Laingsburg, Whitehill.

Habitat: Unknown.

Rationale: Known from the type, collected at Whitehill in 1941. The habitat and distribution of this species are too poorly known for it to be assessed. It may be potentially threatened by overgrazing.

Polycarena filiformis Diels

Status: **Rare**

D. Raimondo & K. Naidoo

[e]**Distribution:** NC. Calvinia district, Hantamsberg Mountain.

Habitat: In shady places, on shale slopes in the shelter of small karroid shrubs.

Rationale: EOO < 500 km^2. Known from four subpopulations, this species has no significant threats.

Polycarena nardouwensis Hilliard

Status: **EN** B1ab(ii,iii,iv,v)

D. Raimondo

[e]**Distribution:** WC. Nardous Kloof.

Habitat: Sandy plateaus.
Rationale: EOO < 250 km². Known from three locations on the Nardous Mountain escarpment, an area currently being rapidly transformed for rooibos tea. Over 50% of its habitat has already been transformed.

Polycarena silenoides Harv. ex Benth.

Status: **CR** PE
N.A. Helme, D. Raimondo & J.E. Victor
Distribution: WC. Lion's Head, Cape Peninsula.
Habitat: Granite slopes.
Rationale: Known from the slopes of Lion's Head, with three collections made before 1940. We suspect that this species may be extinct as a result of alien grass invasions and incorrect fire management.

F **Polycarena subtilis** Hilliard

Status: **EN** B1ab(ii,iii,iv,v)
D. Raimondo
Distribution: WC. Olifants River Valley south of Clanwilliam to Piketberg.
Habitat: Sandy flats.
Rationale: EOO < 460 km². Most of its habitat (about 80%) has already been converted for rooibos tea, potato and citrus cultivation. Fewer than five locations are likely to be extant. Conversion of habitat for potato and rooibos tea cultivation is ongoing.

Pseudoselago Hilliard

F **Pseudoselago burmannii** (Choisy) Hilliard

Status: **DD**
D. Raimondo, P.F. Matlamela & D.A. Kamundi†
Distribution: WC. Olifants River Valley and the eastern foothills of the Cederberg.
Habitat: Unknown.
Rationale: A poorly known species. The only reliable records are from two sites in the drainage basin of the Olifants River between Klawer and Clanwilliam and from the eastern foothills of the Cederberg below Krakadou Peak northeast of Wuppertal. Not enough is known about the distribution, specific habitat or current population status to assess this species.

F **Pseudoselago caerulescens** Hilliard

Status: **Rare**
D. Raimondo, P.F. Matlamela & D.A. Kamundi†
Distribution: WC. Riviersonderend Mountains and the Langeberg.
Habitat: Montane fynbos on sandstone slopes, 200–1 525 m.
Rationale: A range-restricted endemic (EOO 490 km²), known from four subpopulations. No recorded threats.

F **Pseudoselago diplotricha** Hilliard

Status: **Rare**
D. Raimondo, P.F. Matlamela & D.A. Kamundi†
Distribution: WC. Hex River Mountains, Milner Ridge Peak.
Habitat: Shale band on steep slopes, 1 370–1 525 m.
Rationale: A range-restricted endemic (EOO 200 km²), known from four subpopulations. No recorded threats.

F **Pseudoselago peninsulae** Hilliard

Status: **DD**
D. Raimondo, P.F. Matlamela & D.A. Kamundi†
Distribution: WC. Cape Peninsula, Table Mountain.
Habitat: Rocky places, 700–1 050 m.
Rationale: Known from five herbarium collections from the slopes of Table Mountain. Last collected in 1945. A search for this species is needed to determine if it is still extant.

F **Pseudoselago prolixa** Hilliard

Status: **Rare**
D. Raimondo, P.F. Matlamela & D.A. Kamundi†
Distribution: WC. Waaihoek Mountains, Mostertshoek Twins.
Habitat: Rocky slopes, 1 525–1 800 m.
Rationale: Known from the two highest peaks on the Waaihoek Mountains above Worcester (EOO 12 km²). Not threatened.

F **Pseudoselago prostrata** Hilliard

Status: **Rare**
D. Raimondo, P.F. Matlamela & D.A. Kamundi†
Distribution: WC. Swartberg.
Habitat: Stony slopes, 1 770–2 200 m.
Rationale: Known from two collections from high-altitude peaks (EOO < 10 km²). Not threatened.

F **Pseudoselago quadrangularis** (Choisy) Hilliard

Status: **Rare**
D. Raimondo, P.F. Matlamela & D.A. Kamundi†
Distribution: WC. Skurweberg, south of Ceres.
Habitat: Lower rocky sandstone slopes.
Rationale: A range-restricted endemic occurring on lower slopes of the Skurweberg (EOO 150 km²), known from fewer than five subpopulations. No recorded threats.

Reyemia Hilliard

Reyemia chasmanthiflora Hilliard

Status: **Rare**
J.E. Victor
Distribution: NC. Between Calvinia and Middelpos.
Habitat: In karroid vegetation on very dry stony flats.
Rationale: EOO < 50 km². Known from two collections, both made in the same area. No threats are recorded to have had an impact on this area.

Selago L.

F **Selago albomontana** Hilliard

Status: **Rare**
D. Raimondo, P.F. Matlamela & D.A. Kamundi†
Distribution: WC. Witteberg, Tweedside.
Habitat: Karoo scrub on well-drained, stony soil and among rocks, 975–1 220 m.
Rationale: A range-restricted endemic known from a very small area (EOO 80 km²), from two subpopulations. No recorded threats.

Selago baurii (Hiern) Hilliard

Status: **VU** D2
D. Raimondo
Distribution: EC. Transkei, Baziya Mountain.
Habitat: Montane grassland, in scrub at upper limits of forest, 1 600 m.
Rationale: Known from one location and potentially threatened by afforestation.

F **Selago burchellii** Rolfe

Status: **VU** B1ab(ii,iii,iv,v)
D. Raimondo
Distribution: WC. George to Plettenberg Bay.

Habitat: Coastal slopes and flats.
Rationale: EOO 2 700 km². Known from six locations. It has lost at least 40% of its habitat to commercial forestry plantations and crop cultivation. Decline is continuing because of coastal development, crop cultivation and invasion by alien plants.

F Selago cedrimontana Hilliard

Status: **Rare**
D. Raimondo, P.F. Matlamela & D.A. Kamundi†
e**Distribution:** WC. Cederberg, Sneeukop.
Habitat: Sandstone fynbos slopes, 900–1 800 m.
Rationale: Known from a very limited area (EOO 10 km²), occurs at high altitudes and has no known threats.

F Selago chalarantha Hilliard

Status: **VU** D2
D. Raimondo
e**Distribution:** NC. Bokkeveld Plateau.
Habitat: Stony flats in renosterveld on sandy tillite.
Rationale: EOO 44 km². Known from two locations. Its habitat (tillite renosterveld) has been 83% transformed for wheat cultivation. Ploughing for wheat and olives is a potential threat to the 7.6 km² area of remaining habitat.

F Selago comptonii Hilliard

Status: **Rare**
D. Raimondo, P.F. Matlamela & D.A. Kamundi†
e**Distribution:** WC. Rooiberg to Oudtshoorn.
Habitat: Arid rocky slopes, 615–915 m.
Rationale: Known from a restricted area in the Little Karoo (EOO 400 km²), from two subpopulations. No recorded threats.

F Selago congesta Rolfe

Status: **DD**D
D. Raimondo
e**Distribution:** WC. Unknown.
Habitat: Unknown.
Rationale: Known from a very early collection by Thunberg and Masson. Not recorded for over 200 years. The precise site is unknown as the type only lists Cape of Good Hope. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

F Selago diabolica Hilliard

Status: **Rare**
D. Raimondo, P.F. Matlamela & D.A. Kamundi†
e**Distribution:** NC. Richtersveld, top end of Helskloof.
Habitat: Arid rocky areas.
Rationale: EOO < 10 km². Known only from the type locality in the Richtersveld. No recorded threats.

F Selago diffusa Thunb.

Status: **VU** B1ab(ii,iii,iv,v)
D. Raimondo
e**Distribution:** WC. Gansbaai to Still Bay.
Habitat: Limestone flats, outcrops, slopes and hills, as well as sand dunes.
Rationale: EOO 1 850 km². Known from four locations but suspected to occur at another five. Threatened by ongoing habitat loss to invading alien plants, coastal development and crop cultivation.

F Selago dolichonema Hilliard

Status: **Rare**
D. Raimondo, P.F. Matlamela & D.A. Kamundi†
e**Distribution:** WC. Central Cederberg.
Habitat: Sandstone slopes in arid fynbos, 1 500 m.
Rationale: EOO 20 km². Known from four subpopulations, this species has no recorded threats.

F Selago dregeana Hilliard

Status: **Rare**
D. Raimondo, P.F. Matlamela & D.A. Kamundi†
e**Distribution:** WC. Cederberg, from Pakhuis Pass south to Brakfontein.
Habitat: Arid fynbos on sandstone slopes, 900–1 200 m.
Rationale: A range-restricted endemic (EOO 450 km²), known from fewer than five sites. No recorded threats.

F Selago elsiae Hilliard

Status: **DD**D
D. Raimondo
e**Distribution:** EC. Groot Winterhoek Mountains.
Habitat: Rocky slopes.
Rationale: Known from the type collection by Esterhuysen in 1957 on the Cockscomb in the Groot Winterhoek Mountains. May also occur on Elandsberg and Van Stadens Mountains.

F Selago esterhuyseniae Hilliard

Status: **Critically Rare**
D. Raimondo
e**Distribution:** WC. Klein Swartberg, Towerkop.
Habitat: Sandstone slopes above 2 000 m.
Rationale: Known from the Esterhuysen type collection from Towerkop. Likely to occur only on the Klein Swartberg range where it has no threats.

F Selago exigua Hilliard

Status: **Rare**
D. Raimondo, P.F. Matlamela & D.A. Kamundi†
e**Distribution:** WC. Swartberg Pass.
Habitat: High-altitude sandstone slopes.
Rationale: EOO < 10 km². Known from one collection but likely to be under-collected. No recorded threats.

F Selago farrago Hilliard

Status: **Rare**
D. Raimondo, P.F. Matlamela & D.A. Kamundi†
e**Distribution:** NC. Namaqualand, Kamiesberg.
Habitat: Middle to lower slopes.
Rationale: EOO 10 km². Known from the type collection made by Acocks in 1951. No recorded threats.

F Selago ferruginea Rolfe

Status: **CR** B1ab(ii,iii,v); C2a(i,ii); D
J.H. Vlok & D. Raimondo
e**Distribution:** WC. Flats north of the Outeniqua Mountains in the Little Karoo, from Herold to the base of Robinson Pass.
Habitat: Deep, loamy-clay soil, Blossoms Asbos Gwarrieveld.
Rationale: Until 2007 it was known only from the type collection by Ecklon and Zeyher, made in the 1800s. It was rediscovered by Jan Vlok (expert field botanist in the southern Cape) in the southern Little Karoo in 2007. Despite extensive searches within its habitat, only

two small fragmented subpopulations were found: one consisting of 35 plants on a road verge (all the vegetation around this subpopulation has been ploughed for wheat and ostrich pasture) and the second in a small remnant of vegetation that has been badly degraded by grazing and trampling by ostriches. Only one plant occurs at this subpopulation. There are less than 50 extant mature individuals.

[F] **Selago florifera** Hilliard

Status: **Rare**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

[e]**Distribution:** NC. Namaqualand, Kamiesberg.

Habitat: Granite slopes.

Rationale: EOO 70 km^2. Known from one collection but is likely to be under-collected. No recorded threats.

[F] **Selago glandulosa** Choisy

Status: **VU** B1ab(ii,iii,iv,v)

D. Raimondo

[e]**Distribution:** WC. Potberg to Garcia's Pass.

Habitat: Coastal dunes and on limestone hills and outcrops.

Rationale: EOO < 2 800 km^2. Known from six locations. Declining as a result of severe invasions of alien plants throughout its range as well as ongoing habitat loss to crop cultivation and coastal development.

[F] **Selago heterotricha** Hilliard

Status: **EN** B1ab(ii,iii,iv,v)

D. Raimondo

[e]**Distribution:** WC. Heerenlogement to Graafwater.

Habitat: Sandy flats.

Rationale: Known from two locations from a very small range (EOO < 100 km^2). Over 70% of its habitat has been transformed for potato and rooibos tea cultivation and loss is ongoing.

[F] **Selago inaequifolia** Hilliard

Status: **EN** B1ab(ii,iii,iv,v)

D. Raimondo

[e]**Distribution:** WC. Klawer.

Habitat: Sandy flats, 20–50 m.

Rationale: EOO < 100 km^2. Known from two locations. This species grows on sandy flats that are continuously being converted for vineyard, tomato or onion cultivation.

[F] **Selago linearifolia** Rolfe

Status: **DD**D

D. Raimondo

[e]**Distribution:** WC. Olifants River Valley, Bulshoek.

Habitat: Unknown.

Rationale: Known from the type locality (Bulshoek) in the Olifants River Valley, where it was collected by Schlechter and again 40 years later by Wall. No habitat information exists for this species and it has not been recorded since 1936. The area in which the type was collected has largely been transformed for citrus cultivation.

Selago longicalyx Hilliard

Status: **Rare**

J.E. Victor & S.J. Smithies

[e]**Distribution:** FS KZN MP. Ngome, Utrecht, Majuba, Nhlazatshe near Vryheid and Wakkerstroom.

Habitat: Rocky grassland near forest margins.

Rationale: A habitat specialist, known from fewer than 10 sites across a relatively wide range (EOO 10 000 km^2). No threats to this species have been recorded.

Selago longiflora Rolfe

Status: **EN** B1ab(i,ii,iii,iv,v)

C.R. Scott-Shaw & L. von Staden

[e]**Distribution:** KZN. Cunningham's Castle above Byrne Valley, elsewhere in the Richmond and Impendle districts.

Habitat: Mistbelt grassland, in scrubby forest margins, 900–1 500 m.

Rationale: A range-restricted species (EOO 120–230 km^2), known from one location, but up to five other subpopulations might remain if suitable, untransformed habitat still exists in the vicinity of locations of old herbarium records. Forestry plantations and agriculture are causing ongoing destruction of habitat.

[F] **Selago marlothii** Hilliard

Status: **DD**D

D. Raimondo

[e]**Distribution:** WC. Swanepoelspoortberg.

Habitat: Unknown.

Rationale: Known from the 1905 Marloth type from the poorly explored Swanepoelspoortberg in the southern Cape. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

[F] **Selago neglecta** Hilliard

Status: **EN** B1ab(ii,iii,iv,v)

D. Raimondo

[e]**Distribution:** WC. Lower Breede River Valley, low northern slopes of the Potberg.

Habitat: Potberg Ferricrete Fynbos.

Rationale: Known from a very small range (EOO 55 km^2), from three locations. More than 50% of its EOO has been transformed for crop cultivation. It is also suffering continuing decline in habitat quality because of invasion by alien plants and the recent introduction of ostriches.

[F] **Selago nigromontana** Hilliard

Status: **Rare**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

[e]**Distribution:** WC. Groot Swartberg Mountains.

Habitat: Rock crevices and between rocks in damp places, 1 800–2 000 m.

Rationale: A range-restricted habitat specialist (EOO 480 km^2), known from six subpopulations. No recorded threats.

[F] **Selago oppositifolia** Hilliard

Status: **Critically Rare**

D. Raimondo

[e]**Distribution:** WC. Swartberg Mountains, Seweweekspoort.

Habitat: Rocky slopes.

Rationale: Known from one collection. No known threats that have an impact on this species.

[F] **Selago pinea** Link

Status: **EN** B1ab(ii,iii,iv,v)

D. Raimondo

[e]**Distribution:** WC. Caledon and Bredasdorp.

Habitat: Edge of vleis in renosterveld.

Rationale: EOO < 600 km². Known from three locations: Caledon Swartberg, Shaw's Pass and Nachwacht farm near Bredasdorp. The Nachwacht subpopulation has probably been lost to crop cultivation. The remaining locations are both severely threatened by invasive alien plants and the Caledon subpopulation is potentially threatened by urban expansion.

[F] **Selago polycephala** Otto ex Walp.

Status: **CR** PE

D. Raimondo

[e]**Distribution:** EC. Uitenhage to Port Elizabeth.

Habitat: Probably grows on sand hills and in other sandy places up to 50 m.

Rationale: Confined to the area along the Swartkops River between Uitenhage and Port Elizabeth. Last collected in 1967. All historical sites are either completely transformed or currently under dense stands of invasive alien plants. It is highly likely that this species is extinct.

[F] **Selago prostrata** Hilliard

Status: **EN** B1ab(ii,iii)+2ab(ii,iii)

D. Raimondo

[e]**Distribution:** WC. Bredasdorp Poort.

Habitat: Limestone fynbos.

Rationale: Known from two locations from a tiny area (EOO 6 km²). Currently threatened by overgrazing and invasive alien plants.

[F] **Selago psammophila** Hilliard

Status: **EN** B1ab(ii,iii,iv,v)

R.C. Turner & D. Raimondo

[e]**Distribution:** WC. Aurora to Blouberg.

Habitat: Coastal fynbos on white sand.

Rationale: EOO < 3 500 km². Likely to be extant at fewer than five locations. Its habitat has been severely transformed by crop cultivation, invasion by alien plants and housing development. Loss is ongoing.

[F] **Selago punctata** Rolfe

Status: **Rare**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

[e]**Distribution:** EC. Queenstown district, Hangklip and Andriesberg.

Habitat: Dolerite massif, in cracks and depressions, 1 980–2 010 m.

Rationale: Known from two subpopulations (EOO 90 km²). No recorded threats.

[F] **Selago retropilosa** Hilliard

Status: **Rare**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

[e]**Distribution:** EC. Lootsberg.

Habitat: Stony sandstone plateau above low cliffs.

Rationale: A range-restricted endemic (EOO < 10 km²) known only from the type collection made at Lootsberg in the Graaff-Reinet area. Possibly under-collected but is not likely to have any threats.

[F] **Selago rotundifolia** L.f.

Status: **VU** B1ab(ii,iii,iv,v)

D. Raimondo

[e]**Distribution:** EC WC. Knysna to Port Elizabeth.

Habitat: Forest margins or grassy flats.

Rationale: EOO < 3 900 km². Known from seven locations. Declining because of invasion by alien plants and agricultural expansion, especially on the Humansdorp Plain.

[F] **Selago rubromontana** Hilliard

Status: **Rare**

D. Raimondo

[e]**Distribution:** WC. Little Karoo, Rooiberg.

Habitat: Stony lower slopes.

Rationale: Known from fewer than five subpopulations (EOO 470 km²). No recorded threats.

[F] **Selago tenuis** E.Mey.

Status: **DD**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

[e]**Distribution:** NC. Northern Namaqualand.

Habitat: Unknown.

Rationale: Known only from Drège's type collection in the 1800s at Uitkomst and Geelbekskraal in Namaqualand. Not enough is known about the distribution, specific habitat or population status of this species to determine its status.

[F] **Selago thermalis** Hilliard

Status: **Rare**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

[e]**Distribution:** WC. McGregor and Montagu, east to the Warmwatersberg.

Habitat: Dry fynbos and karroid mountain slopes, 500–900 m.

Rationale: Known from a small area (EOO 500 km²), from five sites. No recorded threats.

[F] **Selago trichophylla** Hilliard

Status: **Rare**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

[e]**Distribution:** WC. Worcester and the Hex River Valley.

Habitat: Rocky, south-facing mountain slopes, 425–900 m.

Rationale: A range-restricted endemic known from three collections (EOO 10 km²). No recorded threats.

[F] **Selago valliscitri** Hilliard

Status: **Rare**

D. Raimondo, P.F. Matlamela & D.A. Kamundi†

[e]**Distribution:** WC. Citrusdal.

Habitat: Stony ground on sandstone mountain slopes.

Rationale: A range-restricted endemic (EOO 100 km²), known from two sites. No recorded threats.

[F] **Selago villicaulis** Rolfe

Status: **VU** B1ab(ii,iii,iv,v)

D. Raimondo

[e]**Distribution:** WC. Still Bay to Knysna.

Habitat: Fixed dunes up to 150 m.

Rationale: EOO 3 800 km². Known from fewer than 10 locations. Threatened by ongoing coastal development on the southern Cape Coast as well as by invasive alien plants.

Trieenea Hilliard

Trieenea elsiae Hilliard

Status: **Rare**

N.A. Helme & K. Naidoo

[e]**Distribution:** WC. Southern Cederberg and Koue-bokkeveld Mountains.

Habitat: In the shelter of big boulders and rock overhangs.

Rationale: A rare habitat specialist known from three collections and not threatened.

Trieenea frigida Hilliard

Status: **Critically Rare**
N.A. Helme & D. Raimondo
eDistribution: WC. Kouebokkeveld Mountains.
Habitat: Rock overhangs, high altitude.
Rationale: Known only from one type collection by E. Esterhuysen. Unlikely to be threatened because of its specificity to high-altitude rocky habitats.

F **Trieenea lanciloba** Hilliard

Status: **Rare**
N.A. Helme & D. Raimondo
eDistribution: WC. Northern Cederberg.
Habitat: At base of narrow crevices (10–15 m deep), in deep shade.
Rationale: A range-restricted endemic (EOO < 500 km^2), known from Krakadou and Pakhuis peaks. Not threatened.

F **Trieenea lasiocephala** Hilliard

Status: **Rare**
N.A. Helme & D. Raimondo
eDistribution: WC. Northern Cederberg.
Habitat: Shaded ledges.
Rationale: A range-restricted endemic (EOO < 500 km^2), known from five sites. Not threatened.

Trieenea laxiflora Hilliard

Status: **Rare**
N.A. Helme & D. Raimondo
eDistribution: WC. Northern Cederberg.
Habitat: Higher ridges and slopes, in the shelter of overhanging rocks, 1 375 m.
Rationale: A range-restricted endemic (EOO < 200 km^2), known from three sites. Not threatened.

F **Trieenea longipedicellata** Hilliard

Status: **Rare**
D. Raimondo, P.F. Matlamela & D.A. Kamundi†
eDistribution: WC. Wemmershoek Peak, Du Toit's Peak and Slanghoek Mountain.
Habitat: Damp places under sandstone overhangs, 1 500–1 980 m.
Rationale: EOO 75 km^2. Known from three subpopulations. It has been recorded only from high mountain peaks and has no known threats.

F **Trieenea schlechteri** (Hiern) Hilliard

Status: **Rare**
N.A. Helme & D. Raimondo
eDistribution: WC. Cederberg and Kouebokkeveld Mountains.
Habitat: Shady areas beneath boulders.
Rationale: A rare habitat specialist known from three collections. No recorded threats.

F **Trieenea taylorii** Hilliard

Status: **Rare**
D. Raimondo, P.F. Matlamela & D.A. Kamundi†
eDistribution: WC. Central and northern Cederberg Mountains.
Habitat: Sheltered sandstone slopes, under rock overhangs, 1 200–1 675 m.
Rationale: EOO 20 km^2. Known from three collections. No recorded threats.

Zaluzianskya F.W.Schmidt

Zaluzianskya acrobareia Hilliard

Status: **Rare**
D. Raimondo
eDistribution: NC WC. Bokkeveld Mountains to Gifberg.
Habitat: Moist patches on rocky plateaus.
Rationale: A rare habitat specialist known from two collections. No recorded threats.

Zaluzianskya glandulosa Hilliard

Status: **Rare**
D. Raimondo
eDistribution: WC. Pakhuis Mountains.
Habitat: Sandy soils above 900 m.
Rationale: Known from one collection on the Pakhuis Pass. This species is highly likely to be under-collected and there are probably a few more subpopulations in the northern Cederberg region (EOO suspected to be ± 200 km^2). It is not threatened and occurs within the Cederberg Wilderness Area.

F **Zaluzianskya inflata** Diels

Status: **Rare**
D. Raimondo & F. Cholo
eDistribution: NC. Calvinia district, southern Bokkeveld to Klein Toren near Loeriesfontein.
Habitat: Succulent Karoo shrubland on shale.
Rationale: Restricted to the area around Calvinia (EOO < 500 km^2), known from five sites. No recorded threats.

Zaluzianskya isanthera Hilliard

Status: **Rare**
D. Raimondo & J.E. Victor
eDistribution: WC. Ceres Mountains, Swartruggens and Skurweberge.
Habitat: Sand over rock sheets, 900–1 300 m.
Rationale: Known from only two collections (EOO < 500 km^2). Not threatened as it occurs in a nonarable habitat at high altitudes.

Zaluzianskya kareebergensis Hilliard

Status: **DD**D
D. Raimondo & K. Naidoo
eDistribution: NC. Vanrhynsdorp, Kareeberg.
Habitat: Rocky hills.
Rationale: An annual herb known from only two collections, the most recent in 1947. The habitat, distribution and threats are too poorly known to assign a conservation status.

Zaluzianskya lanigera Hilliard

Status: **DD**D
D. Raimondo & N.A. Helme
eDistribution: WC. Karoopoort.
Habitat: Sandy flats.
Rationale: Known from Acocks's 1933 type collection. Potentially threatened by crop cultivation as ± 20% of its lowland sand habitat is already under cultivation. Not enough is known about the distribution or population status of this species to determine its status.

Zaluzianskya marlothii Hilliard

Status: **DD**D
K. Naidoo
eDistribution: NC. Uitkyk and Sneeukrans in the Roggeveld.

Habitat: Arid slopes, 1 500–1 700 m.
Rationale: Known only from Marloth's type collections made prior to 1930. Not enough is known about the current population status, distribution and specific habitat of this species to determine its status.

Zaluzianskya mirabilis Hilliard
Status: **Rare**
D. Raimondo & K. Naidoo
e**Distribution:** NC. Sutherland.
Habitat: Gravelly ground and dry river courses.
Rationale: Known with certainty from only two sites (EOO 135 km^2). No recorded threats.

Zaluzianskya parviflora Hilliard
Status: **NT** B1ab(ii,iii,iv,v)
D. Raimondo
e**Distribution:** WC. Vredenburg Peninsula.
Habitat: Limestone and granite outcrops.
Rationale: EOO 1 400 km^2. Known from eight locations but suspected to occur at 15. Declining as a result of coastal development.

Zaluzianskya sutherlandica Hilliard
Status: **DD**D
D. Raimondo & K. Naidoo
e**Distribution:** NC. Sutherland.
Habitat: Open places.
Rationale: Known from a single tiny plant collected in 1926 by Levyns at Kruis River in the Sutherland division. Not enough is known about the current population status, distribution and specific habitat of this species to determine its status.

SOLANACEAE

Solanum L.

F **Solanum supinum** Dunal var. **leucophaeum** (Dunal) Bitter
Status: **VU** D2
D. Raimondo
e**Distribution:** EC. Indwe, Queenstown and Macubeni.
Habitat: Grassland on plains and slopes above 1 150 m.
Rationale: EOO < 900 km^2. Known from three locations. This taxon is potentially threatened by overgrazing and trampling as it occurs in communally owned areas where there are high stocking rates.

STILBACEAE

Campylostachys Kunth

F **Campylostachys sp. nov.**
Voucher: *Helme 1226* NBG
Status: **EN** D
N.A. Helme & D. Raimondo
e**Distribution:** WC. Eastern Riviersonderend Mountains.
Habitat: Sandstone slopes just above shale bands.
Rationale: An undescribed species only discovered in 1996 and known from fewer than 10 mature individuals. More undiscovered subpopulations are likely to exist. We suspect that the population totals ± 250 plants.

Kogelbergia Rourke

F **Kogelbergia verticillata** (Eckl. & Zeyh.) Rourke
Status: **Rare**
N.A. Helme & D. Raimondo
e**Distribution:** WC. Langeberg and Outeniqua Mountains.
Habitat: Moist, south-facing upper slopes.
Rationale: A range-restricted species (EOO 450 km^2) that has no significant threats.

Stilbe P.J.Bergius

F **Stilbe gymnopharyngia** (Rourke) Rourke
Status: **EN** D
N.A. Helme & D. Raimondo
e**Distribution:** WC. Langeberg.
Habitat: Steep, south-facing, rocky upper slopes in partial shade.
Rationale: EOO 20 km^2. Known from three subpopulations that together have less than 50 mature individuals. There may be a few undiscovered subpopulations. We estimate that there are less than 250 extant mature individuals.

F **Stilbe serrulata** Hochst.
Status: **VU** D2
N.A. Helme & D. Raimondo
e**Distribution:** WC. Riviersonderend Mountains, Jonaskop to Pilaarkop.
Habitat: Upper sandstone slopes, usually south-facing.
Rationale: Known from four locations and potentially threatened by invasive alien plants.

Thesmophora Rourke

Thesmophora scopulosa Rourke
Status: **VU** D2
N.A. Helme & D. Raimondo
e**Distribution:** WC. The peaks above Michell's Pass near Ceres.
Habitat: Upper rocky sandstone slopes in rock crevices.
Rationale: EOO 24 km^2. Known from four locations and potentially threatened by a deleterious fire regime.

THYMELAEACEAE

Gnidia L.

F **Gnidia chrysophylla** Meisn.
Status: **VU** B1ab(i,ii,iii,iv,v)
R.C. Turner
e**Distribution:** WC. Bredasdorp to Riversdale.
Habitat: Coastal flats.
Rationale: EOO < 3 930 km^2. Known from fewer than 10 locations. Declining as a result of crop cultivation, coastal development and invasion by alien plants.

F **Gnidia ericoides** C.H.Wright
Status: **EN** B1ab(i,ii,iii,iv,v)
R.C. Turner & N.A. Helme
e**Distribution:** WC. Swellendam to Riversdale.
Habitat: Coastal forelands and low mountain slopes.
Rationale: EOO < 3 500 km^2. Known from fewer than five locations. Declining as a result of crop cultivation and infrastructure development.

F **Gnidia humilis** Meisn.
Status: **EN** B2ab(i,ii,iii,iv,v)
R.C. Turner
e**Distribution:** WC. Cape Peninsula to Babilonstoring and Onrus Mountains.
Habitat: Damp sandstone slopes and bogs.
Rationale: EOO < 1 780 km^2. Known from seven severely fragmented subpopulations. Declining as a result of

commercial forest plantations, coastal housing developments, construction of dams and roads, and invasion by alien plants.

[F] **Gnidia insignis** Compton — Plate 91

Status: **EN** B1ab(iii)+2ab(iii)
R.C. Turner & N.A. Helme
[e]Distribution: WC. Slanghoek Mountains.
Habitat: Sandstone slopes, 600–1 500 m.
Rationale: EOO 11 km², AOO 2 km². Known from three locations and declining as a result of invasive alien hakeas and pines.

Gnidia leipoldtii C.H.Wright

Status: **Rare**
D. Raimondo & R.C. Turner
[e]Distribution: NC. Bokkeveld Escarpment.
Habitat: Rocky sandstone slopes.
Rationale: A range-restricted species (EOO < 72 km²), known from three sites on the Nieuwoudtville plateau. Some subpopulations are conserved within the Oorlogskloof Nature Reserve. This species has no significant threats as it occurs in rocky areas that cannot be ploughed.

[F] **Gnidia ornata** (Meisn.) Gilg

Status: **VU** B1ab(ii,iii,iv,v)
D. Raimondo & R.C. Turner
[e]Distribution: WC. Kleinrivier Mountains to Bredasdorp.
Habitat: Marshy flats and lower slopes.
Rationale: EOO < 1 300 km². Known from six locations. Declining as a result of expansion of vineyards, wheat and protea cultivation and invasion by alien plants.

[F] **Gnidia parvula** Wolley-Dod

Status: **DD**
D.A. Kamundi†, D. Raimondo & R.C. Turner
[e]Distribution: WC. Cape Peninsula and Durbanville.
Habitat: Granite slopes.
Rationale: Known from a single record from Lion's Head, collected over 100 years ago. Insufficient data exist to assess this species but it is likely to be threatened as it was recorded in an area currently under pressure from urban development, frequent fires and *Eucalyptus* plantations.

[F] **Gnidia pedunculata** Beyers

Status: **VU** D2
P.A. Manyama
[e]Distribution: WC. Knersvlakte north of Vredendal.
Habitat: Succulent Karoo, in well-drained, sandy, loam soil.
Rationale: A range-restricted species (EOO 25 km²) known from two locations. Potentially threatened by overgrazing by livestock.

[F] **Gnidia penicillata** Licht. ex Meisn.

Status: **NT** B1ab(i,ii,iii,iv,v)
R.C. Turner
[e]Distribution: WC. Cape Peninsula to Caledon Swartberg.
Habitat: Marshy flats and lower slopes.
Rationale: EOO < 3 108 km². Extant at ± 15 locations, several of which are well conserved in nature reserves. It has lost at least five subpopulations because of crop cultivation, forestry plantations, urban expansion and dam construction. In the Elgin Valley, there is ongoing habitat loss to crop cultivation and urban development.

[F] **Gnidia sonderiana** Meisn.

Status: **EN** D
R.C. Turner & N.A. Helme
[e]Distribution: WC. Babilonstoring.
Habitat: Rocky slopes.
Rationale: Known from one site where less than 100 mature individuals occur. Potentially threatened by invading alien plants.

[F] **Gnidia spicata** (L.f.) Gilg

Status: **VU** B1ab(i,ii,iii,iv,v)
R.C. Turner
[e]Distribution: WC. Malmesbury to Potberg.
Habitat: Coastal lowlands in marshy flats and dune slacks.
Rationale: EOO 8 700 km². Likely to be extinct at 10 of 17 historical locations as a result of urban and agricultural development. Decline due to urban and coastal housing development and invasion by alien plants is ongoing.

[F] **Gnidia variabilis** (C.H.Wright) E.Phillips

Status: **VU** D2
M. Lötter, J.E. Burrows & L. von Staden
[e]Distribution: MP. Lydenburg.
Habitat: Well-drained grassland, 900–1 800 m.
Rationale: Confirmed to occur at one location and possibly occurring at a second. Potentially threatened by invasive alien plants.

Lachnaea L.

[F] **Lachnaea alpina** (Eckl. & Zeyh.) Meisn.

Status: **Rare**
J.E. Victor & J.B.P. Beyers†
[e]Distribution: WC. Tulbagh and Ceres.
Habitat: Montane fynbos, 1 600–2 100 m.
Rationale: A range-restricted alpine species (EOO < 450 km²), known from three sites. No recorded threats.

[F] **Lachnaea aurea** (Eckl. & Zeyh.) Meisn. — Plate 91

Status: **VU** B1ab(ii,iii,iv,v)
J.B.P. Beyers†, N.A. Helme & J.E. Victor
[e]Distribution: WC. Hermanus to Bredasdorp.
Habitat: Acid sand and ferricrete flats below 900 m.
Rationale: EOO < 5 000 km². Known from seven locations. Declining as a result of crop (vineyards and wheat) and protea cultivation, and invasion by alien plants.

[F] **Lachnaea axillaris** Meisn.

Status: **NT** B1ab(ii,iii,iv,v)
J.B.P. Beyers† & D. Raimondo
[e]Distribution: WC. Hopefield and Darling, and Elim to Gouritsmond.
Habitat: Sandy flats.
Rationale: EOO 21 000 km². Known from less than 25 locations. Declining because of invasion by alien plants and coastal development.

[F] **Lachnaea capitata** (L.) Crantz — Plate 91

Status: **VU** A2ac
J.B.P. Beyers†, N.A. Helme & D. Raimondo
[e]Distribution: WC. Clanwilliam to Cape Peninsula to Franschhoek and Goudini.
Habitat: Acid sand flats, often seasonally damp.
Rationale: Eighty of the 117 herbarium records for this species were collected before 1980 and it is now extinct at most of these locations. It has suffered a minimum of 30% decline over the past three generations (30 years).

F **Lachnaea densiflora** Meisn.

Status: **NT** B1ab(ii,iii,iv,v)

J.B.P. Beyers† & J.E. Victor

e**Distribution:** WC. Cape Peninsula to Bredasdorp.

Habitat: Coastal acid sand flats.

Rationale: EOO < 2 000 km². Known from less than 20 locations. Declining as a result of urban and golf course development, vineyard expansion and invasion by alien plants.

F **Lachnaea filicaulis** (Meisn.) Beyers

Status: **NT** B1ab(ii,iii,iv,v)

J.B.P. Beyers† & J.E. Victor

e**Distribution:** WC. Palmiet River in Caledon district eastwards to Riversdale.

Habitat: Flats and low mountain slopes.

Rationale: EOO < 12 000 km². Known from less than 20 locations. Declining because of agriculture, urban expansion and invasion by alien plants.

F **Lachnaea funicaulis** Schinz

Status: **NT** D2

N.A. Helme & D. Raimondo

e**Distribution:** WC. Mountains around Ceres.

Habitat: Sandy or stony soils, 500–1 000 m.

Rationale: A range-restricted species (EOO < 180 km²), known from fewer than 10 locations. This reseeding species is potentially threatened by invading alien plants and a deleterious fire regime.

Lachnaea grandiflora (L.f.) Baill.

Status: **VU** A2ac

D. Raimondo & N.A. Helme

e**Distribution:** WC. Swartboskraal in Clanwilliam district to the Cape Peninsula and Bredasdorp.

Habitat: Sandy flats and sandy areas on lower mountain slopes.

Rationale: Around 45% of the sandy habitat of this species has been lost to agriculture, urban expansion and severe invasions of alien plants over the past 100 years. It is a long-lived resprouter (generation length estimated to be 40 years). Furthermore, it is probably extinct at over 50% of the 142 sites represented by herbarium records, and most have been lost over the past 120 years. Sampling may have been biased towards the lowland flats, and lower mountain slopes are possibly not adequately represented in herbaria. The overall loss to the population over the past three generations is therefore suspected to be 30–50%.

Lachnaea greytonensis Beyers

Status: **VU** D2

J.E. Victor & J.B.P. Beyers†

e**Distribution:** WC. Riviersonderend Mountains.

Habitat: Montane fynbos on sandy soils, 640–830 m.

Rationale: A range-restricted endemic (EOO < 100 km²), known from two locations. This reseeding species is potentially threatened by a deleterious fire regime.

Lachnaea laxa (C.H.Wright) Beyers

Status: **NT** D2

J.B.P. Beyers†, N.A. Helme & D. Raimondo

e**Distribution:** WC. Houwhoek, Jonkershoek and Victoria Peak.

Habitat: Middle to upper slopes at altitudes between 400 and 2 150 m, favouring damp sandy areas.

Rationale: A naturally rare species occurring as small subpopulations in a specialised habitat. Known from fewer than eight locations. Potentially threatened by a deleterious fire regime and invasion by alien plants.

F **Lachnaea leipoldtii** Beyers

Status: **VU** D2

J.B.P. Beyers†, N.A. Helme & D. Raimondo

e**Distribution:** WC. Northern Cederberg Mountains.

Habitat: Montane fynbos, moist sandy areas above 1 000 m.

Rationale: EOO 200 km². Known from two subpopulations. A reseeder that is potentially threatened by too frequent fires.

F **Lachnaea marlothii** Schltr.

Status: **Rare**

J.E. Victor & N.A. Helme

e**Distribution:** WC. Hex River Mountains.

Habitat: Montane fynbos, 1 800–2 300 m.

Rationale: EOO 400 km². Occurs at high altitudes on mountain slopes where there are no threats.

Lachnaea oliverorum Beyers

Status: **VU** D2

J.B.P. Beyers† & J.E. Victor

e**Distribution:** WC. Waboomsberg near Montagu.

Habitat: Montane fynbos, in sandy soils, 1 200–1 400 m.

Rationale: A slow-growing reseeder that is potentially threatened by too frequent fires. Known from two subpopulations occurring ± 18 km apart.

Lachnaea pedicellata Beyers

Status: **Rare**

J.E. Victor & N.A. Helme

e**Distribution:** WC. Kouebokkeveld Mountains.

Habitat: Sandy loam soils, probably on underlying shale, 1 760–1 830 m.

Rationale: A rare species with subpopulations consisting of very few individuals. Occurs at high altitudes in mountains where it is not threatened.

F **Lachnaea pendula** Beyers

Status: **VU** D2

D. Raimondo & N.A. Helme

e**Distribution:** WC. Skurweberg to Hex River Mountains.

Habitat: Montane fynbos, stony slopes above 1 300 m.

Rationale: Known from fewer than five locations. This reseeding species is potentially threatened by too frequent fires.

F **Lachnaea pudens** Beyers

Status: **Rare**

J.E. Victor & N.A. Helme

e**Distribution:** WC. Riviersonderend Mountains.

Habitat: Fynbos, on dry, north-facing mountain slopes, sandstone soils, 330–1 530 m.

Rationale: EOO 500 km². Not threatened as most of the areas where this species occurs are protected in private or provincial nature reserves.

Lachnaea pusilla Beyers

Status: **VU** D2

D. Raimondo & N.A. Helme

e**Distribution:** WC. Nuwekloof southwest of Tulbagh to Bailey's Peak north of Wellington.

Habitat: Fynbos, lower mountain slopes, sandstone soils, 70–1 000 m.
Rationale: A range-restricted species (EOO < 150 km²) known from fewer than five locations. Potentially threatened by olive cultivation.

Lachnaea rupestris Beyers

Status: **VU** D2
N.A. Helme & D. Raimondo
eDistribution: WC. Stettynsberg to Riviersonderend Mountains.
Habitat: Montane fynbos, rocky places, 1 500 m.
Rationale: A range-restricted species (EOO < 250 km²) known from fewer than five locations. Potentially threatened by invading alien plants.

F Lachnaea stokoei Beyers

Status: **CR** D
N.A. Helme & J.E. Victor
eDistribution: WC. Langeberg Mountains.
Habitat: Mesic montane fynbos above 1 300 m.
Rationale: Known from only one subpopulation where there are around 10 mature individuals.

Lachnaea striata (Poir.) Meisn.

Status: **Rare**
D. Raimondo
eDistribution: WC. Cederberg, Groot Winterhoek, Witzenberg and Roodezand Mountains.
Habitat: Seasonally damp areas in mountains, 800–1 160 m.
Rationale: A rare habitat specialist restricted to mountainous areas where there are no known threats.

F Lachnaea uniflora (L.) Crantz

Status: **VU** B1ab(ii,iii,iv,v)
N.A. Helme, J.B.P. Beyers† & D. Raimondo
eDistribution: WC. Darling to Cape Peninsula to Somerset West, and Twenty-Four Rivers Mountains to Wolseley and Franschhoek Mountains.
Habitat: Sandy flats and sandy areas on lower mountain slopes.
Rationale: EOO 9 000 km². Known from fewer than 10 locations. It has lost much of its habitat in the past, but over a period longer than three generations. There is ongoing habitat loss, mainly due to invasion by alien plants, urban expansion and crop cultivation (vines).

Passerina L.

Passerina burchellii Thoday

Status: **Rare**
C.L. Bredenkamp, J.E. Victor & R.C. Turner
eDistribution: WC. Riviersonderend Mountains and Towerkop near Ladismith.
Habitat: Mountain summits, in crevices in rocky sandstone outcrops on southwest-facing slopes.
Rationale: EOO 2 500 km², AOO < 5 km². A habitat specialist with subpopulations mostly occurring within protected areas. Not threatened.

F Passerina ericoides L. Plate 91

Status: **VU** B1ab(ii,iii,iv,v)
D. Raimondo & R.C. Turner
eDistribution: WC. Melkbosstrand to Cape Peninsula and eastwards to Bredasdorp.
Habitat: Coastal sandy areas between rocks or in valleys between primary and secondary dunes.
Rationale: EOO 1 400 km². Known from fewer than 10 locations. Its habitat is under severe pressure from coastal development and invasion by alien plants throughout its range.

F Passerina esterhuyseniae C.L.Bredenkamp & A.E.van Wyk

Status: **Rare**
P.A. Manyama
eDistribution: WC. Northern Cederberg.
Habitat: Mountain peaks, amongst rocks, 1 200 m.
Rationale: A range-restricted endemic (EOO 100 km²) to the Cederberg that is not threatened because of the inaccessibility of its habitat.

F Passerina filiformis L. subsp. glutinosa (Thoday) C.L.Bredenkamp & A.E.van Wyk

Status: **NT** B1ab(ii,iii,iv,v)
C.L. Bredenkamp, J.E. Victor & D. Raimondo
eDistribution: WC. St Helena Bay to Doring Bay.
Habitat: Strandveld, in deep calcareous coastal sands.
Rationale: EOO 7 500 km². Known from 15 locations and declining as a result of coastal housing development, invasion by alien plants and potato cultivation.

Passerina paludosa Thoday Plate 91

Status: **EN** B1ab(ii,iii,v)+2ab(ii,iii,v)
N.A. Helme, D. Gibbs, D. Raimondo & C.L. Bredenkamp
eDistribution: WC. Cape Flats and Agulhas Plain.
Habitat: Lowland coastal marshes and seeps.
Rationale: EOO ± 3 200 km², AOO < 100 km². Known from five locations. It has lost over 70% of its habitat on the Cape Flats, where it was once common, because of urban expansion and associated drainage of wetlands. Only four viable populations remain on the Cape Flats. Two subpopulations were recently discovered on the Agulhas Plain, but both are also threatened by invasive alien plants and commercial protea growing. Remaining subpopulations are small (often only a few individuals), isolated and considered severely fragmented.

Struthiola L.

Struthiola anomala Hilliard

Status: **VU** D2
L. von Staden & J.E. Victor
eDistribution: EC KZN. Ngele Mountain, probably also in surrounding areas in southern KwaZulu-Natal and East Griqualand.
Habitat: Mistbelt grassland, on rocky slopes, 1 100–1 400 m.
Rationale: EOO < 30 km². Known from two locations protected within the Ngele Nature Reserve. It is, however, also likely to occur in grasslands surrounding the reserve where it is potentially threatened by overgrazing, ongoing afforestation and harvesting for medicinal purposes.

F Struthiola leariloba Meisn.

Status: **DD**D
D.A. Kamundi† & D. Raimondo
eDistribution: WC. Pakhuis Mountains.
Habitat: Sandstone slopes.
Rationale: Known from one collection from the Pakhuis Pass, collected in 1956 by Dahlgren. Not enough is known about the distribution, specific habitat or current population status of this species to determine its status.

[F] **Struthiola tetralepis** Schltr. var. **glabricaulis** Schltr.

Status: **DD**D
C.L. Bredenkamp & L. Potter

[e]**Distribution:** WC. Paarl to Caledon.
Habitat: Mountain slopes, 274–762 m.
Rationale: Known only from the Schlechter type collected in 1896 in the hills near Villiersdorp. Not enough is known about the current population status of this taxon to determine its status.

Synaptolepis Oliv.

[F] **Synaptolepis kirkii** Oliv.

Status: **NT** A4d
V.L. Williams, D. Raimondo, N.R. Crouch, A.B. Cunningham, C.R. Scott-Shaw, M. Lötter & A.M. Ngwenya
Distribution: KZN. Northern KwaZulu-Natal to Mozambique, Zimbabwe, Tanzania and Kenya.
Habitat: Restricted to sand forest and bush clumps in dry coastal grassland.
Rationale: Past exploitation for the medicinal plant trade has caused a decline of over 30% of the South African portion of the population. Declines due to muthi harvesting and habitat destruction are ongoing. The assessment is downgraded to NT because there are adjacent and continuous subpopulations in southern Mozambique and Swaziland.

VIOLACEAE

Rinorea Aubl.

Rinorea domatiosa A.E.van Wyk

Status: **Rare**
A.T.D. Abbott, A.E. van Wyk, C.R. Scott-Shaw, J.E. Victor & L. von Staden

[e]**Distribution:** EC KZN. Oribi Gorge to Port St Johns.
Habitat: Pondoland scarp forest, sometimes among rocks on riverbanks, Msikaba Formation Sandstone, 10–500 m.
Rationale: EOO 2 000 km^2. Occurs in deep ravines and river gorges where it is relatively safe from the main threats to Pondoland forests (too frequent and intense grassland fires and wood harvesting).

VITACEAE

Cyphostemma (Planch.) Alston

[F] **Cyphostemma flaviflorum** (Sprague) Desc.

Status: **NT** A2c
L. von Staden

[e]**Distribution:** KZN. KwaZulu-Natal coast, from Durban to Port Shepstone. Possibly also Maputaland.
Habitat: Creeper in subtropical dune thicket, 0–50 m.
Rationale: This species has lost an estimated 20–30% of its habitat to urban development, crop cultivation and overgrazing by livestock over the last three generations.

Cyphostemma hardyi Retief

Status: **VU** D2
A.E. van Wyk, L. von Staden & J.E. Victor

[e]**Distribution:** LM. Western Waterberg.
Habitat: Grows in the shade of trees among boulders on rocky slopes.
Rationale: A range-restricted endemic to the western Waterberg (EOO ± 400 km^2), known from three locations. Potentially threatened by collecting for horticultural purposes.

Cyphostemma rubroglandulosum Retief & A.E.van Wyk

Status: **Rare**
J.E. Victor & L. von Staden

[e]**Distribution:** EC KZN. Oribi Gorge to Port St Johns.
Habitat: Pondoland scarp forest. Forest margins on rocky outcrops.
Rationale: EOO 5 600 km^2. Locally common within a restricted area. Occurs on the margins of Pondoland forests, a habitat that is being threatened and degraded by firewood harvesting and too frequent fires. However, because this species is restricted to extremely rocky sites, it is likely to be protected from fire. Firewood harvesting is causing degradation of the habitat but has no direct impact on this species at present. Although potentially threatened, it is currently still too common to qualify under VU D2.

Rhoicissus Planch.

[F] **Rhoicissus kougabergensis** Retief & Van Jaarsv.

Status: **Rare**
D. Raimondo & R.C. Turner

[e]**Distribution:** EC. Kouga Mountains, near Kouga Dam in the Baviaanskloof Wilderness Area.
Habitat: Subtropical thicket, steep sandstone slopes dominated by *Portulacaria afra*.
Rationale: EOO < 10 km^2. Known from one subpopulation, but a few more subpopulations are likely to exist in this under-explored area.

Rhoicissus laetans Retief

Status: **Rare**
J.E. Burrows, M. Lötter & L. von Staden

[e]**Distribution:** LM MP. Blyde River Canyon Nature Reserve and Penge.
Habitat: Montane grassland or in steep, wooded ravines, occasionally in riverine forest.
Rationale: EOO 440 km^2. The habitat is largely untransformed and it is mostly protected in nature reserves.

ZYGOPHYLLACEAE

Zygophyllum L.

[F] **Zygophyllum divaricatum** Eckl. & Zeyh.

Status: **EN** B1ab(i,ii,iii,iv,v)
A.P. Dold & D. Raimondo

[e]**Distribution:** EC. Sundays River to Coega and Addo.
Habitat: Coega Bontveld.
Rationale: EOO 1 424 km^2. Historically recorded from six locations, but only the subpopulation within the Addo Elephant Park is protected. Between one and three locations are suspected to be extant. The remaining locations have been lost to overgrazing by livestock, urban expansion of Port Elizabeth and industrial development at Coega.

[F] **Zygophyllum fuscatum** Van Zyl

Status: **VU** D2
D. Raimondo & D.A. Kamundi†

[e]**Distribution:** WC. Betty's Bay to De Hoop.
Habitat: Limestone fynbos on coastal flats.
Rationale: Known from fewer than five locations. Potentially threatened by coastal development and invasion by alien plants.

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Appendix I

Criteria for the IUCN categories of threat[1]

Critically Endangered (CR)

A. Reduction in population size based on any of the following:

1. An observed, estimated, inferred or suspected population size reduction of ≥ 90% over the last 10 years or three generations, whichever is longer, where the causes of the reduction are clearly reversible AND understood AND have ceased, based on (and specifying) any of the following:
   a. Direct observation.
   b. An index of abundance appropriate to the taxon.
   c. A decline in area of occupancy, extent of occurrence and/or quality of habitat.
   d. Actual or potential levels of exploitation.
   e. The effects of introduced taxa, hybridisation, pathogens, pollutants, competitors or parasites.
2. An observed, estimated, inferred or suspected population size reduction of ≥ 80% over the last 10 years or three generations, whichever is longer, where the reduction or its causes may not be reversible OR may not be understood OR may not have ceased, based on (and specifying) any of a–e under A1.
3. A population size reduction of ≥ 80% projected or suspected to be met within the next 10 years or three generations, whichever is longer, up to a maximum of 100 years, based on (and specifying) any of b–e under A1.
4. An observed, estimated, inferred, projected or suspected population size reduction of ≥ 80% over any 10-year or three-generation period, whichever is longer, up to a maximum of 100 years into the future, where the time period must include both the past and the future, and where the reduction or its causes may not be reversible OR may not be understood OR may not have ceased, based on (and specifying) any of a–e under A1.

B. Geographic range in the form of either B1 (extent of occurrence) OR B2 (area of occupancy) OR both:

1. Extent of occurrence (EOO) estimated to be less than 100 km^2, and estimates indicating at least two of a–c:
   a. Severely fragmented OR known to exist at only a single location.
   b. Continuing decline, observed, inferred or projected, in any of the following:
      (i) Extent of occurrence.
      (ii) Area of occupancy.
      (iii) Area, extent and/or quality of habitat.
      (iv) Number of locations or subpopulations.
      (v) Number of mature individuals.
   c. Extreme fluctuations in any of the following:
      (i) Extent of occurrence.
      (ii) Area of occupancy.
      (iii) Number of locations or subpopulations.
      (iv) Number of mature individuals.
2. Area of occupancy (AOO) estimated to be less than 10 km^2, and estimates indicating at least two of a–c:
   a. Severely fragmented OR known to exist at only a single location.
   b. Continuing decline, observed, inferred or projected, in any of the following:
      (i) Extent of occurrence.
      (ii) Area of occupancy.
      (iii) Area, extent and/or quality of habitat.
      (iv) Number of locations or subpopulations.
      (v) Number of mature individuals.
   c. Extreme fluctuations in any of the following:
      (i) Extent of occurrence.
      (ii) Area of occupancy.
      (iii) Number of locations or subpopulations.
      (iv) Number of mature individuals.

C. Population size estimated to number fewer than 250 mature individuals and either:

1. An estimated continuing decline of at least 25% within three years or one generation, whichever is longer, up to a maximum of 100 years into the future, OR
2. A continuing decline, observed, projected or inferred, in numbers of mature individuals AND at least one of the following, a or b:
   a. Population structure in the form of one of the following:
      (i) No subpopulation estimated to contain more than 50 mature individuals, OR
      (ii) At least 90% of mature individuals in one subpopulation.
   b. Extreme fluctuations in number of mature individuals.

[1] As published in IUCN (2001). See also inside back cover for a summary of the criteria.

D. Population size estimated to number fewer than 50 mature individuals.

E. Quantitative analysis showing the probability of extinction in the wild is at least 50% within 10 years or three generations, whichever is longer, up to a maximum of 100 years.

Endangered (EN)

A. Reduction in population size based on any of the following:

1. An observed, estimated, inferred or suspected population size reduction of ≥ 70% over the last 10 years or three generations, whichever is longer, where the causes of the reduction are clearly reversible AND understood AND have ceased, based on (and specifying) any of the following:
   a. Direct observation.
   b. An index of abundance appropriate to the taxon.
   c. A decline in area of occupancy, extent of occurrence and/or quality of habitat.
   d. Actual or potential levels of exploitation.
   e. The effects of introduced taxa, hybridisation, pathogens, pollutants, competitors or parasites.
2. An observed, estimated, inferred or suspected population size reduction of ≥ 50% over the last 10 years or three generations, whichever is longer, where the reduction or its causes may not be reversible OR may not be understood OR may not have ceased, based on (and specifying) any of a–e under A1.
3. A population size reduction of ≥ 50% projected or suspected to be met within the next 10 years or three generations, whichever is longer, up to a maximum of 100 years, based on (and specifying) any of b–e under A1.
4. An observed, estimated, inferred, projected or suspected population size reduction of ≥ 50% over any 10-year or three-generation period, whichever is longer, up to a maximum of 100 years into the future, where the time period must include both the past and the future, and where the reduction or its causes may not be reversible OR may not be understood OR may not have ceased, based on (and specifying) any of a–e under A1.

B. Geographic range in the form of either B1 (extent of occurrence) OR B2 (area of occupancy) OR both:

1. Extent of occurrence (EOO) estimated to be less than 5 000 km^2, and estimates indicating at least two of a–c:
   a. Severely fragmented OR known to exist at no more than five locations.
   b. Continuing decline, observed, inferred or projected, in any of the following:
      (i) Extent of occurrence.
      (ii) Area of occupancy.
      (iii) Area, extent and/or quality of habitat.
      (iv) Number of locations or subpopulations.
      (v) Number of mature individuals.
   c. Extreme fluctuations in any of the following:
      (i) Extent of occurrence.
      (ii) Area of occupancy.
      (iii) Number of locations or subpopulations.
      (iv) Number of mature individuals.
2. Area of occupancy (AOO) estimated to be less than 500 km^2, and estimates indicating at least two of a–c:
   a. Severely fragmented OR known to exist at no more than five locations.
   b. Continuing decline, observed, inferred or projected, in any of the following:
      (i) Extent of occurrence.
      (ii) Area of occupancy.
      (iii) Area, extent and/or quality of habitat.
      (iv) Number of locations or subpopulations.
      (v) Number of mature individuals.
   c. Extreme fluctuations in any of the following:
      (i) Extent of occurrence.
      (ii) Area of occupancy.
      (iii) Number of locations or subpopulations.
      (iv) Number of mature individuals.

C. Population size estimated to number fewer than 2 500 mature individuals and either:

1. An estimated continuing decline of at least 20% within five years or two generations, whichever is longer, up to a maximum of 100 years into the future, OR
2. A continuing decline, observed, projected, or inferred, in numbers of mature individuals AND at least one of the following, a or b:
   a. Population structure in the form of one of the following:
      (i) No subpopulation estimated to contain more than 250 mature individuals, OR
      (ii) At least 95% of mature individuals in one subpopulation.
   b. Extreme fluctuations in number of mature individuals.

D. Population size estimated to number fewer than 250 mature individuals.

E. Quantitative analysis showing the probability of extinction in the wild is at least 20% within 20 years or five generations, whichever is longer, up to a maximum of 100 years.

Vulnerable (VU)

A. Reduction in population size based on any of the following:

1. An observed, estimated, inferred or suspected population size reduction of ≥ 50% over the last 10 years or three generations, whichever is longer, where the causes of the reduction are clearly reversible AND understood AND have ceased, based on (and specifying) any of the following:
   a. Direct observation.
   b. An index of abundance appropriate to the taxon.
   c. A decline in area of occupancy, extent of occurrence and/or quality of habitat.
   d. Actual or potential levels of exploitation.
   e. The effects of introduced taxa, hybridisation, pathogens, pollutants, competitors or parasites.
2. An observed, estimated, inferred or suspected population size reduction of ≥ 30% over the last 10 years or three generations, whichever is longer, where the reduction or its causes may not be reversible OR may not be understood OR may not have ceased, based on (and specifying) any of a–e under A1.
3. A population size reduction of ≥ 30% projected or suspected to be met within the next 10 years or three generations, whichever is longer, up to a maximum of 100 years, based on (and specifying) any of b–e under A1.
4. An observed, estimated, inferred, projected or suspected population size reduction of ≥ 30% over any 10-year or three-generation period, whichever is longer, up to a maximum of 100 years into the future, where the time period must include both the past and the future, and where the reduction or its causes may not be reversible OR may not be understood OR may not have ceased, based on (and specifying) any of a–e under A1.

B. Geographic range in the form of either B1 (extent of occurrence) OR B2 (area of occupancy) OR both:

1. Extent of occurrence (EOO) estimated to be less than 20 000 km^2, and estimates indicating at least two of a–c:
   a. Severely fragmented OR known to exist at no more than 10 locations.
   b. Continuing decline, observed, inferred or projected, in any of the following:
      (i) Extent of occurrence.
      (ii) Area of occupancy.
      (iii) Area, extent and/or quality of habitat.
      (iv) Number of locations or subpopulations.
      (v) Number of mature individuals.
   c. Extreme fluctuations in any of the following:
      (i) Extent of occurrence.
      (ii) Area of occupancy.
      (iii) Number of locations or subpopulations.
      (iv) Number of mature individuals.
2. Area of occupancy (AOO) estimated to be less than 2 000 km^2, and estimates indicating at least two of a–c:
   a. Severely fragmented OR known to exist at no more than 10 locations.
   b. Continuing decline, observed, inferred or projected, in any of the following:
      (i) Extent of occurrence.
      (ii) Area of occupancy.
      (iii) Area, extent and/or quality of habitat.
      (iv) Number of locations or subpopulations.
      (v) Number of mature individuals.
   c. Extreme fluctuations in any of the following:
      (i) Extent of occurrence.
      (ii) Area of occupancy.
      (iii) Number of locations or subpopulations.
      (iv) Number of mature individuals.

C. Population size estimated to number fewer than 10 000 mature individuals and either:

1. An estimated continuing decline of at least 10% within 10 years or three generations, whichever is longer, up to a maximum of 100 years into the future, OR
2. A continuing decline, observed, projected, or inferred, in numbers of mature individuals AND at least one of the following, a or b:
   a. Population structure in the form of one of the following:
      (i) No subpopulation estimated to contain more than 1 000 mature individuals, OR
      (ii) All mature individuals in one subpopulation.
   b. Extreme fluctuations in number of mature individuals.

D. Population size very small or restricted in the form of either of the following:

1. Population size estimated to number fewer than 1 000 mature individuals.
2. Population with a very restricted area of occupancy (typically less than 20 km^2) or number of locations (typically five or fewer) such that it is prone to the effects of human activities or stochastic events within a very short time period in an uncertain future, and is thus capable of becoming Critically Endangered or even Extinct in a very short time period[2].

E. Quantitative analysis showing the probability of extinction in the wild is at least 50% within 10 years or three generations, whichever is longer, up to a maximum of 100 years.

[2] Note: Although not specified in the criteria, according to IUCN Standards and Petitions Working Group (2008) guidelines on the application of VU D2, *plausible* potential threats in the form of human activities or stochastic events are the most essential component of this criterion and should be specified in the assessment rationale. Unlikely events (such as the eruption of an inactive volcano), nonspecific events that have not yet been observed in similar taxa (such as unspecified disease epidemics) or events unlikely to cause extinction (for example drought when the taxon has already survived many droughts) should not be used to list a taxon as VU D2. In applying this criterion, it is important to consider whether plausible threatening processes are likely to be already causing decline or not. VU D2 should only be used when it is relatively certain that the population is stable at present. If there are suspicions that the population is declining, the taxon should be categorised as Endangered under Criterion B.

Appendix II

Taxonomic changes to taxa listed by Hilton-Taylor (1996a,b, 1997)

Many taxa listed by Hilton-Taylor (1996a,b, 1997) have been put into synonymy. These names are here listed alphabetically by genus together with their currently accepted names. A few other previously listed taxa have been excluded from this Red List because they are naturalised exotics, natural hybrids or were listed at taxonomic ranks below variety. These taxa are listed under *Excluded taxa* at the end of this Appendix, together with the reasons for their exclusion.

Abryanthemum acinaciforme (L.) Rothm. = **Carpobrotus acinaciformis** (L.) L.Bolus
Acrostemon xeranthemifolius (Salisb.) E.G.H.Oliv. = **Erica xeranthemifolia** Salisb.
Agapanthus dyeri F.M.Leight. = **Agapanthus inapertus** P.Beauv. subsp. **intermedius** F.M.Leight.
Agapanthus walshii L.Bolus = **Agapanthus africanus** (L.) Hoffmanns. subsp. **walshii** (L.Bolus) Zonneveld & G.D.Duncan
Agathelpis nitida E.Mey. = **Microdon nitidus** (E.Mey.) Hilliard
Alciope lanata (Thunb.) DC. = **Capelio tomentosa** (Burm.f.) B.Nord.
Alepidea wyliei Dummer = **Alepidea peduncularis** A.Rich.
Aloe distans Haw. = **Aloe perfoliata** L.
Aloe gracilis Haw. var. *decumbens* Reynolds = **Aloe gracilis** Haw.
Aloe hlangapies Groenew. = **Aloe ecklonis** Salm-Dyck
Aloe keithii Reynolds = **Aloe parvibracteata** Schönland
Aloe khamiesensis Pillans = **Aloe microstigma** Salm-Dyck subsp. **microstigma**
Aloe kraussii Baker = **Aloe ecklonis** Salm-Dyck
Aloe petrophila Pillans = **Aloe swynnertonii** Rendle
Aloe vandermerwei Reynolds = **Aloe zebrina** Baker
Aloe vogtsii Reynolds = **Aloe swynnertonii** Rendle
Aloinopsis jamesii L.Bolus = **Aloinopsis rubrolineata** (N.E.Br.) Schwantes
Aloinopsis setifera (L.Bolus) L.Bolus = **Aloinopsis luckhoffii** (L.Bolus) L.Bolus
Aloinopsis villetii (L.Bolus) L.Bolus = **Aloinopsis luckhoffii** (L.Bolus) L.Bolus
Amphibolia hutchinsonii (L.Bolus) H.E.K.Hartmann = **Amphibolia laevis** (Aiton) H.E.K.Hartmann
Amphisiphon stylosa W.F.Barker = **Daubenya stylosa** (Barker) A.M.van der Merwe & J.C.Manning
Anacampseros herreana Poelln. = **Avonia herreana** (Poelln.) G.D.Rowley
Anacampseros papyracea E.Mey. ex Fenzl subsp. *papyracea* = **Avonia papyracea** (E.Mey. ex Fenzl) G.D.Rowley subsp. **papyracea**
Anacampseros quinaria E.Mey. ex Fenzl = **Avonia quinaria** (E.Mey. ex Fenzl) G.D.Rowley subsp. **quinaria**
Anacampseros recurvata Schönland subsp. *buderiana* (Poelln.) Gerbaulet = **Avonia recurvata** (Schönland) G.D.Rowley subsp. **buderiana** (Poelln.) G.Will.
Anacampseros recurvata Schönland subsp. *minuta* Gerbaulet = **Avonia recurvata** (Schönland) G.D.Rowley subsp. **minuta** (Gerbaulet) G.D.Rowley
Anacampseros recurvata Schönland subsp. *recurvata* = **Avonia recurvata** (Schönland) G.D.Rowley subsp. **recurvata**
Anacampseros rhodesica N.E.Br. = **Avonia rhodesica** (N.E.Br.) G.D.Rowley
Anacampseros ruschii Dinter & Poelln. = **Avonia ruschii** (Dinter & Poelln.) G.D.Rowley
Androcymbium ciliolatum Schltr. & K.Krause = **Colchicum capense** (L.) J.C.Manning & Vinn. subsp. **ciliolatum** (Schltr. & K.Krause) J.C.Manning & Vinn.
Androcymbium cruciatum U. & D.Müll.-Doblies = **Colchicum cruciatum** (U. & D.Müll.-Doblies) J.C.Manning & Vinn.
Androcymbium exiguum Roessler subsp. *vogelii* (U. & D.Müll.-Doblies) U. & D.Müll.-Doblies = **Colchicum exiguum** (Roessler) J.C.Manning & Vinn. subsp. **vogelii** (U. & D.Müll.-Doblies) J.C.Manning & Vinn.
Androcymbium henssenianum U. & D.Müll.-Doblies = **Colchicum henssenianum** (U. & D.Müll.-Doblies) J.C.Manning & Vinn.
Androcymbium poeltianum U. & D.Müll.-Doblies = **Colchicum poeltianum** (U. & D.Müll.-Doblies) J.C.Manning & Vinn.
Androcymbium scabromarginatum Schltr. & K.Krause = **Colchicum scabromarginatum** (Schltr. & K.Krause) J.C.Manning & Vinn.
Androcymbium schlechteri K.Krause = **Colchicum albomarginatum** (Schinz) J.C.Manning & Vinn.
Androcymbium villosum U. & D.Müll.-Doblies = **Colchicum villosum** (U. & D.Müll.-Doblies) J.C.Manning & Vinn.
Androsiphon capense Schltr. = **Daubenya capensis** (Schltr.) A.M.van der Merwe & J.C.Manning
Annesorhiza marlothii H.Wolff = **Annesorhiza lateriflora** (Eckl. & Zeyh.) B.-E.van Wyk
Anthericum cyperaceum Oberm. = **Chlorophytum cyperaceum** (Oberm.) Nordal
Argyrolobium muirii L.Bolus = **Argyrolobium filiforme** (Thunb.) Eckl. & Zeyh.
Babiana framesii L.Bolus var. *framesii* = **Babiana framesii** L.Bolus
Babiana framesii L.Bolus var. *kamiesbergensis* G.J.Lewis = **Babiana curviscapa** G.J.Lewis
Babiana hypogaea sensu G.J.Lewis var. *longituba* G.J.Lewis = **Babiana bainesii** Baker
Babiana klaverensis G.J.Lewis = **Babiana mucronata** (Jacq.) Ker Gawl. subsp. **minor** (G.J.Lewis) Goldblatt & J.C.Manning
Babiana mucronata (Jacq.) Ker Gawl. var. *minor* G.J.Lewis = **Babiana mucronata** (Jacq.) Ker Gawl. subsp. **minor** (G.J.Lewis) Goldblatt & J.C.Manning
Babiana obliqua E.Phillips = **Babiana ambigua** (Roem. & Schult.) G.J.Lewis
Babiana striata (Jacq.) G.J.Lewis var. *planifolia* G.J.Lewis = **Babiana planifolia** (G.J.Lewis) Goldblatt & J.C.Manning
Bonatea saundersiae (Harv.) T.Durand & Schinz = **Bonatea cassidea** Sond.
Bonatea speciosa (L.f.) Willd. var. *speciosa* = **Bonatea speciosa** (L.f.) Willd.
Bowiea gariepensis Van Jaarsv. = **Bowiea volubilis** Harv. ex Hook.f. subsp. **gariepensis** (Van Jaarsv.) Bruyns

Brachysiphon imbricatus (Graham) A.Juss. = **Brachysiphon fucatus** (L.) Gilg
Brachystelma pilosum R.A.Dyer = **Brachystelma hirtellum** Weim.
Brunsvigia gydobergensis D. & U.Müll.-Doblies = **Brunsvigia josephinae** (Redouté) Ker Gawl.
Brunsvigia minor Lindl. = **Brunsvigia striata** (Jacq.) Aiton
Bulbine bachmanniana Schinz = **Bulbine nutans** (Jacq.) Spreng.
Bulbine brunsvigiaefolia Baker = **Bulbine latifolia** (L.f.) Schult. & J.H.Schult. var. **latifolia**
Bulbine urgineoides Baker = **Bulbine praemorsa** (Jacq.) Spreng.
Calpurnia robinioides (DC.) E.Mey. = **Calpurnia reflexa** A.J.Beaumont
Caralluma arida (Masson) N.E.Br. = **Quaqua arida** (N.E.Br.) Plowes
Carpolyza spiralis (L'Hér.) Salisb. = **Strumaria spiralis** L'Hér.
Catha abbottii A.E.van Wyk & M.Prins = **Lydenburgia abbottii** (A.E.van Wyk & M.Prins) Steenkamp, A.E.van Wyk & M.Prins
Catha transvaalensis Codd = **Lydenburgia cassinoides** N.Robson
Cenia duckittiae L.Bolus = **Cotula duckittiae** (L.Bolus) K.Bremer & Humphries
Centella dregeana (Sond.) Domin = **Centella tridentata** (L.f.) Drude ex Domin var. **dregeana** (Sond.) M.T.R.Schub. & B.-E.van Wyk
Centella hermanniifolia (Eckl. & Zeyh.) Domin var. *hermanniifolia* = **Centella tridentata** (L.f.) Drude ex Domin var. **hermanniifolia** (Eckl. & Zeyh.) M.T.R.Schub. & B.-E.van Wyk
Ceratopteris cornuta (P.Beauv.) Lepr. = **Ceratopteris thalictroides** (L.) Brongn.
Chasmanthe floribunda (Salisb.) N.E.Br. var. *duckittii* G.J.Lewis ex L.Bolus = **Chasmanthe floribunda** (Salisb.) N.E.Br.
Cheiridopsis alata L.Bolus = **Cheiridopsis robusta** (Haw.) N.E.Br.
Chondropetalum acockii Pillans = **Elegia acockii** (Pillans) Moline & H.P.Linder
Chondropetalum rectum (Mast.) Pillans = **Elegia recta** (Mast.) Moline & H.P.Linder
Cineraria hederifolia Cron = **Senecio hederiformis** Cron
Coelidium bowiei Benth. = **Amphithalea bowiei** (Benth.) A.L.Schutte
Coelidium flavum Granby = **Amphithalea flava** (Granby) A.L.Schutte
Coelidium minimum Granby = **Amphithalea minima** (Granby) A.L.Schutte
Coelidium obtusilobum Granby = **Amphithalea obtusiloba** (Granby) A.L.Schutte
Coelidium pageae L.Bolus = **Amphithalea pageae** (L.Bolus) A.L.Schutte
Coelidium purpureum Granby = **Amphithalea purpurea** (Granby) A.L.Schutte
Coelidium spinosum Harv. = **Amphithalea spinosa** (Harv.) A.L.Schutte
Coelidium vlokii A.L.Schutte & B.-E.van Wyk = **Amphithalea vlokii** (A.L.Schutte & B.-E.van Wyk) A.L.Schutte
Coilostigma zeyherianum Klotzsch var. *tenuifolium* (Klotzsch) E.G.H.Oliv. = **Erica zeyheriana** (Klotzsch) E.G.H.Oliv.
Conophytum julii Schwantes ex H.Jacobsen = **Conophytum uviforme** (Haw.) N.E.Br. subsp. **uviforme**
Conophytum rugosum S.A.Hammer subsp. *sanguineum* S.A.Hammer = **Conophytum roodiae** N.E.Br. subsp. **sanguineum** (S.A.Hammer) T.Smale
Conophytum smorenskaduense de Boer subsp. *hermarium* S.A.Hammer = **Conophytum hermarium** (S.A.Hammer) S.A.Hammer
Conophytum uviforme (Haw.) N.E.Br. var. *subincanum* (Tischer) Rawé = **Conophytum uviforme** (Haw.) N.E.Br. subsp. **uviforme**
Cybistetes longifolia (L.) Milne-Redh. & Schweick. = **Ammocharis longifolia** (L.) M.Roem.
Cyphia stephensii E.Wimm. = **Cyphia bulbosa** (L.) P.J.Bergius var. **acocksii** E.Wimm.
Cyrtanthus rectiflorus Baker = **Cyrtanthus brachyscyphus** Baker
Diascia heterandra Benth. = **Alonsoa unilabiata** (L.f.) Steud.
Disparago kolbei (Bolus) Hutch. = **Laevicarpa kolbei** (Bolus) Koekemoer
Drimia modesta (Baker) Jessop = **Drimia calcarata** (Baker) Stedje
Drosanthemum thudichumii L.Bolus var. *gracilius* L.Bolus = **Drosanthemum thudichumii** L.Bolus
Duvalia pillansii N.E.Br. var. *albanica* N.E.Br. = **Duvalia pillansii** N.E.Br.
Ectotropis alpina N.E.Br. = **Delosperma alpinum** (N.E.Br.) S.A.Hammer & A.P.Dold
Empodium occidentale (Nel) B.L.Burtt = **Saniella occidentalis** (Nel) B.L.Burtt
Eragrostis lamprospicula De Winter = **Eragrostis patentipilosa** Hack.
Eremia brevifolia Benth. = **Erica velatiflora** E.G.H.Oliv.
Eremiella outeniquae Compton = **Erica outeniquae** (Compton) E.G.H.Oliv.
Erica abietina L. var. *echiiflora* (Bolus) Salter = **Erica abietina** L. subsp. **diabolis** E.G.H.Oliv. & I.M.Oliv.
Erica blancheana L.Bolus = **Erica hispidula** L. var. **hispidula**
Erica blesbergensis H.A.Baker = **Erica inamoena** Dulfer
Erica casta Guthrie & Bolus var. *casta* = **Erica regia** Bartl. subsp. **regia**
Erica comptonii T.M.Salter = **Erica banksii** Andrews subsp. **comptonii** (T.M.Salter) E.G.H.Oliv. & I.M.Oliv.
Erica crucistigmatica Dulfer = **Erica gnaphaloides** L.
Erica fervida L.Bolus = **Erica pillansii** Bolus subsp. **fervida** (L.Bolus) E.G.H.Oliv. & I.M.Oliv.
Erica gallorum L.Bolus = **Erica viscaria** L. subsp. **gallorum** (L.Bolus) E.G.H.Oliv. & I.M.Oliv.
Erica grandiflora L.f. var. *grandiflora* = **Erica abietina** L. subsp. **aurantiaca** E.G.H.Oliv. & I.M.Oliv.
Erica porteri Compton = **Erica thomae** L.Bolus
Erica pyrantha L.Bolus = **Erica pillansii** Bolus subsp. **fervida** (L.Bolus) E.G.H.Oliv. & I.M.Oliv.
Erica regia Bartl. var. *variegata* Bolus = **Erica regia** Bartl. subsp. **regia**
Erica sonora Compton = **Erica aristifolia** Benth.
Erica turbiniflora Salisb. var. *turbiniflora* = **Erica capensis** Salter
Erica umbonata Compton = **Erica glandulipila** Compton
Erica vestiflua Salisb. = **Erica melastoma** Andrews subsp. **melastoma**
Euphorbia malevola L.C.Leach subsp. *bechuanica* L.C.Leach = **Euphorbia limpopoana** L.C.Leach ex S.Carter
Euphorbia meloformis Aiton = **Euphorbia meloformis** Aiton subsp. **meloformis**

Euphorbia symmetrica A.C.White, R.A.Dyer & B.Sloane = **Euphorbia obesa** Hook.f. subsp. **symmetrica** (A.C.White, R.A.Dyer & B.Sloane) G.D.Rowley
Euphorbia valida N.E.Br. = **Euphorbia meloformis** Aiton subsp. **valida** (N.E.Br.) G.D.Rowley
Fagara leprieurii (Guill. & Perr.) Engl. = **Zanthoxylum leprieurii** Guill. & Perr.
Faucaria candida L.Bolus = **Faucaria felina** (L.) Schwantes
Faucaria hooleae L.Bolus = **Faucaria gratiae** L.Bolus
Ferraria divaricata Sweet subsp. *arenosa* M.P.de Vos = **Ferraria divaricata** Sweet
Ferraria divaricata Sweet subsp. *aurea* M.P.de Vos = **Ferraria divaricata** Sweet
Ferraria uncinata Sweet subsp. *macrochlamys* (Baker) M.P.de Vos = **Ferraria macrochlamys** (Baker) Goldblatt & J.C.Manning
Finckea eriocephala Klotzsch = **Erica pilosiflora** E.G.H.Oliv. subsp. **pilosiflora**
Freesia elimensis L.Bolus = **Freesia caryophyllacea** (Burm.f.) N.E.Br.
Freylinia decurrens Levyns ex Van Jaarsv. = **Freylinia densiflora** Benth.
Galaxia alata Goldblatt = **Moraea angulata** Goldblatt
Galaxia barnardii Goldblatt = **Moraea barnardiella** Goldblatt
Galaxia ciliata Pers. = **Moraea pilifolia** Goldblatt
Galaxia fenestralis Goldblatt & E.G.H.Oliv. = **Moraea fenestralis** (Goldblatt & E.G.H.Oliv.) Goldblatt
Galaxia grandiflora Andrews = **Moraea kamiesensis** Goldblatt
Galaxia kamiesmontana Goldblatt = **Moraea kamiesmontana** (Goldblatt) Goldblatt
Galaxia parva Goldblatt = **Moraea minima** Goldblatt
Galaxia variabilis G.J.Lewis = **Moraea variabilis** (G.J.Lewis) Goldblatt
Galenia fruticosa (L.f.) Sond. var. *prostrata* Adamson = **Galenia fruticosa** (L.f.) Sond.
Gethyllis multifolia L.Bolus = **Gethyllis campanulata** L.Bolus
Gladiolus alatus L. var. *algoensis* Herb. = **Gladiolus alatus** L.
Gladiolus appendiculatus G.J.Lewis var. *longifolius* G.J.Lewis = **Gladiolus appendiculatus** G.J.Lewis
Gladiolus carinatus Aiton subsp. *parviflorus* G.J.Lewis = **Gladiolus griseus** Goldblatt & J.C.Manning
Gladiolus citrinus Klatt = **Gladiolus trichonemifolius** Ker Gawl.
Gladiolus debilis Sims var. *variegatus* G.J.Lewis = **Gladiolus variegatus** (G.J.Lewis) Goldblatt & J.C.Manning
Gladiolus floribundus Jacq. subsp. *miniatus* (Eckl.) Oberm. = **Gladiolus miniatus** Eckl.
Gladiolus gracilis Jacq. var. *latifolius* G.J.Lewis = **Gladiolus caeruleus** Goldblatt & J.C.Manning
Gladiolus microcarpus G.J.Lewis subsp. *italaensis* Oberm. = **Gladiolus scabridus** Goldblatt & J.C.Manning
Gladiolus oppositiflorus Herb. subsp. *salmoneus* (Baker) Oberm. = **Gladiolus oppositiflorus** Herb.
Gladiolus pillansii G.J.Lewis var. *roseus* G.J.Lewis = **Gladiolus martleyi** L.Bolus
Gladiolus pritzelii Diels var. *sufflavus* G.J.Lewis = **Gladiolus sufflavus** (G.J.Lewis) Goldblatt & J.C.Manning
Gladiolus punctulatus Schrank var. *punctulatus* = **Gladiolus hirsutus** Jacq.
Gladiolus robustus Goldblatt = **Gladiolus geardii** L.Bolus
Gladiolus rogersii Baker var. *vlokii* Goldblatt = **Gladiolus rogersii** Baker
Gladiolus varius F.Bolus var. *micranthus* (Baker) Oberm. = **Gladiolus ferrugineus** Goldblatt & J.C.Manning
Grisebachia ciliaris (L.f.) Klotzsch subsp. *bolusii* (N.E.Br.) E.G.H.Oliv. = **Erica plumosa** Thunb.
Grisebachia ciliaris (L.f.) Klotzsch subsp. *involuta* (Klotzsch) E.G.H.Oliv. = **Erica plumosa** Thunb.
Grisebachia incana (Bartl.) Klotzsch = **Erica plumosa** Thunb.
Grisebachia minutiflora N.E.Br. subsp. *nodiflora* (N.E.Br.) E.G.H.Oliv. = **Erica caprina** E.G.H.Oliv.
Grisebachia nivenii N.E.Br. = **Erica plumosa** Thunb.
Grisebachia plumosa (Thunb.) Klotzsch subsp. *eciliata* E.G.H.Oliv. = **Erica plumosa** Thunb.
Grisebachia plumosa (Thunb.) Klotzsch subsp. *hirta* (Klotzsch) E.G.H.Oliv. = **Erica plumosa** Thunb.
Grisebachia plumosa (Thunb.) Klotzsch subsp. *hispida* (Klotzsch) E.G.H.Oliv. = **Erica plumosa** Thunb.
Grisebachia plumosa (Thunb.) Klotzsch subsp. *irrorata* E.G.H.Oliv. = **Erica plumosa** Thunb.
Grisebachia rigida N.E.Br. = **Erica plumosa** Thunb.
Grisebachia secundiflora E.G.H.Oliv. = **Erica lateriflora** E.G.H.Oliv.
Gynandriris anomala Goldblatt = **Moraea contorta** Goldblatt
Gynandriris hesperantha Goldblatt = **Moraea hesperantha** (Goldblatt) Goldblatt
Haplocoelum gallaense (Engl.) Radlk. = **Haplocoelum foliolosum** (Hiern) Bullock subsp. **mombasense** (Bullock) Verdc.
Haworthia archeri W.F.Barker ex M.B.Bayer var. *archeri* = **Haworthia marumiana** Uitewaal var. **archeri** (W.F.Barker ex M.B.Bayer) M.B.Bayer
Haworthia archeri W.F.Barker ex M.B.Bayer var. *dimorpha* M.B.Bayer = **Haworthia marumiana** Uitewaal var. **dimorpha** (M.B.Bayer) M.B.Bayer
Haworthia comptoniana G.G.Sm. = **Haworthia emelyae** Poelln. var. **comptoniana** (G.G.Sm.) J.D.Venter & S.A.Hammer
Haworthia fasciata (Willd.) Haw. = **Haworthia fasciata** (Willd.) Haw.
Haworthia graminifolia G.G.Sm. = **Haworthia blackburniae** W.F.Barker var. **graminifolia** (G.G.Sm.) M.B.Bayer
Haworthia magnifica Poelln. var. *major* (G.G.Sm.) M.B.Bayer = **Haworthia emelyae** Poelln. var. **major** (G.G.Sm.) M.B.Bayer
Haworthia magnifica Poelln. var. *paradoxa* (Poelln.) M.B.Bayer = **Haworthia mirabilis** (Haw.) Haw. var. **paradoxa** (Poelln.) M.B.Bayer
Haworthia maughanii Poelln. = **Haworthia truncata** Schönland var. **maughanii** (Poelln.) B.Fearn
Haworthia mcmurtryi C.L.Scott = **Haworthia koelmaniorum** Oberm. & D.S.Hardy var. **mcmurtryi** (C.L.Scott) M.B.Bayer
Haworthia mirabilis (Haw.) Haw. subsp. *badia* (Poelln.) M.B.Bayer = **Haworthia mirabilis** (Haw.) Haw. var. **badia** (Poelln.) M.B.Bayer
Haworthia mirabilis (Haw.) Haw. subsp. *mundula* (G.G.Sm.) M.B.Bayer = **Haworthia mirabilis** (Haw.) Haw. var. **mirabilis**
Haworthia pehlemanniae C.L.Scott = **Haworthia nortieri** G.G.Sm. var. **pehlemanniae** (C.L.Scott) M.B.Bayer
Haworthia poellnitziana Uitewaal = **Haworthia minima** (Aiton) Haw. var. **poellnitziana** (Uitewaal) M.B.Bayer
Haworthia retusa (L.) Duval var. *dekenahii* (G.G.Sm.) M.B.Bayer = **Haworthia magnifica** Poelln. var. **dekenahii** (G.G.Sm.) M.B.Bayer
Haworthia starkiana Poelln. var. *lateganiae* (Poelln.) M.B.Bayer = **Haworthia scabra** Haw. var. **lateganiae** (Poelln.) M.B.Bayer
Haworthia woolleyi Poelln. = **Haworthia venosa** (Lam.) Haw. subsp. **woolleyi** (Poelln.) Halda

Hemimeris montana L.f. = **Hemimeris racemosa** (Houtt.) Merr.
Hemizygia bolusii (N.E.Br.) Codd = **Syncolostemon bolusii** (N.E.Br.) D.F.Otieno
Hemizygia ramosa Codd = **Syncolostemon ramosus** (Codd) D.F.Otieno
Hemizygia rugosifolia M.Ashby = **Syncolostemon rugosifolius** (M.Ashby) D.F.Otieno
Hemizygia stalmansii A.J.Paton & K.Balkwill = **Syncolostemon stalmansii** (A.J.Paton & K.Balkwill) D.F.Otieno
Herschelianthe barbata (L.f.) N.C.Anthony = **Disa barbata** (L.f.) Sw.
Herschelianthe forcipata (Schltr.) Rauschert = **Disa forcipata** Schltr.
Herschelianthe forficaria (Bolus) N.C.Anthony = **Disa forficaria** Bolus
Herschelianthe lugens (Bolus) Rauschert var. *lugens* = **Disa lugens** Bolus var. **lugens**
Herschelianthe lugens (Bolus) Rauschert var. *nigrescens* (H.P.Linder) N.C.Anthony = **Disa lugens** Bolus var. **nigrescens** (H.P.Linder) H.P.Linder
Herschelianthe multifida (Lindl.) Rauschert = **Disa multifida** Lindl.
Herschelianthe newdigateae (L.Bolus) N.C.Anthony = **Disa newdigateae** L.Bolus
Herschelianthe schlechteriana (Bolus) N.C.Anthony = **Disa schlechteriana** Bolus
Herschelianthe spathulata (L.f.) Rauschert subsp. *spathulata* = **Disa spathulata** (L.f.) Sw. subsp. **spathulata**
Herschelianthe spathulata (L.f.) Rauschert subsp. *tripartita* (Lindl.) N.C.Anthony = **Disa spathulata** (L.f.) Sw. subsp. **tripartita** (Lindl.) H.P.Linder
Herschelianthe venusta (Bolus) Rauschert = **Disa venusta** Bolus
Hessea bruce-bayeri (D. & U.Müll.-Doblies) Snijman = **Namaquanula bruce-bayeri** D. & U.Müll.-Doblies
Hexaglottis namaquana Goldblatt = **Moraea namaquana** (Goldblatt) Goldblatt
Hexaglottis virgata (Jacq.) Sweet subsp. *karooica* Goldblatt = **Moraea virgata** Jacq. subsp. **karooica** (Goldblatt) Goldblatt
Hippocratea crenata (Klotzsch) K.Schum. & Loes. = **Loeseneriella crenata** (Klotzsch) R.Wilczek ex N.Hallé var. **crenata**
Hippocratea parvifolia Oliv. = **Elachyptera parvifolia** (Oliv.) N.Hallé
Homeria autumnalis Goldblatt = **Moraea autumnalis** (Goldblatt) Goldblatt
Homeria bolusiae Goldblatt = **Moraea louisabolusiae** Goldblatt
Homeria cedarmontana Goldblatt = **Moraea cedarmonticola** Goldblatt
Homeria comptonii L.Bolus = **Moraea comptonii** (L.Bolus) Goldblatt
Homeria elegans (Jacq.) Sweet = **Moraea elegans** Jacq.
Homeria fenestrata Goldblatt = **Moraea fenestrata** (Goldblatt) Goldblatt
Homeria fuscomontana Goldblatt = **Moraea fuscomontana** (Goldblatt) Goldblatt
Homeria miniata (Andrews) Sweet = **Moraea miniata** Andrews
Homeria ochroleuca Salisb. = **Moraea ochroleuca** (Salisb.) Drapiez
Homeria odorata L.Bolus = **Moraea fragrans** Goldblatt
Homeria patens Goldblatt = **Moraea patens** (Goldblatt) Goldblatt
Homeria pendula Goldblatt = **Moraea pendula** (Goldblatt) Goldblatt
Homeria radians (Goldblatt) Goldblatt = **Moraea radians** (Goldblatt) Goldblatt
Homeria ramosissima Schltr. = **Moraea knersvlaktensis** Goldblatt
Homeria serratostyla Goldblatt = **Moraea serratostyla** (Goldblatt) Goldblatt
Homeria spiralis L.Bolus = **Moraea aspera** Goldblatt
Homeria vallisbelli Goldblatt = **Moraea vallisbelli** (Goldblatt) Goldblatt
Huernia hystrix (Hook.f.) N.E.Br. var. *parvula* L.C.Leach = **Huernia hystrix** (Hook.f.) N.E.Br. subsp. **parvula** (L.C.Leach) Bruyns
Huernia insigniflora C.A.Maass = **Huernia zebrina** N.E.Br. subsp. **insigniflora** (C.A.Maass) Bruyns
Isoetes capensis A.V.Duthie var. *stephanseniae* (A.V.Duthie) Schelpe & N.C.Anthony = **Isoetes stephanseniae** A.V.Duthie
Ixia bellendenii R.C.Foster = **Ixia longituba** N.E.Br. var. **bellendenii** (R.C.Foster) M.P.de Vos
Ixia frederickii M.P.de Vos = **Ixia dubia** Vent.
Jumellea filicornoides (De Wild.) Schltr. = **Jumellea walleri** (Rolfe) la Croix
Juttadinteria tetrasepala L.Bolus = **Juttadinteria deserticola** (Marloth) Schwantes
Lachenalia rhodantha Baker = **Lachenalia campanulata** Baker
Lachnaea elegans Compton = **Lachnaea striata** (Poir.) Meisn.
Lachnaea purpurea Andrews = **Lachnaea eriocephala** L.
Lampranthus dunensis (Sond.) L.Bolus = **Erepsia dunensis** (Sond.) Klak
Laurentia giftbergensis (E.Phillips) E.Wimm. = **Wimmerella bifida** (Thunb.) L.Serra, M.B.Crespo & Lammers
Laurentia longitubus E.Wimm. = **Wimmerella longitubus** (E.Wimm.) L.Serra, M.B.Crespo & Lammers
Laurentia mariae E.Wimm. = **Wimmerella mariae** (E.Wimm.) L.Serra, M.B.Crespo & Lammers
Lavrania cactiformis (Hook.) Bruyns in part = **Larryleachia cactiformis** (Hook.) Plowes var. **felina** (D.T.Cole) Bruyns
Lavrania cactiformis (Hook.) Bruyns in part = **Larryleachia cactiformis** (Hook.) Plowes var. **cactiformis**
Lavrania cactiformis (Hook.) Bruyns in part = **Larryleachia similis** (N.E.Br.) Plowes
Lavrania marlothii (N.E.Br.) Bruyns in part = **Larryleachia dinteri** (A.Berger) Plowes
Lavrania marlothii (N.E.Br.) Bruyns in part = **Larryleachia marlothii** (N.E.Br.) Plowes
Lavrania perlata (Dinter) Bruyns = **Larryleachia perlata** (Dinter) Plowes
Lavrania picta (N.E.Br.) Bruyns subsp. *picta* = **Larryleachia picta** (N.E.Br.) Plowes
Lessertia schlechteri L.Bolus = **Lessertia pauciflora** Harv. var. **schlechteri** L.Bolus
Limonium capense (L.Bolus) L.Bolus = **Afrolimon capense** (L.Bolus) Lincz.
Limonium namaquanum L.Bolus = **Afrolimon namaquanum** (L.Bolus) Lincz.
Limonium purpuratum (L.) F.T.Hubb. ex L.H.Bailey = **Afrolimon purpuratum** (L.) Lincz.
Limonium teretifolium L.Bolus = **Afrolimon teretifolium** (L.) Lincz.
Linociera battiscombei Hutch. = **Chionanthus battiscombei** (Hutch.) Stearn
Lithops aucampiae L.Bolus var. *euniceae* de Boer = **Lithops aucampiae** L.Bolus subsp. **euniceae** (de Boer) D.T.Cole

Lithops aucampiae L.Bolus var. *fluminalis* D.T.Cole = **Lithops aucampiae** L.Bolus subsp. **euniceae** (de Boer) D.T.Cole
Lithops aucampiae L.Bolus subsp. *aucampiae* var. *koelemanii* (de Boer) D.T.Cole = **Lithops aucampiae** L.Bolus subsp. **aucampiae**
Lithops bromfieldii L.Bolus var. *glaudinae* (de Boer) D.T.Cole = **Lithops bromfieldii** L.Bolus
Lithops comptonii L.Bolus var. *weberi* (Nel) D.T.Cole = **Lithops comptonii** L.Bolus
Lithops dinteri Schwantes var. *frederici* D.T.Cole = **Lithops dinteri** Schwantes subsp. **frederici** (D.T.Cole) D.T.Cole
Lithops divergens L.Bolus var. *amethystina* de Boer = **Lithops divergens** L.Bolus
Lithops fulviceps (N.E.Br.) N.E.Br. var. *lactinea* D.T.Cole = **Lithops fulviceps** (N.E.Br.) N.E.Br.
Lithops glaudinae de Boer = **Lithops bromfieldii** L.Bolus
Lithops hookeri (A.Berger) Schwantes var. *elephina* (D.T.Cole) D.T.Cole = **Lithops hookeri** (A.Berger) Schwantes
Lithops hookeri (A.Berger) Schwantes var. *marginata* (Nel) D.T.Cole = **Lithops hookeri** (A.Berger) Schwantes
Lithops hookeri (A.Berger) Schwantes var. *subfenestrata* (de Boer) D.T.Cole = **Lithops hookeri** (A.Berger) Schwantes
Lithops hookeri (A.Berger) Schwantes var. *susannae* (D.T.Cole) D.T.Cole = **Lithops hookeri** (A.Berger) Schwantes
Lithops koelemanii de Boer = **Lithops aucampiae** L.Bolus subsp. **aucampiae**
Lithops lesliei (N.E.Br.) N.E.Br. subsp. *lesliei* var. *hornii* de Boer = **Lithops lesliei** (N.E.Br.) N.E.Br. subsp. **lesliei**
Lithops lesliei (N.E.Br.) N.E.Br. subsp. *lesliei* var. *mariae* D.T.Cole = **Lithops lesliei** (N.E.Br.) N.E.Br. subsp. **lesliei**
Lithops olivacea L.Bolus var. *nebrownii* D.T.Cole = **Lithops olivacea** L.Bolus
Lobelia acutangula (C.Presl) A.DC. = **Lobelia flaccida** (C.Presl) A.DC. subsp. **flaccida**
Lobelia montaguensis E.Wimm. = **Lobelia erinus** L.
Lobelia oreas E.Wimm. = **Lobelia flaccida** (C.Presl) A.DC. subsp. **flaccida**
Maytenus bachmannii (Loes.) Marais = **Gymnosporia bachmannii** Loes.
Maytenus oxycarpa N.Robson = **Gymnosporia oxycarpa** (N.Robson) Jordaan
Maytenus pubescens N.Robson = **Gymnosporia pubescens** (N.Robson) Jordaan
Maytenus vanwykii R.H.Archer = **Gymnosporia vanwykii** (R.H.Archer) Jordaan
Monadenia ecalcarata G.J.Lewis = **Disa ecalcarata** (G.J.Lewis) H.P.Linder
Monadenia macrostachya Lindl. = **Disa macrostachya** (Lindl.) Bolus
Monadenia physodes (Sw.) Rchb.f. = **Disa physodes** Sw.
Monadenia pygmaea (Bolus) T.Durand & Schinz = **Disa pygmaea** Bolus
Monadenia sabulosa (Bolus) Kraenzl. = **Disa sabulosa** Bolus
Moraea flexuosa Goldblatt = **Moraea flexicaulis** Goldblatt
Moraea neopavonia R.C.Foster = **Moraea tulbaghensis** L.Bolus
Myrica integra (A.Chev.) Killick = **Morella integra** (A.Chev.) Killick
Oedera muirii C.A.Sm. = **Oedera laevis** DC.
Ophthalmophyllum longitubum L.Bolus = **Conophytum longum** N.E.Br.
Ophthalmophyllum villetii L.Bolus = **Conophytum concordans** G.D.Rowley
Orbea irrorata (Masson) L.C.Leach = **Orbea verrucosa** (Masson) L.C.Leach
Orbea lepida (Jacq.) L.C.Leach = **Orbea variegata** (L.) Haw.
Orbea speciosa L.C.Leach = **Orbea macloughlinii** (I.Verd.) L.C.Leach
Orbeanthus conjunctus (A.C.White & B.Sloane) L.C.Leach = **Orbea conjuncta** (A.C.White & B.Sloane) Bruyns
Orbeanthus hardyi (R.A.Dyer) L.C.Leach = **Orbea hardyi** (R.A.Dyer) Bruyns
Orbeopsis gerstneri (Letty) L.C.Leach subsp. *elongata* (R.A.Dyer) L.C.Leach = **Orbea gerstneri** (Letty) Bruyns subsp. **elongata** (R.A.Dyer) Bruyns
Orbeopsis gerstneri (Letty) L.C.Leach subsp. *gerstneri* = **Orbea gerstneri** (Letty) Bruyns subsp. **gerstneri**
Orbeopsis knobelii (E.Phillips) L.C.Leach = **Orbea knobelii** (E.Phillips) Bruyns
Ornithogalum pilosum L.f. subsp. *pullatum* (F.M.Leight.) Oberm. = **Ornithogalum pullatum** F.M.Leight.
Oxalis framesii L.Bolus = **Oxalis obtusa** Jacq.
Pachycymbium lancasteri Lavranos = **Orbea carnosa** (Stent) Bruyns subsp. **keithii** (R.A.Dyer) Bruyns
Pachycymbium miscellum (N.E.Br.) M.G.Gilbert = **Orbea miscella** (N.E.Br.) Meve
Pachycymbium ubomboense (I.Verd.) M.G.Gilbert = **Australluma ubomboensis** (I.Verd.) Bruyns
Pectinaria mammillaris (L.) Sweet = **Quaqua mammillaris** (L.) Bruyns
Pectinaria mirkinii Pillans = **Ophionella arcuata** (N.E.Br.) Bruyns subsp. **mirkinii** (Pillans) Bruyns
Pelargonium namaquense R.Knuth = **Pelargonium bubonifolium** (Andrews) Pers.
Peucedanum lateriflorum (Eckl. & Zeyh.) Sond. = **Annesorhiza lateriflora** (Eckl. & Zeyh.) B.-E.van Wyk
Piaranthus barrydalensis Meve = **Piaranthus geminatus** (Masson) N.E.Br. subsp. **geminatus**
Podalyria lanceolata Benth. = **Podalyria calyptrata** (Retz.) Willd.
Poellnitzia rubriflora (L.Bolus) Uitewaal = **Astroloba rubriflora** (L.Bolus) Gideon F.Sm. & J.C.Manning
Polyxena corymbosa (L.) Jessop = **Lachenalia corymbosa** (L.) J.C.Manning & Goldblatt
Pterothrix flaccida Schltr. ex Hutch. & E.Phillips = **Amphiglossa tomentosa** (Thunb.) Harv.
Pterothrix perotrichoides (DC.) Harv. = **Amphiglossa perotrichoides** DC.
Pterothrix tecta Brusse = **Amphiglossa tecta** (Brusse) Koekemoer
Quaqua armata (N.E.Br.) Bruyns subsp. *arenicola* (N.E.Br.) Bruyns = **Quaqua arenicola** (N.E.Br.) Plowes subsp. **arenicola**
Quaqua inversa (N.E.Br.) Bruyns var. *cincta* (C.A.Lückh.) Bruyns = **Quaqua cincta** (C.A.Lückh.) Bruyns
Quaqua parviflora (Masson) Bruyns subsp. *bayeriana* Bruyns = **Quaqua bayeriana** (Bruyns) Plowes
Rafnia ericifolia T.M.Salter = **Rafnia angulata** Thunb. subsp. **ericifolia** (T.M.Salter) G.J.Campbell & B.-E.van Wyk
Restio filicaulis Pillans = **Restio pedicellatus** Mast.
Rhadamanthus arenicola B.Nord. = **Drimia arenicola** (B.Nord.) J.C.Manning & Goldblatt
Rhadamanthus urantherus R.A.Dyer = **Drimia uranthera** (R.A.Dyer) J.C.Manning & Goldblatt
Rhinephyllum inaequale L.Bolus var. *latipetalum* L.Bolus = **Rhinephyllum inaequale** L.Bolus

Rhus albomarginata Sond. = **Searsia albomarginata** (Sond.) Moffett
Rhus batophylla Codd = **Searsia batophylla** (Codd) Moffett
Rhus dracomontana Moffett = **Searsia dracomontana** (Moffett) Moffett
Rhus grandidens Harv. ex Engl. = **Searsia grandidens** (Harv. ex Engl.) Moffett
Rhus gueinzii Sond. = **Searsia gueinzii** (Sond.) F.A.Barkley
Rhus harveyi Moffett = **Searsia harveyi** (Moffett) Moffett
Rhus krebsiana C.Presl ex Engl. = **Searsia krebsiana** (C.Presl ex Engl.) Moffett
Rhus kwazuluana Moffett = **Searsia kwazuluana** (Moffett) Moffett
Rhus maricoana Moffett = **Searsia maricoana** (Baker f.) Moffett
Rhus pondoensis Schönland = **Searsia pondoensis** (Schönland) Moffett
Rhus rogersii Schönland = **Searsia rogersii** (Schönland) Moffett
Rhus rudatisii Engl. = **Searsia rudatisii** (Engl.) Moffett
Rhus sekhukhuniensis Moffett = **Searsia sekhukhuniensis** (Moffett) Moffett
Rhus stenophylla Eckl. & Zeyh. = **Searsia stenophylla** (Eckl. & Zeyh.) Moffett
Rhus wilmsii Diels = **Searsia wilmsii** (Diels) Moffett
Roella cuspidata Adamson var. *hispida* Adamson = **Roella compacta** Schltr.
Roella incurva A.DC. var. *rigida* Adamson = **Roella prostrata** E.Mey. ex A.DC.
Roella lightfootioides Schltr. = **Roella spicata** L.f. var. **spicata**
Roella rhodantha Adamson = **Roella incurva** A.DC.
Roggeveldia fistulosa Goldblatt = **Moraea fistulosa** (Goldblatt) Goldblatt
Roggeveldia montana Goldblatt = **Moraea monticola** Goldblatt
Romulea papyracea Wolley-Dod = **Romulea schlechteri** Bég.
Romulea vanzyliae M.P.de Vos = **Romulea subfistulosa** M.P.de Vos
Ruschia filamentosa (L.) L.Bolus = **Erepsia forficata** (L.) Schwantes
Ruschia leipoldtii L.Bolus = **Antimima leipoldtii** (L.Bolus) H.E.K.Hartmann
Satyridium rostratum Lindl. = **Satyrium rhynchanthum** Bolus
Scilla natalensis Planch. = **Merwilla plumbea** (Lindl.) Speta
Scilla plumbea Lindl. = **Merwilla plumbea** (Lindl.) Speta
Scirpus delicatulus Levyns = **Isolepis bulbifera** (Boeck.) Muasya
Scyphogyne calcicola E.G.H.Oliv. = **Erica calcicola** (E.G.H.Oliv.) E.G.H.Oliv.
Secale africanum Stapf = **Secale strictum** (J.Presl) J.Presl subsp. **africanum** (Stapf) K.Hammer
Senecio scabriusculus DC. = **Senecio pinnulatus** Thunb.
Solanum crassifolium Lam. = **Solanum africanum** Mill.
Sphalmanthus arenicolus (L.Bolus) L.Bolus = **Phyllobolus oculatus** (N.E.Br.) Gerbaulet
Spiloxene declinata (Nel) Garside = **Spiloxene curculigoides** (Bolus) Garside
Stapelia baylissii L.C.Leach = **Stapelia hirsuta** L. var. **baylissii** (L.C.Leach) Bruyns
Stapelia gariepensis Pillans = **Stapelia hirsuta** L. var. **gariepensis** (Pillans) Bruyns
Stapelia glabricaulis N.E.Br. = **Stapelia hirsuta** L. var. **tsomoensis** (N.E.Br.) Bruyns
Stapelia macowanii N.E.Br. var. *conformis* (N.E.Br.) L.C.Leach = **Stapelia grandiflora** Masson var. **conformis** (N.E.Br.) Bruyns
Stapelia macowanii N.E.Br. var. *macowanii* = **Stapelia grandiflora** Masson var. **conformis** (N.E.Br.) Bruyns
Stapelia peglerae N.E.Br. = **Stapelia hirsuta** L. var. **tsomoensis** (N.E.Br.) Bruyns
Stapelia praetermissa L.C.Leach var. *luteola* L.C.Leach = **Stapelia hirsuta** L. var. **baylissii** (L.C.Leach) Bruyns
Stapelia praetermissa L.C.Leach var. *praetermissa* = **Stapelia hirsuta** L. var. **baylissii** (L.C.Leach) Bruyns
Stapelia scitula L.C.Leach = **Stapelia paniculata** Willd. subsp. **scitula** (L.C.Leach) Bruyns
Stapelia tsomoensis N.E.Br. = **Stapelia hirsuta** L. var. **tsomoensis** (N.E.Br.) Bruyns
Stapelia vetula Masson = **Stapelia hirsuta** L. var. **vetula** (Masson) Bruyns
Stictocardia laxiflora (Baker) Hallier f. var. *woodii* (N.E.Br.) Verdc. = **Stictocardia laxiflora** (Baker) Hallier f.
Stoebe copholepis Sch.Bip. = **Stoebe phyllostachya** (DC.) Sch.Bip.
Stoebe ensorii Compton = **Stoebe phyllostachya** (DC.) Sch.Bip.
Stoebe humilis Levyns = **Stoebe cyathuloides** Schltr.
Stoebe salteri Levyns = **Stoebe schultzii** Levyns
Stokoeanthus chionophilus E.G.H.Oliv. = **Erica stokoeanthus** E.G.H.Oliv.
Struthiola congesta C.H.Wright = **Struthiola pondoensis** Gilg ex C.H.Wright
Sutera aethiopica (L.) Kuntze = **Chaenostoma aethiopicum** (L.) Benth.
Sutera campanulata (Benth.) Kuntze = **Chaenostoma campanulatum** Benth.
Sutera longipedicellata Hilliard = **Chaenostoma longipedicellatum** (Hilliard) Kornhall
Sutera multiramosa Hilliard = **Chaenostoma multiramosum** (Hilliard) Kornhall
Sutera placida Hilliard = **Chaenostoma placidum** (Hilliard) Kornhall
Sutera platysepala Hiern = **Chaenostoma platysepalum** (Hiern) Kornhall
Sutera polyantha (Benth.) Kuntze = **Chaenostoma polyanthum** Benth.
Sutera racemosa (Benth.) Kuntze = **Chaenostoma racemosum** Benth.
Sutera subnuda (N.E.Br.) Hiern = **Chaenostoma subnudum** N.E.Br.
Sutera titanophila Hilliard = **Chaenostoma titanophilum** (Hilliard) Kornhall
Syndesmanthus schlechteri N.E.Br. = **Erica agglutinans** E.G.H.Oliv.
Tarenna zimbabwensis Bridson = **Coptosperma rhodesiacum** (Bremek.) Degreef
Tarenna zygoon Bridson = **Coptosperma zygoon** (Bridson) Degreef
Tenicroa filifolia (Jacq.) Oberm. = **Drimia filifolia** (Jacq.) J.C.Manning & Goldblatt

Tenicroa multifolia (G.J.Lewis) Oberm. = **Drimia multifolia** (G.J.Lewis) Jessop
Tenicroa nana Snijman = **Drimia nana** (Snijman) J.C.Manning & Goldblatt
Thelypteris altissima (Holttum) Vorster = **Christella altissima** Holttum
Thelypteris knysnaensis N.C.Anthony & Schelpe = **Amauropelta knysnaensis** (N.C.Anthony & Schelpe) Parris
Thuranthos basuticum (E.Phillips) Oberm. = **Drimia angustifolia** Baker
Thuranthos macranthum (Baker) C.H.Wright = **Drimia macrantha** (Baker) Baker
Tridentea parvipuncta (N.E.Br.) L.C.Leach var. *truncata* (C.A.Lückh.) L.C.Leach = **Tridentea parvipuncta** (N.E.Br.) L.C.Leach subsp. **truncata** (C.A.Lückh.) Bruyns
Tritonia watermeyeri L.Bolus = **Tritonia securigera** (Aiton) Ker Gawl. subsp. **watermeyeri** (L.Bolus) J.C.Manning & Goldblatt
Tromotriche longii (C.A.Lückh.) Bruyns = **Orbea longii** (C.A.Lückh.) Bruyns
Urginea modesta Baker = **Drimia calcarata** (Baker) Stedje
Wahlenbergia ciliolata A.DC. = **Wahlenbergia cernua** (Thunb.) A.DC.
Wahlenbergia rotundifolia Brehmer = **Wahlenbergia brehmeri** Lammers
Wahlenbergia swellendamensis H.Buek = **Wahlenbergia ecklonii** H.Buek
Woodia mucronata (Thunb.) N.E.Br. var. *mucronata* = **Woodia mucronata** (Thunb.) N.E.Br.

Excluded taxa
Alchornea hirtella Benth. f. **glabrata** (Müll.Arg.) Pax & K.Hoffm.: forms not listed. See **Alchornea hirtella** Benth.
Apium inundatum (L.) Rchb.f.: naturalised exotic
Cullen corylifolia (L.) Medik.: naturalised exotic
Gladiolus × lewisiae Oberm.: natural hybrid
Huernia × distincta N.E.Br.: natural hybrid
Hyptis spicigera Lam.: naturalised exotic
Satyrium candidum Lindl. × *S. bicallosum* Thunb. = **Satyrium × guthriei** Bolus: natural hybrid
Stapelia barklyi N.E.Br. = **Orbea namaquensis** (N.E.Br.) L.C.Leach × **Stapelia hirsuta** L.: natural hybrid

9. Red List

This section contains an alphabetical list of all South Africa's indigenous plant taxa together with their national Red List status and serves two purposes: 1. It is the complete Red List of South African plants, and allows quick reference to the status of any taxon. 2. It is an index to the assessments of taxa of conservation concern (section 5). Subgeneric taxa of conservation concern are marked in bold, and can be found in section 5 by following the page number next to the genus name.

A

Abildgaardia
hygrophila (Gordon-Gray) Lye LC
ovata (Burm.f.) Kral. LC
triflora (L.) Abeyw. LC

Abrus
laevigatus E.Mey. LC
precatorius L. subsp. africanus Verdc. LC

Abutilon, 406
angulatum (Guill. & Perr.) Mast. var. angulatum LC
angulatum (Guill. & Perr.) Mast. var. macrophyllum (Baker f.) Hochr. LC
austro-africanum Hochr. LC
dinteri Ulbr. LC
flanaganii A.Meeuse ..... DDD
fruticosum Guill. & Perr. LC
galpinii A.Meeuse LC
grandiflorum G.Don LC
grandifolium (Willd.) Sweet LC
grantii A.Meeuse LC
guineense (Schumach.) Baker f. & Exell LC
hirtum (Lam.) Sweet var. hirtum LC
lauraster Hochr. ..... DDT
mauritianum (Jacq.) Medik. LC
piloso-cinereum A.Meeuse LC
pycnodon Hochr. LC
ramosum (Cav.) Guill. & Perr. LC
rehmannii Baker f. LC
sonneratianum (Cav.) Sweet LC

Acacia, 349
ataxacantha DC. LC
borleae Burtt Davy LC
brevispica Harms subsp. dregeana (Benth.) Brenan LC
burkei Benth. LC
caffra (Thunb.) Willd. LC
davyi N.E.Br. LC
dyeri P.P.Swartz LC
ebutsiniorum P.J.H.Hurter ..... EN
erioloba E.Mey. ..... Declining
erubescens Welw. ex Oliv. LC
exuvialis I.Verd. LC
fleckii Schinz LC
galpinii Burtt Davy LC
gerrardii Benth. subsp. gerrardii var. gerrardii LC
grandicornuta Gerstner LC
haematoxylon Willd. LC
hebeclada DC. subsp. hebeclada LC
hereroensis Engl. LC
karroo Hayne LC
kosiensis P.P.Swartz LC
kraussiana Meisn. ex Benth. LC
luederitzii Engl. var. luederitzii LC
luederitzii Engl. var. retinens (Sim) J.H.Ross & Brenan LC
mellifera (Vahl) Benth. subsp. detinens (Burch.) Brenan LC
natalitia E.Mey. LC
nebrownii Burtt Davy LC
nigrescens Oliv. LC
nilotica (L.) Willd. ex Delile subsp. kraussiana (Benth.) Brenan LC
ormocarpoides P.J.H.Hurter ..... NT
permixta Burtt Davy LC
polyacantha Willd. subsp. campylacantha (Hochst. ex A.Rich.) Brenan LC
rehmanniana Schinz LC
robbertsii P.P.Swartz LC
robusta Burch. subsp. clavigera (E.Mey.) Brenan LC
robusta Burch. subsp. robusta LC
schweinfurthii Brenan & Exell var. schweinfurthii LC
sekhukhuniensis P.J.H.Hurter ..... CR
senegal (L.) Willd. var. leiorhachis Brenan LC
senegal (L.) Willd. var. rostrata Brenan LC
sieberiana DC. var. woodii (Burtt Davy) Keay & Brenan LC
stuhlmannii Taub. LC
swazica Burtt Davy LC
tenuispina I.Verd. LC
theronii P.P.Swartz LC
tortilis (Forssk.) Hayne subsp. heteracantha (Burch.) Brenan LC
welwitschii Oliv. subsp. delagoensis (Harms) J.H.Ross & Brenan LC
xanthophloea Benth. LC

Acaena
latebrosa Aiton LC

Acalypha, 343
angustata Sond. LC
capensis (L.f.) Prain & Hutch. LC
caperonioides Baill. var. caperonioides ..... DDT
caperonioides Baill. var. galpinii Prain ..... DDT
ciliata Forssk. LC
depressinerva (Kuntze) K.Schum. LC
ecklonii Baill. LC
entumenica Prain ..... EN
fimbriata Schumach. & Thonn. LC
glabrata Thunb. var. glabrata LC
glabrata Thunb. var. pilosa Pax LC
glandulifolia Buchinger ex Meisn. LC
indica L. var. indica LC
ornata Hochst. ex A.Rich. LC
peduncularis E.Mey. ex Meisn. LC
pubiflora Baill. subsp. pubiflora LC
punctata Meisn. var. punctata LC
punctata Meisn. var. rogersii Prain LC
segetalis Müll.Arg. LC
sonderiana Müll.Arg. LC
villicaulis Hochst. LC
wilmsii Pax ex Prain & Hutch. LC
zeyheri Baill. ..... DDT

Acampe
pachyglossa Rchb.f. LC

Acanthopsis, 216
carduifolia (L.f.) Schinz LC
disperma Nees LC
glauca (E.Mey.) Schinz ..... DDD
hoffmannseggiana (Nees) C.B.Clarke LC
horrida Nees LC
scullyi (S.Moore) Oberm. LC
spathularis (E.Mey.) Schinz ..... Rare
trispina C.B.Clarke ..... DDT

Acanthosicyos, 311
horridus Welw. ex Hook.f. ..... CR PE
naudinianus (Sond.) C.Jeffrey LC

Acharia
tragodes Thunb. LC

Achyropsis
avicularis (E.Mey. ex Moq.) T.Cooke & C.H.Wright LC
leptostachya (E.Mey. ex Meisn.) Baker & C.B.Clarke LC

Acmadenia, 521
alternifolia Cham. ..... EN
argillophila I.Williams ..... VU
baileyensis I.Williams ..... DDT
bodkinii (Schltr.) Strid ..... Rare
burchellii Dummer ..... Rare
candida I.Williams ..... EN
densifolia Sond. ..... NT
faucitincta I.Williams ..... VU
flaccida Eckl. & Zeyh. LC
fruticosa I.Williams ..... VU
gracilis Dummer ..... VU
heterophylla P.E.Glover LC
kiwanensis I.Williams ..... CR
latifolia I.Williams ..... VU
laxa I.Williams ..... EN
macradenia (Sond.) Dummer ..... NT
macropetala (P.E.Glover) Compton ..... VU
maculata I.Williams ..... NT
matroosbergensis E.Phillips ..... Rare
mundiana Eckl. & Zeyh. ..... Rare
nivea I.Williams ..... VU
nivenii Sond. ..... VU
obtusata (Thunb.) Bartl. & H.L.Wendl. LC
patentifolia I.Williams LC
rourkeana I.Williams ..... Rare
rupicola I.Williams ..... CR
sheilae I.Williams LC
tenax I.Williams ..... Critically Rare
teretifolia (Link) E.Phillips LC
tetracarpellata I.Williams ..... Rare
tetragona (L.f.) Bartl. & H.L.Wendl. ..... VU
trigona (Eckl. & Zeyh.) Druce LC
wittebergensis (Compton) I.Williams LC

Acokanthera
oblongifolia (Hochst.) Codd LC
oppositifolia (Lam.) Codd LC
rotundata (Codd) Kupicha LC

Acrachne
racemosa (B.Heyne ex Roem. & Schult.) Ohwi LC

Acridocarpus, 406
natalitius A.Juss. ..... Declining

Acroceras
macrum Stapf LC

Acrodon, 408
bellidiflorus (L.) N.E.Br. LC
deminutus Klak ..... VU
parvifolius R.du Plessis ..... EN
purpureostylus (L.Bolus) Burgoyne ..... EN
quarcicola H.E.K.Hartmann ..... EN
subulatus (Mill.) N.E.Br. ..... EN

Acrolophia, 180
barbata (Thunb.) H.P.Linder ..... EN
bolusii Rolfe ..... VU
capensis (P.J.Bergius) Fourc. LC
cochlearis (Lindl.) Schltr. & Bolus LC
lamellata (Lindl.) Schltr. & Bolus LC
micrantha (Lindl.) Pfitzer LC
ustulata (Bolus) Schltr. & Bolus ..... VU

Acrosanthes
anceps (Thunb.) Sond. LC
angustifolia Eckl. & Zeyh. LC
humifusa (Thunb.) Sond. LC
microphylla Adamson LC
teretifolia Eckl. & Zeyh. LC

Acrostichum
aureum L. LC

Acrotome
angustifolia G.Taylor LC
hispida Benth. LC
inflata Benth. LC
pallescens Benth. LC
thorncroftii Skan LC

Actinanthella
wyliei (Sprague) Wiens LC

Actiniopteris
dimorpha Pic.Serm. subsp. dimorpha LC
radiata (J.König ex Sw.) Link LC

Adansonia
digitata L. LC

Adenandra, 523
acuta Schltr. LC
brachyphylla Schltdl. LC
coriacea Licht. ex Roem. & Schult. LC
dahlgrenii Strid ..... Rare
fragrans (Sims) Roem. & Schult. LC
gracilis Eckl. & Zeyh. ..... DDD
gummifera Strid LC
lasiantha Sond. ..... Rare
marginata (L.f.) Roem. & Schult. subsp. humilis (Eckl. & Zeyh.) Strid LC
marginata (L.f.) Roem. & Schult. subsp. marginata LC

marginata (L.f.) Roem. & Schult. subsp. mucronata Strid ..... **Rare**
marginata (L.f.) Roem. & Schult. subsp. serpyllacea (Bartl.) Strid LC
multiflora Strid ..... **VU**
mundiifolia Eckl. & Zeyh. LC
obtusata Sond. LC
odoratissima Strid subsp. odoratissima ..... **VU**
odoratissima Strid subsp. tenuis Strid ..... **CR**
rotundifolia Eckl. & Zeyh. ..... **NT**
schlechteri Dummer ..... **EN**
uniflora (L.) Willd. LC
villosa (P.J.Bergius) Licht. ex Roem. & Schult. subsp. apiculata Strid ..... **Rare**
villosa (P.J.Bergius) Licht. ex Roem. & Schult. subsp. biseriata (E.Mey. ex Bartl. & H.L.Wendl.) Strid LC
villosa (P.J.Bergius) Licht. ex Roem. & Schult. subsp. imbricata Strid ..... **Rare**
villosa (P.J.Bergius) Licht. ex Roem. & Schult. subsp. orbicularis Strid LC
villosa (P.J.Bergius) Licht. ex Roem. & Schult. subsp. pedicellata Strid ..... **Rare**
villosa (P.J.Bergius) Licht. ex Roem. & Schult. subsp. robusta Strid ..... **Rare**
villosa (P.J.Bergius) Licht. ex Roem. & Schult. subsp. sonderi (Dummer) Strid LC
villosa (P.J.Bergius) Licht. ex Roem. & Schult. subsp. umbellata (J.C.Wendl.) Strid LC
villosa (P.J.Bergius) Licht. ex Roem. & Schult. subsp. villosa LC
viscida Eckl. & Zeyh. LC

Adenanthellum
osmitoides (Harv.) B.Nord. LC

Adenia, 452
digitata (Harv.) Engl. LC
fruticosa Burtt Davy subsp. fruticosa ..... **NT**
fruticosa Burtt Davy subsp. simplicifolia W.J.de Wilde ..... **DDD**
fruticosa Burtt Davy subsp. trifoliata W.J.de Wilde LC
glauca Schinz LC
gummifera (Harv.) Harms var. gummifera ..... **Declining**
hastata (Harv.) Schinz var. glandulifera W.J.de Wilde LC
hastata (Harv.) Schinz var. hastata LC
natalensis W.J.de Wilde ..... **CR PE**
repanda (Burch.) Engl. LC
spinosa Burtt Davy LC
wilmsii Harms ..... **EN**

Adenium, 224
multiflorum Klotzsch LC
oleifolium Stapf LC
swazicum Stapf ..... **CR**

Adenocline
acuta (Thunb.) Baill. LC
pauciflora Turcz. LC
violifolia (Kuntze) Prain LC

Adenoglossa
decurrens (Hutch.) B.Nord. LC

Adenogramma, 444
capillaris (Eckl. & Zeyh.) Druce LC
congesta Adamson ..... **DDD**
glomerata (L.f.) Druce LC
lichtensteiniana (Schult.) Druce LC
littoralis Adamson LC
mollugo Rchb.f. LC
physocalyx Fenzl ..... **DDD**
rigida (Bartl.) Sond. ..... **CR PE**
sylvatica (Eckl. & Zeyh.) Fenzl LC
teretifolia (Thunb.) Adamson ..... **DDD**

Adenolobus
garipensis (E.Mey.) Torre & Hillc. LC

Adenopodia
spicata (E.Mey.) C.Presl LC

Adenostemma
caffrum DC. var. caffrum LC
viscosum J.R.Forst. & G.Forst. LC

Adhatoda
andromeda (Lindau) C.B.Clarke LC
densiflora (Hochst.) J.C.Manning LC

Adiantum
aethiopicum L. LC
capillus-veneris L. LC
hispidulum Sw. LC
incisum Forssk. LC
lunulatum Burm.f. LC
poiretii Wikstr. LC

Adromischus, 305
alstonii (Schönland & Baker f.) C.A.Sm. LC
bicolor Hutchison ..... **Rare**
caryophyllaceus (Burm.f.) Lem. LC
cooperi (Baker) A.Berger LC
cristatus (Haw.) Lem. var. clavifolius (Haw.) Toelken LC
cristatus (Haw.) Lem. var. cristatus LC
cristatus (Haw.) Lem. var. mzimvubuensis Van Jaarsv. ..... **Rare**
cristatus (Haw.) Lem. var. schonlandii (E.Phillips) Toelken ..... **Rare**
cristatus (Haw.) Lem. var. zeyheri (Harv.) Toelken ..... **DDD**
diabolicus Toelken ..... **Rare**
fallax Toelken ..... **Rare**
filicaulis (Eckl. & Zeyh.) C.A.Sm. subsp. filicaulis LC
filicaulis (Eckl. & Zeyh.) C.A.Sm. subsp. marlothii (Schönland) Toelken LC
hemisphaericus (L.) Lem. LC
humilis (Marloth) Poelln. ..... **Rare**
inamoenus Toelken LC
leucophyllus Uitewaal LC
liebenbergii Hutchison subsp. liebenbergii LC
liebenbergii Hutchison subsp. orientalis Van Jaarsv. ..... **Rare**
maculatus (Salm-Dyck) Lem. LC
mammillaris (L.f.) Lem. ..... **EN**
marianiae (Marloth) A.Berger var. hallii (Hutchison) Toelken ..... **Rare**
marianiae (Marloth) A.Berger var. immaculatus Uitewaal LC
marianiae (Marloth) A.Berger var. kubusensis (Uitewaal) Toelken LC
marianiae (Marloth) A.Berger var. marianiae LC
maximus Hutchison ..... **Rare**
montium-klinghardtii (Dinter) A.Berger LC
nanus (N.E.Br.) Poelln. LC
phillipsiae (Marloth) Poelln ..... **Rare**
roaneanus Uitewaal LC
sphenophyllus C.A.Sm. LC
subdistichus Makin ex Bruyns LC
subviridis Toelken LC
triflorus (L.f.) A.Berger LC
trigynus (Burch.) Poelln. LC
umbraticola C.A.Sm. subsp. ramosus Toelken ..... DDT
umbraticola C.A.Sm. subsp. umbraticola ..... **NT**

Aeollanthus
buchnerianus Briq. LC
neglectus (Dinter) Launert LC
parvifolius Benth. LC
rehmannii Gürke LC
suaveolens Mart. ex Spreng. LC

Aerangis
mystacidii (Rchb.f.) Schltr. LC
somalensis (Schltr.) Schltr. LC
verdickii (De Wild.) Schltr. var. verdickii LC

Aerva
lanata (L.) Juss. ex Schult. LC
leucura Moq. LC

Aeschynomene
indica L. LC
micrantha DC. LC
nodulosa (Baker) Baker f. var. glabrescens J.B.Gillett LC
nodulosa (Baker) Baker f. var. nodulosa LC
nyassana Taub. LC
rehmannii Schinz var. leptobotrya (Harms ex Baker f.) J.B.Gillett LC
rehmannii Schinz var. rehmannii LC
rhodesiaca Harms LC
uniflora E.Mey. var. uniflora LC

Aethephyllum
pinnatifidum (L.f.) N.E.Br. LC

Afrocanthium
gilfillanii (N.E.Br.) Lantz LC
mundianum (Cham. & Schltdl.) Lantz LC

Afrolimon, 456
amoenum (C.H.Wright) Lincz. LC
capense (L.Bolus) Lincz ..... **NT**
longifolium (Thunb.) Lincz. LC
namaquanum (L.Bolus) Lincz. ..... **Rare**
peregrinum (P.J.Bergius) Lincz LC
purpuratum (L.) Lincz. ..... **CR**
teretifolium (L.) Lincz. ..... **Rare**

Afrotysonia
africana (Bolus) Rauschert LC
glochidiata (R.R.Mill) R.R.Mill LC

Afzelia
quanzensis Welw. LC

Agapanthus, 63
africanus (L.) Hoffmanns. subsp. africanus LC
africanus (L.) Hoffmanns. subsp. walshii (L.Bolus) Zonneveld & G.D.Duncan ..... **EN**
campanulatus F.M.Leight. subsp. campanulatus LC
campanulatus F.M.Leight. subsp. patens (F.M.Leight.) F.M.Leight. LC
caulescens Spreng. subsp. angustifolius F.M.Leight. LC
caulescens Spreng. subsp. gracilis (F.M.Leight.) F.M.Leight. LC
coddii F.M.Leight. ..... **Rare**
inapertus P.Beauv. subsp. hollandii (F.M.Leight.) F.M.Leight. LC
inapertus P.Beauv. subsp. inapertus LC
inapertus P.Beauv. subsp. intermedius F.M.Leight. LC
inapertus P.Beauv. subsp. parviflorus F.M.Leight. LC
inapertus P.Beauv. subsp. pendulus (L.Bolus) F.M.Leight. LC
praecox Willd. subsp. minimus (Lindl.) F.M.Leight. LC
praecox Willd. subsp. orientalis (F.M.Leight.) F.M.Leight. LC
praecox Willd. subsp. praecox LC

Agathisanthemum
bojeri Klotzsch subsp. bojeri LC
chlorophyllum (Hochst.) Bremek. var. chlorophyllum LC
chlorophyllum (Hochst.) Bremek. var. pubescens Bremek. ..... DDT

Agathosma, 524
abrupta Pillans ..... **VU**
acocksii Pillans ..... **VU**
acutissima Dummer ..... **VU**
adenandriflora Schltr. ..... **NT**
adnata Pillans ..... DDT
aemula Schltr. ..... **Rare**
affinis Sond. LC
alaris Cham. ..... **DDD**
alligans Williams ..... **Rare**
alpina Schltr. LC
alticola Schltr. ex Dummer LC
anomala E.Mey. ex Sond. LC
apiculata G.Mey. LC
asperifolia Eckl. & Zeyh. LC
barnesiae Compton LC
bathii (Dummer) Pillans ..... **Rare**
betulina (P.J.Bergius) Pillans ..... **Declining**
bicolor Dummer ..... **VU**
bicornuta R.A.Dyer ..... **EN**
bifida (Jacq.) Bartl. & H.L.Wendl. LC
bisulca (Thunb.) Bartl. & H.L.Wendl. LC
blaerioides Cham. & Schltdl. LC
bodkinii Dummer ..... **VU**
capensis (L.) Dummer LC
capitata Sond. ..... **VU**
cedrimontana Dummer LC
cephalodes E.Mey. ex Sond. ..... DDT
cerefolium (Vent.) Bartl. & H.L.Wendl. LC
ciliaris (L.) Druce LC
ciliata (L.) Link LC
clavisepala R.A.Dyer LC
collina Eckl. & Zeyh. ..... **NT**
concava Pillans ..... **Rare**
conferta Pillans ..... **EN**
cordifolia Pillans ..... **Rare**
corymbosa (Montin) G.Don ..... **EN**
craspedota Sond. LC
crassifolia Sond. LC
crenulata (L.) Pillans ..... **Declining**
decurrens Pillans ..... **Rare**
dentata Pillans ..... **Rare**
dielsiana Schltr. ex Dummer LC
distans Pillans ..... **VU**
divaricata Pillans LC

dregeana Sond. ..... **EN**
elata Sond. ..... **EN**
elegans Cham. & Schltdl. LC
eriantha (Steud.) Steud. ..... **VU**
esterhuyseniae Pillans ..... **Rare**
florida Sond. ..... **Rare**
florulenta Sond. ..... **EN**
foetidissima (Bartl. & H.L.Wendl.) Steud. ..... **NT**
foleyana Dummer ..... **Rare**
fraudulenta Sond. ..... **DDD**
geniculata Pillans ..... **NT**
giftbergensis E.Phillips ..... Thr*
glabrata Bartl. & H.L.Wendl. ..... **EN**
glandulosa (Thunb.) Sond. ..... **EN**
gnidiiflora Dummer ..... **CR**
gonaquensis Eckl. & Zeyh. ..... **CR**
hirsuta Pillans ..... **Rare**
hirta (Lam.) Bartl. & H.L.Wendl. LC
hispida (Thunb.) Bartl. & H.L.Wendl. ..... **NT**
hookeri Sond. ..... **Rare**
humilis Sond. LC
imbricata (L.) Willd. LC
insignis (Compton) Pillans ..... **Rare**
involucrata Eckl. & Zeyh. ..... **CR PE**
joubertiana Schltdl. ..... **EN**
juniperifolia Bartl. LC
kougaense Pillans ..... **Rare**
krakadouwensis Dummer ..... **Rare**
lanceolata (L.) Engl. LC
lancifolia Eckl. & Zeyh. ..... **DDD**
latipetala Sond. ..... **EN**
leptospermoides Sond. ..... **VU**
linifolia (Roem. & Schult.) Licht. ex Bartl. & H.L.Wendl. ..... **Rare**
longicornu Pillans ..... **Rare**
marifolia Eckl. & Zeyh. ..... **NT**
marlothii Dummer LC
martiana Sond. LC
microcalyx Dummer ..... **NT**
microcarpa (Sond.) Pillans ..... **VU**
minuta Schltdl. ..... **EN**
mirabilis Pillans LC
mucronulata Sond. LC
muirii E.Phillips ..... **VU**
mundtii Cham. & Schltdl. LC
namaquensis Pillans ..... **VU**
odoratissima (Montin) Pillans LC
orbicularis (Thunb.) Bartl. & H.L.Wendl. ..... **CR**
ovalifolia Pillans ..... **Rare**
ovata (Thunb.) Pillans LC
pallens Pillans ..... **CR PE**
pattisoniae Dummer ..... **DDD**
peglerae Dummer LC
pentachotoma E.Mey. ex Sond. LC
phillipsii Dummer ..... **Rare**
pilifera Schltdl. LC
planifolia Sond. LC
propinqua Sond. ..... **CR PE**
puberula (Steud.) Fourc. LC
pubigera Sond. ..... Thr*
pulchella (L.) Link ..... **VU**
pungens (E.Mey. ex Sond.) Pillans LC
purpurea Pillans LC
recurvifolia Sond. LC
rehmanniana Dummer ..... **Rare**
riversdalensis Dummer ..... **VU**
robusta Eckl. & Zeyh. ..... **VU**
roodebergensis Compton LC
rosmarinifolia (Bartl.) I.Williams LC
rubricaulis Dummer ..... **VU**
rudolphii I.Williams LC
sabulosa Sond. ..... DDT
salina Eckl. & Zeyh. ..... **EN**
scaberula Dummer ..... **NT**
sedifolia Schltdl. ..... **EN**
serpyllacea Licht. ex Roem. & Schult. LC
serratifolia (Curtis) Spreeth ..... **VU**
sladeniana P.E.Glover ..... **Rare**
sp. nov. (*Bean 475* BOL) ..... **Rare**
sp. nov. (*Bean 808* BOL) ..... **VU**
sp. nov. (*Bean 810* BOL) ..... **VU**
sp. nov. (*Bean 1056* BOL) ..... **Critically Rare**
sp. nov. (*Bean 3082* BOL) ..... **Critically Rare**
sp. nov. (*Bean 3088* BOL) ..... **VU**
sp. nov. (*Bean & Trinder-Smith 2868* BOL) ..... **Rare**
sp. nov. (*Esterhuysen 27654* BOL) ..... **Critically Rare**
sp. nov. (*Oliver 6085* BOL) ..... **VU**
sp. nov. (*Viviers 1238* BOL) ..... **Critically Rare**
sp. nov. (*Viviers 1251* BOL) ..... **VU**
sp. nov. (*Vlok 835* BOL) ..... **Rare**
sp. nov. (*Williams 2616* BOL) ..... **Critically Rare**
spinescens Dummer LC
spinosa Sond. ..... **Rare**
squamosa (Roem. & Schult.) Bartl. & H.L.Wendl. LC
stenopetala (Steud.) Steud. ..... **VU**
stenosepala Pillans ..... **Rare**
stilbeoides Dummer LC
stipitata Pillans LC
stokoei Pillans ..... **Rare**
subteretifolia Pillans ..... **Rare**
tabularis Sond. LC
thymifolia Schltdl. ..... **VU**
trichocarpa Holmes ..... **CR PE**
tulbaghensis Dummer ..... **Rare**
umbonata Pillans ..... **Rare**
unicarpellata (Fourc.) Pillans LC
venusta (Eckl. & Zeyh.) Pillans LC
virgata (Lam.) Bartl. & H.L.Wendl. LC
zwartbergense Pillans ..... **VU**

Agelanthus
crassifolius (Wiens) Polhill & Wiens LC
gracilis (Toelken & Wiens) Polhill & Wiens LC
kraussianus (Meisn.) Polhill & Wiens LC
lugardii (N.E.Br.) Polhill & Wiens LC
natalitius (Meisn.) Polhill & Wiens subsp. natalitius LC
natalitius (Meisn.) Polhill & Wiens subsp. zeyheri (Harv.) Polhill & Wiens LC
prunifolius (E.Mey. ex Harv.) Polhill & Wiens LC
pungu (De Wild.) Polhill & Wiens LC
sambesiacus (Engl. & Schinz) Polhill & Wiens LC
transvaalensis (Sprague) Polhill & Wiens LC

Agrimonia
bracteata E.Mey. ex C.A.Mey. LC
procera Wallr. LC

Agrocharis
melanantha Hochst. LC

Agrostis
barbuligera Stapf var. barbuligera LC
barbuligera Stapf var. longipilosa Gooss. & Papendorf LC
bergiana Trin. var. bergiana LC
bergiana Trin. var. laeviuscula Stapf LC
continuata Stapf. LC
eriantha Hack. var. eriantha LC
eriantha Hack. var. planifolia Gooss. & Papendorf ..... DDT
griquensis Stapf LC
lachnantha Nees var. lachnantha LC
polypogonoides Stapf LC
schlechteri Rendle LC
subulifolia Stapf LC

Aizoanthemum
galenioides (Fenzl ex Sond.) Friedrich LC
hispanicum L. LC

Aizoon
asbestinum Schltr. LC
canariense L. LC
glinoides L.f. LC
karooicum Compton LC
paniculatum L. LC
rigidum L.f. LC
sarmentosum L.f. LC
schellenbergii Adamson LC
zeyheri Sond. ..... DDT

Ajuga
ophrydis Burch. ex Benth. LC

Alatoseta
tenuis Compton LC

Alberta, 519
magna E.Mey. ..... **NT**

Albertisia
delagoensis (N.E.Br.) Forman LC

Albizia, 349
adianthifolia (Schumach.) W.Wight var. adianthifolia LC
amara (Roxb.) Boivin subsp. sericocephala (Benth.) Brenan LC
anthelmintica (A.Rich.) Brongn. LC
antunesiana Harms LC
brevifolia Schinz LC
forbesii Benth. LC
harveyi E.Fourn. LC
petersiana (Bolle) Oliv. subsp. evansii (Burtt Davy) Brenan LC
suluensis Gerstner ..... **EN**
tanganyicensis Baker f. subsp. tanganyicensis LC
versicolor Welw. ex Oliv. LC

Albuca, 113
affinis Baker LC
aspera U.Müll.-Doblies ..... DDT
aurea Jacq. LC
batteniana Hilliard & B.L.Burtt LC
bifolia Baker LC
bifoliata R.A.Dyer LC
bontebokensis U.Müll.-Doblies ..... DDT
boucheri U.Müll.-Doblies LC
bruce-bayeri U.Müll.-Doblies ..... DDT
caudata Jacq. LC
ciliaris U.Müll.-Doblies LC
clanwilliamigloria U.Müll.-Doblies ..... **EN**
collina Baker LC
cooperi Baker LC
corymbosa Baker LC
cremnophila Van Jaarsv. & A.E.van Wyk LC
crinifolia Baker ..... DDT
crudenii Archibald ..... **VU**
dalyae Baker LC
darlingana U.Müll.-Doblies LC
decipiens U.Müll.-Doblies LC
echinosperma U.Müll.-Doblies LC
etesiogaripensis U.Müll.-Doblies LC
exuviata Baker LC
fastigiata Dryand. var. fastigiata LC
fastigiata Dryand. var. floribunda Baker LC
flaccida Jacq. LC
foetida U.Müll.-Doblies LC
fragrans Jacq. LC
glandulosa Baker LC
glauca Baker LC
goswinii U.Müll.-Doblies LC
hallii U.Müll.-Doblies LC
hesquaspoortensis U.Müll.-Doblies LC
humilis Baker LC
jacquinii U.Müll.-Doblies ..... DDT
juncifolia Baker subsp. juncifolia LC
juncifolia Baker subsp. xanthocodon (Hilliard & B.L.Burtt) U.Müll.-Doblies LC
karooica U.Müll.-Doblies LC
leucantha U.Müll.-Doblies LC
longipes Baker LC
macowanii Baker LC
massonii Baker LC
mater-familias U.Müll.-Doblies ..... DDT
maxima Burm.f. LC
namaquensis Baker LC
nana Schönland LC
navicula U.Müll.-Doblies LC
nelsonii N.E.Br. LC
papyracea J.C.Manning & Goldblatt LC
paradoxa Dinter LC
polyphylla Baker LC
prolifera J.H.Wilson LC
riebeekkasteelberganula U.Müll.-Doblies LC
robertsoniana U.Müll.-Doblies LC
rogersii Schönland LC
rupestris Hilliard & B.L.Burtt LC
schlechteri Baker LC
schonlandii Baker LC
setosa Jacq. LC
shawii Baker LC
spiralis L.f. LC
tenuifolia Baker LC
thermarum Van Jaarsv. ..... **Critically Rare**
tortuosa Baker LC
trachyphylla U.Müll.-Doblies LC
villosa U.Müll.-Doblies subsp. glabra U.Müll.-Doblies LC
villosa U.Müll.-Doblies subsp. villosa LC
viscosa L.f. LC
viscosella U.Müll.-Doblies ..... DDT
weberlingiorum U.Müll.-Doblies LC

Alchemilla
bakeri De Wild. ..... DDT
bicarpellata Rothm. LC
bolusii De Wild. LC
capensis Thunb. LC
colura Hilliard LC

cryptantha Steud. ex A.Rich.....LC
elongata Eckl. & Zeyh. var. elongata.....LC
elongata Eckl. & Zeyh. var. platyloba Rothm. LC
galpinii Hauman & Balle.....LC
hirsuto-petiolata (De Wild.) Rothm. LC
incurvata Gand.....DDT
natalensis Engl.....LC
quinqueloba Rothm. .....DDT
rehmannii Engl.....LC
schlechteriana Rothm. .....DDT
woodii Kuntze.....LC

Alchornea
hirtella Benth. LC
laxiflora (Benth.) Pax & K.Hoffm.....LC

Alectra
basutica (E.Phillips) Melch. LC
capensis Thunb.....LC
dunensis Hilliard & B.L.Burtt.....LC
lurida Harv. LC
natalensis (Hiern) Melch. .....DDT
orobanchoides Benth.....LC
picta (Hiern) Hemsl. LC
pumila Benth.....LC
sessiliflora (Vahl) Kuntze var. monticola (Engl.) Melch.LC
sessiliflora (Vahl) Kuntze var. sessiliflora.....LC
thyrsoidea Melch. LC
vogelii Benth.....LC
welwitschii (Hiern) Hemsl.....LC

Alepidea, 220
acutidens Weim. var. acutidens.....LC
acutidens Weim. var. dispar Weim.....LC
amatymbica Eckl. & Zeyh.....VU
attenuata Weim.....NT
basinuda Pott var. basinuda LC
basinuda Pott var. subnuda Weim. ..... EN
capensis (P.J.Bergius) R.A.Dyer var. capensis LC
capensis (P.J.Bergius) R.A.Dyer var. tenella (Schltr. & H.Wolff) Weim.....DDT
cirsiifolia Schltr. & H.Wolff.....LC
delicatula Weim. ..... Rare
duplidens Weim.....DDT
galpinii Dummer LC
insculpta Hilliard & B.L.Burtt..... Rare
longeciliata Schinz ex Dummer LC
macowani Dummer.....VU
multisecta B.L.Burtt ..... CR PE
natalensis J.M.Wood & M.S.Evans.....LC
peduncularis A.Rich. .....DDT
pilifera Weim. LC
pusilla Weim. LC
reticulata Weim.....DDT
serrata Eckl. & Zeyh. var. cathcartensis (Kuntze) Weim.....LC
serrata Eckl. & Zeyh. var. serrata LC
setifera N.E.Br. LC
stellata Weim. .....DDT
thodei Dummer LC
woodii Oliv.....LC

Alinula
paradoxa (Cherm.) Goetgh. & Vorster.....LC

Alistilus
bechuanicus N.E.Br.....LC

Allium
dregeanum Kunth LC

Allocassine
laurifolia (Harv.) N.Robson LC

Allophylus
africanus P.Beauv. var. africanus LC
chaunostachys Gilg LC
decipiens (Sond.) Radlk.....LC
dregeanus (Sond.) De Winter.....LC
natalensis (Sond.) De Winter LC
rubifolius (Hochst. ex A.Rich.) Engl. var. rubifolius.....LC

Alloteropsis
papillosa Clayton LC
semialata (R.Br.) Hitchc. subsp. eckloniana (Nees) Gibbs-Russ. LC
semialata (R.Br.) Hitchc. subsp. semialata.....LC

Aloe, 79
aculeata Pole-Evans.....LC
affinis A.Berger LC
africana Mill. LC
albida (Stapf) Reynolds .....NT
alooides (Bolus) Druten LC
angelica Pole-Evans.....LC
arborescens Mill.....LC
arenicola Reynolds.....NT
aristata Haw. LC
barberae Dyer LC
bowiea Schult. & J.H.Schult..... CR
branddraaiensis Groenew. LC
brevifolia Mill. var. brevifolia.....VU
brevifolia Mill. var. depressa (Haw.) Baker.....DDT
broomii Schönland var. broomii.....LC
broomii Schönland var. tarkaensis Reynolds... Rare
buhrii Lavranos .....VU
castanea Schönland LC
chabaudii Schönland var. chabaudii.....LC
challisii Van Jaarsv. & A.E.van Wyk .....VU
chlorantha Lavranos.....VU
chortolirioides A.Berger var. chortolirioides.....VU
chortolirioides A.Berger var. woolliana (Pole-Evans) Glen & D.S.Hardy LC
ciliaris Haw. var. ciliaris LC
ciliaris Haw. var. redacta S.Carter .....VU
ciliaris Haw. var. tidmarshii Schönland LC
claviflora Burch. LC
commixta A.Berger .....VU
comosa Marloth & A.Berger (Plate 10).....LC
cooperi Baker subsp. cooperi .....Declining
cooperi Baker subsp. pulchra Glen & D.S.Hardy.....DDT
craibii Gideon F.Sm..... CR
cryptopoda Baker LC
dabenorisana Van Jaarsv..... Rare
dewetii Reynolds.....LC
dichotoma Masson.....VU
dominella Reynolds.....NT
dyeri Schönland LC
ecklonis Salm-Dyck LC
excelsa A.Berger var. excelsa.....LC
falcata Baker LC
ferox Mill.....LC
fosteri Pillans LC
fouriei D.S.Hardy & Glen.....DDT
gariepensis Pillans LC
gerstneri Reynolds .....VU
glauca Mill.....LC
globuligemma Pole-Evans LC
gracilis Haw.....LC
grandidentata Salm-Dyck.....LC
greatheadii Schönland var. davyana (Schönland) Glen & D.S.Hardy LC
greatheadii Schönland var. greatheadii.....LC
greenii Baker.....LC
haemanthifolia A.Berger & Marloth LC
hardyi Glen ..... Rare
hereroensis Engl. var. hereroensis LC
humilis (L.) Mill. LC
inconspicua Plowes.....EN
integra Reynolds .....VU
kniphofioides Baker .....VU
kouebokkeveldensis Van Jaarsv. & A.B.Low ..... Rare
krapohliana Marloth .....DDD
linearifolia A.Berger .....NT
lineata (Aiton) Haw. var. lineata LC
lineata (Aiton) Haw. var. muirii (Marloth) Reynolds LC
littoralis Baker LC
longistyla Baker.....DDD
lutescens Groenew.....LC
maculata All. LC
marlothii A.Berger subsp. marlothii.....LC
marlothii A.Berger subsp. orientalis Glen & D.S.Hardy LC
melanacantha A.Berger LC
meyeri Van Jaarsv..... Rare
micracantha Haw.....NT
microstigma Salm-Dyck subsp. framesii (L.Bolus) Glen & D.S.Hardy.....NT
microstigma Salm-Dyck subsp. microstigma LC
minima Baker.....LC
modesta Reynolds.....VU
monotropa I.Verd.....VU
mudenensis Reynolds LC
myriacantha (Haw.) Schult. & J.H.Schult.....LC
nubigena Groenew.....LC
parvibracteata Schönland LC
pearsonii Schönland LC
peglerae Schönland.....EN
perfoliata L.....LC
petricola Pole-Evans.....LC
pictifolia D.S.Hardy ..... Rare
pillansii L.Guthrie.....EN
plicatilis (L.) Mill.....LC
pluridens Haw. LC
pratensis Baker LC
pretoriensis Pole-Evans.....LC
prinslooi I.Verd. & D.S.Hardy .....NT
pruinosa Reynolds.....VU
ramosissima Pillans.....EN
reitzii Reynolds var. reitzii .....NT
reitzii Reynolds var. vernalis D.S.Hardy ..... CR
reynoldsii Letty ..... Rare
rupestris Baker.....LC
saundersiae (Reynolds) Reynolds..... CR
simii Pole-Evans..... CR
soutpansbergensis I.Verd. ..... Rare
speciosa Baker LC
spicata L.f.....LC
striata Haw. subsp. karasbergensis (Pillans) Glen & D.S.Hardy LC
striata Haw. subsp. komaggasensis (Kritzinger & Van Jaarsv.) Glen & D.S.Hardy.....VU
striata Haw. subsp. striata.....LC
striatula Haw. var. caesia Reynolds LC
striatula Haw. var. striatula LC
succotrina Lam.....LC
suffulta Reynolds.....LC
suprafoliata Pole-Evans LC
swynnertonii Rendle .....DDT
tenuior Haw. LC
thompsoniae Groenew. ..... Rare
thorncroftii Pole-Evans .....NT
thraskii Baker .....NT
vanbalenii Pillans LC
vanrooyenii Gideon F.Sm. & N.R.Crouch.....LC
variegata L. LC
verecunda Pole-Evans.....LC
vossii Reynolds.....DDT
vryheidensis Groenew.....DDT
zebrina Baker.....LC

Aloinopsis, 409
acuta L.Bolus.....DDT
loganii (L.Bolus) L.Bolus .....DDT
luckhoffii (L.Bolus) L.Bolus.....DDT
malherbei (L.Bolus) L.Bolus.....LC
rosulata (Kensit) Schwantes LC
rubrolineata (N.E.Br.) Schwantes ..... Rare
schooneesii L.Bolus.....LC
spathulata (Thunb.) L.Bolus LC

Alonsoa, 540
peduncularis (Kunze) Wettst. ..... Rare
unilabiata (L.f.) Steud. LC

Althaea
ludwigii L. LC

Althenia
filiformis F.Petit LC

Alysicarpus
glumaceus (Vahl) DC. subsp. glumaceus var. glumaceus.....LC
rugosus (Willd.) DC. subsp. perennirufus J.Léonard.....LC
rugosus (Willd.) DC. subsp. rugosus.....LC
vaginalis (L.) DC. var. vaginalis LC
zeyheri Harv.....LC

Amaranthus
capensis Thell. subsp. capensis LC
capensis Thell. subsp. uncinatus (Thell.) Brenan ..LC
dinteri Schinz subsp. brevipetiolatus Brenan LC
dinteri Schinz subsp. dinteri var. a LC
dinteri Schinz subsp. dinteri var. b LC
praetermissus Brenan LC
schinzianus Thell. LC
thunbergii Moq.....LC

Amaryllis, 63
belladonna L. LC
paradisicola Snijman.....VU

Amauropelta, 54
bergiana (Schltdl.) Holttum var. bergiana LC
knysnaensis (N.C.Anthony & Schelpe) Parris .....VU
oppositiformis (C.Chr.) Holttum.....LC

Amellus, 243
alternifolius Roth subsp. alternifolius.....LC

alternifolius Roth subsp. angustissimus (DC.) Rommel LC
asteroides (L.) Druce subsp. asteroides LC
asteroides (L.) Druce subsp. mollis Rommel ..... VU
capensis (Walp.) Hutch. ..... VU
coilopodius DC. LC
epaleaceus O.Hoffm. LC
flosculosus DC. LC
microglossus DC. LC
nanus DC. LC
strigosus (Thunb.) Less. subsp. pseudoscabridus Rommel LC
strigosus (Thunb.) Less. subsp. scabridus (DC.) Rommel LC
strigosus (Thunb.) Less. subsp. strigosus LC
tenuifolius Burm. LC
tridactylus DC. subsp. arenarius (S.Moore) Rommel LC
tridactylus DC. subsp. olivaceus Rommel LC
tridactylus DC. subsp. tridactylus LC

Ammannia
prieuriana Guill. & Perr. LC
senegalensis Lam. LC

Ammocharis
coranica (Ker Gawl.) Herb. LC
longifolia (L.) M.Roem. LC

Ampelocissus
obtusata (Welw. ex Baker) Planch. subsp. kirkiana (Planch.) Wild & R.B.Drumm. LC

Ampelopteris
prolifera (Retz.) Copel. LC

Amphibolia
laevis (Aiton) H.E.K.Hartmann LC
obscura H.E.K.Hartmann LC
rupis-arcuatae (Dinter) H.E.K.Hartmann LC
succulenta (L.Bolus) H.E.K.Hartmann LC

Amphiglossa, 243
callunoides DC. ..... VU
celans Koekemoer ..... Rare
corrudifolia DC. ..... VU
grisea Koekemoer LC
perotrichoides DC. LC
rudolphii Koekemoer LC
susannae Koekemoer ..... VU
tecta (Brusse) Koekemoer LC
tomentosa (Thunb.) Harv. LC
triflora DC. LC

Amphithalea, 349
alba Granby ..... NT
axillaris Granby ..... Rare
biovulata (Bolus) Granby LC
bodkinii Dummer ..... VU
bowiei (Benth.) A.L.Schutte ..... VU
bullata (Benth.) A.L.Schutte ..... DDD
cedarbergensis (Granby) A.L.Schutte LC
ciliaris Eckl. & Zeyh. LC
concava Granby ..... Rare
cuneifolia Eckl. & Zeyh. LC
cymbifolia (C.A.Sm.) A.L.Schutte ..... EN
dahlgrenii (Granby) A.L.Schutte ..... VU
ericifolia (L.) Eckl. & Zeyh. subsp. erecta Granby ..... CR
ericifolia (L.) Eckl. & Zeyh. subsp. ericifolia LC
ericifolia (L.) Eckl. & Zeyh. subsp. minuta Granby ..... Critically Rare
ericifolia (L.) Eckl. & Zeyh. subsp. scoparia Granby ..... Rare
esterhuyseniae (Granby) A.L.Schutte ..... VU
flava (Granby) A.L.Schutte ..... VU
fourcadei Compton LC
imbricata (L.) Druce ..... Rare
intermedia Eckl. & Zeyh. LC
micrantha Walp. LC
minima (Granby) A.L.Schutte ..... CR PE
monticola A.L.Schutte LC
muirii (Granby) A.L.Schutte LC
muraltioides (Benth.) A.L.Schutte LC
obtusiloba (Granby) A.L.Schutte ..... EN
oppositifolia L.Bolus ..... Rare
pageae (L.Bolus) A.L.Schutte ..... VU
parvifolia (Thunb.) A.L.Schutte LC
perplexa Eckl. & Zeyh. LC
phylicoides Eckl. & Zeyh. LC
purpurea (Granby) A.L.Schutte LC
rostrata A.L.Schutte & B.-E.van Wyk ..... EN
sericea Schltr. ..... VU
speciosa Schltr. ..... VU
spinosa (Harv.) A.L.Schutte ..... VU
stokoei L.Bolus ..... NT
tomentosa (Thunb.) Granby ..... NT
tortilis (E.Mey.) Steud. LC
villosa Schltr. ..... EN
violacea (E.Mey.) Benth. LC
virgata Eckl. & Zeyh. ..... VU
vlokii (A.L.Schutte & B.-E.van Wyk) A.L.Schutte ..... EN
williamsonii Harv. LC

Anacampseros, 464
albidiflora Poelln. LC
arachnoides (Haw.) Sims LC
baeseckei Dinter LC
bayeriana S.A.Hammer ..... Rare
comptonii Pillans ..... VU
filamentosa (Haw.) Sims subsp. filamentosa LC
filamentosa (Haw.) Sims subsp. namaquensis (H.Pearson & Stephens) G.D.Rowley LC
filamentosa (Haw.) Sims subsp. tomentosa (A.Berger) Gerbaulet LC
lanceolata (Haw.) Sweet subsp. lanceolata LC
lanceolata (Haw.) Sweet subsp. nebrownii (Poelln.) Gerbaulet LC
marlothii Poelln. LC
pisina G.Will. ..... DDD
retusa Poelln. LC
rufescens (Haw.) Sweet LC
scopata G.Will. ..... Rare
subnuda Poelln. subsp. lubbersii (Bleck) Gerbaulet ..... VU
subnuda Poelln. subsp. subnuda LC
telephiastrum DC. LC
vanthielii G.Will. LC

Anagallis
huttonii Harv. LC
tenuicaulis Baker LC

Anastrabe
integerrima E.Mey. ex Benth. LC

Anaxeton, 243
angustifolium Lundgren ..... Critically Rare
arborescens (L.) Less. LC
asperum (Thunb.) DC. subsp. asperum LC
asperum (Thunb.) DC. subsp. pauciflorum Lundgren LC
brevipes Lundgren ..... VU
ellipticum Lundgren ..... Rare
hirsutum (Thunb.) Less. ..... VU
laeve (Harv.) Lundgren LC
lundgrenii B.Nord. ..... Critically Rare
nycthemerum Less. LC
virgatum DC. LC

Anchusa
capensis Thunb. LC
riparia A.DC. LC

Ancylobotrys
capensis (Oliv.) Pichon LC
petersiana (Klotzsch) Pierre LC

Anderbergia, 244
elsiae B.Nord. ..... Rare
epaleata (Hilliard & B.L.Burtt) B.Nord ..... Critically Rare
fallax B.Nord. ..... Critically Rare
rooibergensis B.Nord. ..... Critically Rare
ustulata B.Nord. ..... Critically Rare
vlokii (Hilliard) B.Nord. ..... Critically Rare

Andrachne
ovalis (E.Mey. ex Sond.) Müll.Arg. LC

Androcymbium see **Colchicum**

Andropogon
amethystinus Steud. LC
appendiculatus Nees LC
chinensis (Nees) Merr. LC
distachyos L. LC
eucomus Nees LC
fastigiatus Sw. LC
festuciformis Rendle LC
gayanus Kunth var. polycladus (Hack.) Clayton LC
huillensis Rendle LC
lacunosus J.G.Anderson LC
laxatus Stapf LC
mannii Hook.f. LC
ravus J.G.Anderson LC
schirensis Hochst. ex A.Rich. LC

Androstachys
johnsonii Prain LC

Aneilema, 103
aequinoctiale (P.Beauv.) Loudon LC
arenicola Faden LC
brunneospermum Faden LC
dregeanum Kunth LC
hockii De Wild. LC
indehiscens Faden subsp. lilacinum Faden LC
longirrhizum Faden ..... NT
nicholsonii C.B.Clarke LC
zebrinum Chiov. LC

Anemia
dregeana Kunze LC
simii Tardieu LC

Anemone, 507
caffra (Eckl. & Zeyh.) Harv. LC
fanninii Harv. ex Mast. ..... NT
tenuifolia (L.f.) DC. LC

Anginon, 221
difforme (L.) B.L.Burtt LC
fruticosum I.Allison & B.-E.van Wyk LC
intermedium I.Allison & B.-E.van Wyk LC
jaarsveldii B.L.Burtt ..... EN
paniculatum (Thunb.) B.L.Burtt LC
pumilum I.Allison & B.-E.van Wyk ..... Rare
rugosum (Thunb.) Raf. LC
swellendamensis (Eckl. & Zeyh.) B.L.Burtt LC
tenuior I.Allison & B.-E.van Wyk ..... VU
ternatum I.Allison & B.-E.van Wyk ..... Rare
verticillatum (Sond.) B.L.Burtt LC

Angraecum, 180
chamaeanthus Schltr. LC
conchiferum Lindl. LC
cultriforme Summerh. LC
pusillum Lindl. LC
sacciferum Lindl. LC
stella-africae P.J.Cribb ..... Rare

Anisochaeta
mikanioides DC. LC

Anisodontea, 406
alexandri (Baker f.) Bates ..... DDT
anomala (Link & Otto) Bates LC
biflora (Desr.) Bates LC
bryoniifolia (L.) Bates LC
capensis (L.) Bates LC
dissecta (Harv.) Bates ..... CR
elegans (Cav.) Bates LC
fruticosa (P.J.Bergius) Bates LC
gracilis Bates ..... DDD
julii (Burch. ex DC.) Bates subsp. julii LC
julii (Burch. ex DC.) Bates subsp. pannosa (Bolus) Bates LC
julii (Burch. ex DC.) Bates subsp. prostrata (E.Mey. ex Turcz.) Bates LC
malvastroides (Baker f.) Bates ..... Rare
procumbens (Harv.) Bates ..... Rare
pseudocapensis Bates ..... EN
racemosa (Harv.) Bates ..... VU
reflexa (J.C.Wendl.) Bates LC
scabrosa (L.) Bates LC
setosa (Harv.) Bates LC
theronii Bates ..... DDD
triloba (Thunb.) Bates LC

Anisopappus
junodii Hutch. LC
latifolius (S.Moore) B.L.Burtt LC
smutsii Hutch. LC

Anisotes
formosissimus (Klotzsch) Milne-Redh. LC
rogersii S.Moore LC

Anisothrix, 244
integra (Compton) Anderb. ..... Rare
kuntzei O.Hoffm. ..... Critically Rare

Anisotoma
cordifolia Fenzl LC
pedunculata N.E.Br. LC

Annesorhiza, 221
altiscapa Schltr. LC
burttii B.-E.van Wyk LC
fibrosa B.-E.van Wyk ..... EN
filicaulis Eckl. & Zeyh. ..... DDT
flagellifolia Burtt Davy LC
grandiflora (Thunb.) M.Hiroe LC
lateriflora (Eckl. & Zeyh.) B.-E.van Wyk ..... Rare

latifolia Adamson ..... DDT
macrocarpa Eckl. & Zeyh. LC
nuda (Aiton) B.L.Burtt LC
schlechteri H.Wolff LC
thunbergii B.L.Burtt ..... DDT
wilmsii H.Wolff LC

Annona
senegalensis Pers. subsp. senegalensis LC

Anogramma
leptophylla (L.) Link LC

Ansellia, 180
africana Lindl. ..... Declining

Antegibbaeum
fissoides (Haw.) Schwantes ex C.Weber LC

Anthephora
argentea Gooss. LC
pubescens Nees LC
schinzii Hack. LC

Antherothamnus
pearsonii N.E.Br. LC

Antherotoma
debilis (Sond.) Jacq.-Fél. LC
naudinii Hook.f. LC
phaeotricha (Hochst.) Jacq.-Fél. LC

Anthochortus, 204
capensis Esterh. ..... Rare
crinalis (Mast.) H.P.Linder LC
ecklonii Nees LC
graminifolius (Kunth) H.P.Linder ..... Rare
insignis (Mast.) H.P.Linder ..... VU
laxiflorus (Nees) H.P.Linder LC
singularis Esterh. ..... VU

Anthocleista
grandiflora Gilg LC

Anthospermum, 520
aethiopicum L. LC
basuticum Puff LC
bergianum Cruse LC
bicorne Puff LC
comptonii Puff LC
dregei Sond. subsp. dregei LC
dregei Sond. subsp. ecklonis (Sond.) Puff LC
ericifolium (Licht. ex Roem. & Schult.) Kuntze ... EN
esterhuysenianum Puff var. esterhuysenianum LC
esterhuysenianum Puff var. hirsutum Puff ..... Rare
galioides Rchb.f. subsp. galioides LC
galioides Rchb.f. subsp. reflexifolium (Kuntze) Puff LC
galpinii Schltr. LC
herbaceum L.f. LC
hirtum Cruse LC
hispidulum E.Mey. ex Sond. LC
littoreum L.Bolus LC
monticola Puff. LC
paniculatum Cruse LC
prostratum Sond. LC
rigidum Eckl. & Zeyh. subsp. pumilum (Sond.) Puff LC
rigidum Eckl. & Zeyh. subsp. rigidum LC
spathulatum Spreng. subsp. ecklonianum (Cruse) Puff. LC
spathulatum Spreng. subsp. saxatile Puff LC
spathulatum Spreng. subsp. spathulatum LC
spathulatum Spreng. subsp. tulbaghense Puff LC
spathulatum Spreng. subsp. uitenhagense Puff. ... LC
streyi Puff ..... Rare
welwitschii Hiern LC

Anthoxanthum
brevifolium Stapf ..... DDT
dregeanum (Nees) Stapf LC
ecklonii (Nees ex Trin.) Stapf LC
tongo (Trin.) Stapf LC

Anticharis
scoparia (E.Mey. ex Benth.) Hiern ex Benth. & Hook.f. LC
senegalensis (Walp.) Bhandari LC

Antidesma
venosum E.Mey. ex Tul. LC

Antimima, 409
addita (L.Bolus) H.E.K.Hartmann LC
alborubra (L.Bolus) Dehn LC
amoena (Schwantes) H.E.K.Hartmann LC
androsacea (Marloth & Schwantes) H.E.K.Hartmann ..... Critically Rare
aristulata (Sond.) Chess. & Gideon F.Sm. ..... VU
biformis (N.E.Br.) H.E.K.Hartmann ..... Rare
bracteata (L.Bolus) H.E.K.Hartmann LC
brevicarpa (L.Bolus) H.E.K.Hartmann LC
brevicollis (N.E.Br.) H.E.K.Hartmann ..... DDT
compacta (L.Bolus) H.E.K.Hartmann LC
compressa (L.Bolus) H.E.K.Hartmann LC
concinna (L.Bolus) H.E.K.Hartmann ..... DDT
condensa (N.E.Br.) H.E.K.Hartmann ..... Rare
crassifolia (L.Bolus) H.E.K.Hartmann LC
dasyphylla (Schltr.) H.E.K.Hartmann LC
defecta (L.Bolus) H.E.K.Hartmann ..... DDT
dekenahi (N.E.Br.) H.E.K.Hartmann LC
distans (L.Bolus) H.E.K.Hartmann LC
dualis (N.E.Br.) N.E.Br. LC
elevata (L.Bolus) H.E.K.Hartmann ..... DDT
emarcescens (L.Bolus) H.E.K.Hartmann ..... Rare
erosa (L.Bolus) H.E.K.Hartmann LC
evoluta (N.E.Br.) H.E.K.Hartmann LC
excedens (L.Bolus) Klak LC
exsurgens (L.Bolus) H.E.K.Hartmann LC
fenestrata (L.Bolus) H.E.K.Hartmann LC
fergusoniae (L.Bolus) H.E.K.Hartmann ..... Rare
gracillima (L.Bolus) H.E.K.Hartmann LC
granitica (L.Bolus) H.E.K.Hartmann LC
hallii (L.Bolus) H.E.K.Hartmann LC
hamatilis (L.Bolus) H.E.K.Hartmann ..... VU
hantamensis (Engl.) H.E.K.Hartmann & Stüber LC
herrei (Schwantes) H.E.K.Hartmann ..... DDT
insidens (L.Bolus) Chess. LC
intervallaris (L.Bolus) H.E.K.Hartmann LC
ivori (N.E.Br.) H.E.K.Hartmann LC
karroidea (L.Bolus) H.E.K.Hartmann LC
klaverensis (L.Bolus) H.E.K.Hartmann LC
koekenaapensis (L.Bolus) H.E.K.Hartmann ..... Thr*
komkansica (L.Bolus) H.E.K.Hartmann ..... Thr*
lawsonii (L.Bolus) H.E.K.Hartmann ..... Rare
leipoldtii (L.Bolus) H.E.K.Hartmann ..... VU
leucanthera (L.Bolus) H.E.K.Hartmann LC
limbata (N.E.Br.) H.E.K.Hartmann ..... EN
lodewykii (L.Bolus) H.E.K.Hartmann ..... Rare
loganii (L.Bolus) H.E.K.Hartmann ..... DDT
lokenbergensis (L.Bolus) H.E.K.Hartmann ..... Rare
longipes (L.Bolus) Dehn LC
luckhoffii (L.Bolus) H.E.K.Hartmann ..... DDT
maleolens (L.Bolus) H.E.K.Hartmann LC
maxwellii (L.Bolus) H.E.K.Hartmann LC
menniei (L.Bolus) H.E.K.Hartmann LC
mesklipensis (L.Bolus) H.E.K.Hartmann LC
meyerae (Schwantes) H.E.K.Hartmann LC
microphylla (Haw.) Dehn ..... DDT
minima (Tischer) H.E.K.Hartmann ..... DDT
minutifolia (L.Bolus) H.E.K.Hartmann LC
mucronata (Haw.) H.E.K.Hartmann ..... VU
mutica (L.Bolus) H.E.K.Hartmann LC
nobilis (Schwantes) H.E.K.Hartmann LC
nordenstamii (L.Bolus) H.E.K.Hartmann ..... Rare
oviformis (L.Bolus) H.E.K.Hartmann ..... DDT
papillata (L.Bolus) H.E.K.Hartmann LC
paucifolia (L.Bolus) H.E.K.Hartmann LC
pauper (L.Bolus) H.E.K.Hartmann LC
peersii (L.Bolus) H.E.K.Hartmann ..... Thr*
persistens (L.Bolus) H.E.K.Hartmann LC
pilosula (L.Bolus) H.E.K.Hartmann ..... DDT
piscodora (L.Bolus) H.E.K.Hartmann ..... DDD
prolongata (L.Bolus) H.E.K.Hartmann LC
propinqua (N.E.Br.) H.E.K.Hartmann ..... DDT
prostrata (L.Bolus) H.E.K.Hartmann LC
pumila (Fedde & K.Schust.) H.E.K.Hartmann ..... DDT
pusilla (Schwantes) H.E.K.Hartmann LC
pygmaea (Haw.) H.E.K.Hartmann LC
roseola (N.E.Br.) H.E.K.Hartmann LC
saturata (L.Bolus) H.E.K.Hartmann ..... DDT
saxicola (L.Bolus) H.E.K.Hartmann LC
schlechteri (Schwantes) H.E.K.Hartmann LC
simulans (L.Bolus) H.E.K.Hartmann LC
sobrina (N.E.Br.) H.E.K.Hartmann ..... DDT
solida (L.Bolus) H.E.K.Hartmann LC
stayneri (L.Bolus) H.E.K.Hartmann LC
stokoei (L.Bolus) H.E.K.Hartmann LC
subtruncata (L.Bolus) H.E.K.Hartmann ..... DDD
triquetra (L.Bolus) H.E.K.Hartmann LC
tuberculosa (L.Bolus) H.E.K.Hartmann LC
turneriana (L.Bolus) H.E.K.Hartmann LC
vanzylii (L.Bolus) H.E.K.Hartmann LC
varians (L.Bolus) H.E.K.Hartmann LC
ventricosa (L.Bolus) H.E.K.Hartmann LC
verruculosa (L.Bolus) H.E.K.Hartmann ..... DDT
viatorum (L.Bolus) Klak LC
watermeyeri (L.Bolus) H.E.K.Hartmann LC
wittebergensis (L.Bolus) H.E.K.Hartmann ..... DDT

Antithrixia, 244
flavicoma DC. ..... VU

Antizoma
angustifolia (Burch.) Miers ex Harv. LC
miersiana Harv. LC

Apatesia
helianthoides (Aiton) N.E.Br. LC
pillansii N.E.Br. LC
sabulosa (Thunb.) L.Bolus LC

Aphloia
theiformis (Vahl) Benn. LC

Apium
prostratum Vent. LC

Aplanodes
doidgeana Marais LC
sisymbrioides (Schltr.) Marais LC

Apodolirion, 63
amyanum D.Müll.-Doblies ..... EN
bolusii Baker ..... DDD
buchananii Baker LC
cedarbergense D.Müll.-Doblies ..... Rare
lanceolatum (Thunb.) Baker ..... DDT
macowanii Baker ..... VU

Apodytes, 397
abbottii Potgieter & A.E.van Wyk ..... NT
dimidiata E.Mey. ex Arn. subsp. dimidiata LC
geldenhuysii A.E.van Wyk & Potgieter ..... Rare

Aponogeton, 77
angustifolius Aiton ..... VU
desertorum Zeyh. ex A.Spreng. LC
distachyos L.f. LC
fugax J.C.Manning & Goldblatt ..... VU
junceus Lehm. LC
natalensis Oliv. LC
ranunculiflorus Jacot Guill. & Marais ..... VU
rehmannii Oliv. LC
stuhlmannii Engl. LC

Aptenia
cordifolia (L.f.) Schwantes LC
geniculiflora (L.) Bittrich ex Gerbaulet LC
haeckeliana (A.Berger) Bittrich ex Gerbaulet LC
lancifolia L.Bolus LC

Aptosimum
albomarginatum Marloth & Engl. LC
elongatum Engl. LC
indivisum Burch. ex Benth. LC
junceum (Hiern) Philcox LC
lineare Marloth & Engl. var. lineare LC
lugardiae (N.E.Br. ex Hemsl. & Skan) E.Phillips LC
marlothii (Engl.) Hiern LC
neglectum F.E.Weber LC
patulum Bremek. LC
procumbens (Lehm.) Steud. LC
spinescens (Thunb.) F.E.Weber LC
tragacanthoides E.Mey. ex Benth. LC
transvaalense F.E.Weber LC
viscosum Benth. LC

Arachniodes
webbiana (A.Braun) Schelpe subsp. foliosa (C.Chr.) Gibby, Rasbach, Reichst., Widén & Viane LC

Arctopus, 221
dregei Sond. ..... VU
echinatus L. LC
monacanthus Carmich. ex Sond. LC

Arctotheca, 244
calendula (L.) Levyns LC
forbesiana (DC.) K.Lewin ..... CR
marginata Beyers ..... VU
populifolia (P.J.Bergius) Norl. LC
prostrata (Salisb.) Britten LC

Arctotis, 245
acaulis L. LC
acuminata K.Lewin LC
adpressa DC. LC
aenea Jacq. ..... DDT
angustifolia L. ..... CR
arctotoides (L.f.) O.Hoffm. LC
argentea Thunb. LC
aspera L. var. aspera LC
aspera L. var. scabra P.J.Bergius LC
auriculata Jacq. LC

bellidiastrum (S.Moore) K.Lewin....DDT
bellidifolia P.J.Bergius....LC
bolusii (S.Moore) K.Lewin....DDT
campanulata DC.....LC
candida Thunb.....LC
caudata K.Lewin....DDT
crispata Hutch....DDT
cuneata DC.....LC
cuprea Jacq.....LC
debensis R.J.Mckenzie....VU
decurrens Jacq.....DDT
diffusa Thunb....LC
discolor (Less.) Beauverd....LC
dregei Turcz.....LC
elongata Thunb....DDT
erosa (Harv.) Beauverd....LC
fastuosa Jacq.....LC
flaccida Jacq.....LC
fosteri N.E.Br.....DDT
gowerae E.Phillips....DDT
graminea K.Lewin....DDT
gumbletonii Hook.f.....LC
hirsuta (Harv.) Beauverd....LC
hispidula (Less.) Beauverd....DDD
incisa Thunb.....LC
laevis Thunb....LC
lanceolata Harv.....LC
leiocarpa Harv.....LC
leptorhiza DC.....LC
linearis Thunb....LC
macrosperma (DC.) Beauverd....DDT
microcephala (DC.) Beauverd....LC
perfoliata (Less.) Beauverd....LC
petiolata Thunb.....LC
pinnatifida Thunb.....LC
pusilla DC....DDT
revoluta Jacq.....LC
rotundifolia K.Lewin....LC
schlechteri K.Lewin....LC
semipapposa (DC.) Beauverd....LC
sessilifolia K.Lewin....DDT
setosa K.Lewin....DDT
stoechadifolia P.J.Bergius....LC
suffruticosa K.Lewin....DDT
sulcocarpa K.Lewin....LC
tricolor Jacq.....LC
undulata Jacq.....LC
venidioides DC.....DDD
venusta Norl....LC
virgata Jacq.....LC

Arenifera

pillansii (L.Bolus) Herre....LC
pungens H.E.K.Hartmann....LC
spinescens (L.Bolus) H.E.K.Hartmann....LC
stylosa (L.Bolus) H.E.K.Hartmann....LC

Argyroderma, 410

congregatum L.Bolus....LC
crateriforme (L.Bolus) N.E.Br.....LC
delaetii C.A.Maass....LC
fissum (Haw.) L.Bolus....LC
framesii L.Bolus subsp. framesii....LC
framesii L.Bolus subsp. hallii (L.Bolus) H.E.K.Hartmann....Rare
patens L.Bolus....LC
pearsonii (N.E.Br.) Schwantes....LC
ringens L.Bolus....LC
subalbum (N.E.Br.) N.E.Br.....Rare
testiculare (Aiton) N.E.Br.....Rare
theartii Van Jaarsv....Rare

Argyrolobium, 352

aciculare Dummer....Rare
amplexicaule (E.Mey.) Dummer....LC
angustissimum (E.Mey.) T.J.Edwards....CR PE
argenteum Eckl. & Zeyh....LC
ascendens Walp.....LC
baptisioides (E.Mey.) Walp.....LC
barbatum Walp....VU
campicola Harms....NT
candicans Eckl. & Zeyh.....LC
collinum Eckl. & Zeyh.....LC
crassifolium Eckl. & Zeyh.....EN
crinitum (E.Mey.) Walp.....CR
filiforme (Thunb.) Eckl. & Zeyh.....LC
frutescens Burtt Davy....LC
harmsianum Schltr. ex Harms....EN
harveyanum Oliv.....LC
humile E.Phillips....LC
incanum Eckl. & Zeyh.....LC
longifolium (Meisn.) Walp....VU
lotoides Harv.....LC
lunare (L.) Druce subsp. lunare....LC
lunare (L.) Druce subsp. sericeum (Thunb.) T.J.Edwards....LC
marginatum Bolus....LC
megarrhizum Bolus....NT
molle Eckl. & Zeyh.....LC
muddii Dummer....EN
nanum Schltr. ex Harms....LC
nigrescens Dummer....LC
pachyphyllum Schltr.....EN
parviflorum T.J.Edwards....Rare
pauciflorum Eckl. & Zeyh....LC
petiolare (E.Mey.) Steud.....DDD
polyphyllum Eckl. & Zeyh.....LC
pseudotuberosum T.J.Edwards....LC
pumilum Eckl. & Zeyh.....LC
rarum Dummer....Rare
robustum T.J.Edwards....LC
rotundifolium T.J.Edwards....LC
rupestre (E.Mey.) Walp. subsp. rupestre....LC
sankeyi Harms....LC
sericosemium Harms....LC
speciosum Eckl. & Zeyh.....LC
splendens (E.Mey.) Walp....CR PE
stipulaceum Eckl. & Zeyh....LC
tomentosum (Andrews) Druce....LC
transvaalense Schinz....LC
trifoliatum (Thunb.) Druce....Thr*
tuberosum Eckl. & Zeyh....LC
velutinum Eckl. & Zeyh.....EN
wilmsii Harms....LC

Aridaria

brevicarpa L.Bolus....LC
noctiflora (L.) Schwantes subsp. defoliata (Haw.) Gerbaulet....LC
noctiflora (L.) Schwantes subsp. noctiflora....LC
noctiflora (L.) Schwantes subsp. straminea (Haw.) Gerbaulet....LC
serotina L.Bolus....LC
vespertina L.Bolus....LC

Aristea, 126

abyssinica Pax....LC
africana (L.) Hoffmanns.....LC
anceps Eckl. ex Klatt....LC
angolensis Baker subsp. acutivalvis Weim.....LC
angolensis Baker subsp. angolensis....LC
angolensis Baker subsp. pulchella Weim.....LC
bakeri Klatt....LC
biflora Weim....EN
bracteata Pers.....LC
cantharophila Goldblatt & J.C.Manning....VU
capitata (L.) Ker Gawl.....LC
cistiflora J.C.Manning & Goldblatt....VU
compressa Buchinger ex Baker....LC
cuspidata Schinz....LC
dichotoma (Thunb.) Ker Gawl.....LC
ecklonii Baker....LC
elliptica Goldblatt & A.P.Dold....NT
ensifolia J.Muir bis....LC
fimbriata Goldblatt & J.C.Manning...Critically Rare
flexicaulis Baker....LC
galpinii N.E.Br. ex Weim.....LC
gerrardii Weim.....LC
glauca Klatt....LC
grandis Weim.....LC
inaequalis Goldblatt & J.C.Manning....Rare
juncifolia Baker....LC
latifolia G.J.Lewis....Rare
lugens (L.f.) Steud.....EN
montana Baker....LC
nana Goldblatt & J.C.Manning....Rare
nigrescens J.C.Manning & Goldblatt....EN
oligocephala Baker....LC
palustris Schltr.....EN
pauciflora Wolley-Dod....DDT
platycaulis Baker....VU
pusilla (Thunb.) Ker Gawl.....LC
racemosa Baker var. inflata Weim.....LC
racemosa Baker var. racemosa....LC
recisa Weim.....Rare
rigidifolia G.J.Lewis....DDT
rupicola Goldblatt & J.C.Manning.....Critically Rare
schizolaena Harv. ex Baker....LC
simplex Weim.....NT
singularis Weim.....Critically Rare
spiralis (L.f.) Ker Gawl.....LC
teretifolia Goldblatt & J.C.Manning....EN
torulosa Klatt....LC
zeyheri Baker....Rare

Aristida

adscensionis L.....LC
aequiglumis Hack....LC
bipartita (Nees) Trin. & Rupr.....LC
canescens Henrard subsp. canescens....LC
canescens Henrard subsp. ramosa De Winter....LC
congesta Roem. & Schult. subsp. barbicollis (Trin. & Rupr.) De Winter....LC
congesta Roem. & Schult. subsp. congesta....LC
curvata (Nees) T.Durand & Schinz var. nana Henrard....LC
dasydesmis (Pilg.) Mez....LC
diffusa Trin. subsp. burkei (Stapf) Melderis....LC
diffusa Trin. subsp. diffusa....LC
effusa Henrard....LC
engleri Mez var. engleri....LC
engleri Mez var. ramosissima De Winter....LC
junciformis Trin. & Rupr. subsp. galpinii (Stapf) De Winter....LC
junciformis Trin. & Rupr. subsp. junciformis....LC
meridionalis Henrard....LC
mollissima Pilg. subsp. argentea (Schweick.) Melderis....LC
mollissima Pilg. subsp. mollissima....LC
monticola Henrard....LC
parvula (Nees) De Winter....LC
pilgeri Henrard....LC
recta Franch.....LC
rhiniochloa Hochst....LC
scabrivalvis Hack. subsp. contracta (De Winter) Melderis....LC
scabrivalvis Hack. subsp. scabrivalvis....LC
sciurus Stapf....LC
spectabilis Hack.....LC
stipitata Hack. subsp. graciliflora (Pilg.) Melderis....LC
stipitata Hack. subsp. robusta (Stent & J.M.Rattray) Melderis....LC
stipitata Hack. subsp. spicata (De Winter) Melderis....LC
stipitata Hack. subsp. stipitata....LC
transvaalensis Henrard....LC
vestita Thunb. var. eckloniana Trin. & Rupr.....LC
vestita Thunb. var. vestita....LC

Arrowsmithia

styphelioides DC.....LC

Artabotrys

brachypetalus Benth.....LC
monteiroae Oliv.....LC

Artemisia

afra Jacq. ex Willd. var. afra....LC

Artemisiopsis

villosa (O.Hoffm.) Schweick....LC

Arthratherum

brevifolium Nees var. floccosum Nees....LC
curvata Nees var. minor....LC
subacaule Nees....LC

Arthraxon

lanceolatus (Roxb.) Hochst. var. lanceolatus....LC

Arthropteris

monocarpa (Cordem.) C.Chr.....LC

Arundinella

nepalensis Trin.....LC

Asclepias, 224

adscendens (Schltr.) Schltr....LC
albens (E.Mey.) Schltr.....LC
aurea (Schltr.) Schltr.....LC
bicuspis N.E.Br.....CR
brevicuspis (E.Mey.) Schltr.....LC
brevipes (Schltr.) Schltr....LC
compressidens (N.E.Br.) Nicholas....Rare
concinna (Schltr.) Schltr.....VU
cooperi N.E.Br.....Rare
crassinervis N.E.Br.....LC
crispa P.J.Bergius var. crispa....LC
crispa P.J.Bergius var. plana N.E.Br.....LC
crispa P.J.Bergius var. pseudocrispa N.E.Br.....LC
cucullata (Schltr.) Schltr. subsp. cucullata....LC

cultriformis (Harv. ex Schltr.) Schltr. LC
densiflora N.E.Br. LC
disparilis N.E.Br. ..... **VU**
dissona N.E.Br. ..... **VU**
dregeana Schltr. var. calceola (S.Moore) N.E.Br. LC
dregeana Schltr. var. dregeana LC
eminens (Harv.) Schltr. LC
expansa (E.Mey.) Schltr. LC
fallax (Schltr.) Schltr. LC
flexuosa (E.Mey.) Schltr. LC
gibba (E.Mey.) Schltr. var. gibba LC
gibba (E.Mey.) Schltr. var. media N.E.Br. LC
gordon-grayae Nicholas ..... **EN**
hastata (E.Mey.) Schltr. LC
humilis (E.Mey.) Schltr. LC
macropus (Schltr.) Schltr. LC
meliodora (Schltr.) Schltr. LC
meyeriana (Schltr.) Schltr. LC
monticola N.E.Br. ..... **Critically Rare**
multicaulis (E.Mey.) Schltr. LC
multiflora (Decne.) N.E.Br. ..... DDT
nana I.Verd. ..... **DDD**
navicularis (E.Mey.) Schltr. LC
oreophila Nicholas ..... **Rare**
patens N.E.Br. ..... **NT**
peltigera (E.Mey.) Schltr. LC
praemorsa Schltr. LC
rara N.E.Br. ..... **DDD**
schlechteri (K.Schum.) N.E.Br. ..... **EN**
stellifera Schltr. LC
ulophylla Schltr. ..... DDT
velutina (Schltr.) Schltr. ..... **VU**
vicaria N.E.Br. LC
woodii (Schltr.) Schltr. ..... **VU**
xysmalobioides Hilliard & B.L.Burtt ..... **Rare**

Ascolepis

capensis (Kunth) Ridl. LC

Askidiosperma, 204

albo-aristatum (Pillans) H.P.Linder LC
alticolum (Esterh.) H.P.Linder ..... **Rare**
andreaeanum (Pillans) H.P.Linder LC
capitatum Steud. LC
chartaceum (Pillans) H.P.Linder LC
delicatulum H.P.Linder ..... **Critically Rare**
esterhuyseniae (Pillans) H.P.Linder LC
insigne (Pillans) H.P.Linder LC
longiflorum (Pillans) H.P.Linder ..... **NT**
nitidum (Mast.) H.P.Linder LC
paniculatum (Mast.) H.P.Linder LC
rugosum Esterh. ..... Thr*

Aspalathus, 353

abietina Thunb. LC
acanthes Eckl. & Zeyh. LC
acanthiloba R.Dahlgren ..... **VU**
acanthoclada R.Dahlgren ..... **VU**
acanthophylla Eckl. & Zeyh. ..... **VU**
acicularis E.Mey. subsp. acicularis LC
acicularis E.Mey. subsp. planifolia R.Dahlgren LC
acidota Garab. ex R.Dahlgren LC
acifera R.Dahlgren LC
aciloba R.Dahlgren ..... **VU**
aciphylla Harv. LC
acocksii (R.Dahlgren) R.Dahlgren LC
aculeata Thunb. ..... **EN**
acuminata Lam. subsp. acuminata LC
acuminata Lam. subsp. pungens (Thunb.) R.Dahlgren LC
acutiflora R.Dahlgren ..... **EN**
aemula E.Mey. LC
albens L. ..... **VU**
alopecurus Benth. LC
alpestris (Benth.) R.Dahlgren LC
altissima R.Dahlgren LC
amoena (R.Dahlgren) R.Dahlgren ..... **CR PE**
angustifolia (Lam.) R.Dahlgren subsp. angustifolia LC
angustifolia (Lam.) R.Dahlgren subsp. robusta (E.Phillips) R.Dahlgren ..... **VU**
araneosa L. ..... **VU**
arenaria R.Dahlgren ..... **VU**
argyrella MacOwan LC
argyrophanes R.Dahlgren LC
arida E.Mey. subsp. arida LC
arida E.Mey. subsp. erecta (E.Mey.) R.Dahlgren LC
arida E.Mey. subsp. procumbens (E.Mey.) R.Dahlgren LC
aristata Compton LC
aristifolia R.Dahlgren LC
aspalathoides (L.) R.Dahlgren LC
asparagoides L.f. subsp. asparagoides LC
asparagoides L.f. subsp. rubro-fusca (Eckl. & Zeyh.) R.Dahlgren LC
astroites L. LC
attenuata R.Dahlgren ..... **EN**
aurantiaca R.Dahlgren LC
barbata (Lam.) R.Dahlgren ..... **VU**
barbigera R.Dahlgren ..... **VU**
batodes Eckl. & Zeyh. subsp. batodes LC
batodes Eckl. & Zeyh. subsp. spinulifolia R.Dahlgren LC
bidouwensis Garab. ex R.Dahlgren ..... **EN**
biflora E.Mey. subsp. biflora LC
biflora E.Mey. subsp. longicarpa R.Dahlgren LC
bodkinii Bolus LC
borboniifolia R.Dahlgren ..... **VU**
bowieana (Benth.) R.Dahlgren ..... **EN**
bracteata Thunb. LC
brevicarpa (R.Dahlgren) R.Dahlgren LC
burchelliana Benth. ..... **EN**
caespitosa R.Dahlgren ..... **Rare**
calcarata Harv. LC
calcarea R.Dahlgren ..... **VU**
caledonensis R.Dahlgren LC
callosa L. LC
campestris R.Dahlgren ..... **VU**
candicans Aiton f. ..... **EN**
candidula R.Dahlgren ..... **VU**
capensis (Walp.) R.Dahlgren ..... **Rare**
capitata L. ..... **VU**
carnosa P.J.Bergius LC
cephalotes Thunb. subsp. cephalotes LC
cephalotes Thunb. subsp. obscurifolia R.Dahlgren LC
cephalotes Thunb. subsp. violaceae R.Dahlgren LC
cerrhantha Eckl. & Zeyh. LC
chenopoda L. subsp. chenopoda LC
chenopoda L. subsp. gracilis (Eckl. & Zeyh.) R.Dahlgren ..... **VU**
chortophila Eckl. & Zeyh. LC
chrysantha R.Dahlgren ..... **VU**
ciliaris L. LC
cinerascens E.Mey. LC
citrina R.Dahlgren LC
cliffortiifolia R.Dahlgren ..... **CR PE**
cliffortioides Bolus LC
collina Eckl. & Zeyh. subsp. collina LC
collina Eckl. & Zeyh. subsp. luculenta R.Dahlgren LC
commutata (Vogel) R.Dahlgren LC
compacta R.Dahlgren ..... **VU**
complicata (Benth.) R.Dahlgren ..... **EX**
comptonii R.Dahlgren ..... **Rare**
concava Bolus ..... **DDD**
condensata R.Dahlgren LC
confusa R.Dahlgren LC
congesta (R.Dahlgren) R.Dahlgren ..... **Rare**
cordata (L.) R.Dahlgren LC
cordicarpa R.Dahlgren ..... **EX**
corniculata R.Dahlgren ..... **DDD**
corrudifolia P.J.Bergius LC
costulata Benth. LC
crassisepala R.Dahlgren LC
crenata (L.) R.Dahlgren LC
cuspidata R.Dahlgren ..... **VU**
cymbiformis DC. LC
cytisoides Lam. LC
dasyantha Eckl. & Zeyh. ..... **CR**
decora R.Dahlgren ..... **Rare**
densifolia Benth. ..... **DDD**
desertorum Bolus ..... **NT**
dianthopora E.Phillips LC
diffusa Eckl. & Zeyh. LC
digitifolia R.Dahlgren ..... **VU**
divaricata Thunb. subsp. divaricata LC
divaricata Thunb. subsp. gracilior R.Dahlgren LC
dunsdoniana Alston ex R.Dahlgren LC
elliptica (E.Phillips) R.Dahlgren LC
empetrifolia (R.Dahlgren) R.Dahlgren LC
ericifolia L. subsp. ericifolia LC
ericifolia L. subsp. minuta R.Dahlgren LC
ericifolia L. subsp. pusilla R.Dahlgren LC
erythrodes Eckl. & Zeyh. ..... DDT
esterhuyseniae R.Dahlgren LC
excelsa R.Dahlgren ..... **VU**
fasciculata (Thunb.) R.Dahlgren ..... **DDD**
ferox Harv. ..... **CR PE**
filicaulis Eckl. & Zeyh. LC
flexuosa Thunb. LC
florifera R.Dahlgren LC
florulenta R.Dahlgren ..... **VU**
forbesii Harv. LC
fourcadei L.Bolus ..... **Rare**
frankenioides DC. LC
fusca Thunb. LC
galeata E.Mey. LC
gerrardii Bolus ..... **VU**
glabrata R.Dahlgren ..... **CR**
glabrescens R.Dahlgren ..... **EN**
globosa Andrews LC
globulosa E.Mey. ..... **VU**
glossoides R.Dahlgren ..... **VU**
grandiflora Benth. LC
granulata R.Dahlgren LC
grobleri R.Dahlgren ..... **EN**
heterophylla L.f. LC
hirta E.Mey. subsp. hirta LC
hirta E.Mey. subsp. stellaris R.Dahlgren LC
hispida Thunb. subsp. albiflora (Eckl. & Zeyh.) R.Dahlgren LC
hispida Thunb. subsp. hispida LC
horizontalis (R.Dahlgren) R.Dahlgren ..... **CR**
humilis Bolus ..... **Rare**
hypnoides R.Dahlgren ..... **VU**
hystrix L.f. LC
incana R.Dahlgren ..... **Rare**
incompta Thunb. ..... **NT**
incurva Thunb. ..... **Rare**
incurvifolia Vogel ex Walp. LC
inops Eckl. & Zeyh. ..... **Rare**
intermedia Eckl. & Zeyh. LC
intervallaris Bolus ..... **NT**
intricata Compton subsp. anthospermoides (R.Dahlgren) R.Dahlgren LC
intricata Compton subsp. intricata ..... **Rare**
intricata Compton subsp. oxyclada (Compton) R.Dahlgren LC
isolata (R.Dahlgren) R.Dahlgren ..... **EN**
joubertiana Eckl. & Zeyh. ..... **EN**
juniperina Thunb. subsp. gracilifolia (R.Dahlgren) R.Dahlgren LC
juniperina Thunb. subsp. grandis R.Dahlgren LC
juniperina Thunb. subsp. juniperina LC
juniperina Thunb. subsp. monticola R.Dahlgren LC
karrooensis R.Dahlgren ..... **Critically Rare**
katbergensis (R.Dahlgren) R.Dahlgren LC
keeromsbergensis R.Dahlgren ..... **Rare**
kougaensis (Garab. ex R.Dahlgren) R.Dahlgren LC
lactea Thunb. subsp. breviloba R.Dahlgren ..... **VU**
lactea Thunb. subsp. lactea LC
laeta Bolus LC
lamarckiana R.Dahlgren ..... **Rare**
lanata E.Mey. LC
lanceicarpa R.Dahlgren ..... **Rare**
lanceifolia R.Dahlgren LC
lanifera R.Dahlgren LC
laricifolia P.J.Bergius subsp. canescens (L.) R.Dahlgren LC
laricifolia P.J.Bergius subsp. laricifolia LC
latifolia Bolus ..... **VU**
lebeckioides R.Dahlgren ..... **VU**
lenticula Bolus ..... **CR**
leptocoma Eckl. & Zeyh. LC
leptoptera Bolus LC
leucophylla R.Dahlgren LC
linearifolia (Burm.f.) DC. LC
linearis (Burm.f.) R.Dahlgren LC
linguiloba R.Dahlgren LC
longifolia Benth. ..... **VU**
longipes Harv. LC
lotiflora R.Dahlgren LC
lotoides Thunb. subsp. lagopus (Thunb.) R.Dahlgren ..... **VU**
lotoides Thunb. subsp. lotoides ..... **VU**
macrantha Harv. ..... **EN**
macrocarpa Eckl. & Zeyh. ..... **VU**
marginalis Eckl. & Zeyh. LC
marginata Harv. LC
microphylla DC. LC

millefolia R.Dahlgren ..... **VU**
monosperma (DC.) R.Dahlgren LC
mundiana Eckl. & Zeyh. LC
muraltioides Eckl. & Zeyh. ..... **EN**
myrtillifolia Benth. ..... **DDD**
neglecta T.M.Salter LC
nigra L. LC
nivea Thunb. LC
nudiflora Harv. LC
obliqua R.Dahlgren ..... **CR PE**
oblongifolia R.Dahlgren ..... **VU**
obtusata Thunb. ..... **VU**
obtusifolia R.Dahlgren ..... **VU**
odontoloba R.Dahlgren ..... **EN**
oliveri R.Dahlgren ..... **Critically Rare**
opaca Eckl. & Zeyh. subsp. opaca LC
opaca Eckl. & Zeyh. subsp. pappeana (Harv.) R.Dahlgren LC
opaca Eckl. & Zeyh. subsp. rostriloba R.Dahlgren LC
orbiculata Benth. ..... **Critically Rare**
pachyloba Benth. subsp. macroclada R.Dahlgren LC
pachyloba Benth. subsp. pachyloba LC
pachyloba Benth. subsp. rugulicarpa R.Dahlgren ..... **Critically Rare**
pachyloba Benth. subsp. villicaulis R.Dahlgren LC
pallescens Eckl. & Zeyh. ..... **VU**
pallidiflora R.Dahlgren LC
parviflora P.J.Bergius LC
patens Garab. ex R.Dahlgren ..... **Rare**
pedicellata Harv. LC
pedunculata Houtt. LC
pendula R.Dahlgren ..... **VU**
perfoliata (Lam.) R.Dahlgren subsp. perfoliata LC
perfoliata (Lam.) R.Dahlgren subsp. phillipsii R.Dahlgren LC
perforata (Thunb.) R.Dahlgren LC
petersonii R.Dahlgren LC
pigmentosa R.Dahlgren LC
pilantha R.Dahlgren ..... **Critically Rare**
pinea Thunb. subsp. caudata R.Dahlgren LC
pinea Thunb. subsp. pinea LC
pinguis Thunb. subsp. australis R.Dahlgren LC
pinguis Thunb. subsp. longissima R.Dahlgren ..... Thr*
pinguis Thunb. subsp. occidentalis R.Dahlgren ..... **VU**
pinguis Thunb. subsp. pinguis LC
polycephala E.Mey. subsp. lanatifolia R.Dahlgren LC
polycephala E.Mey. subsp. polycephala ..... **Rare**
polycephala E.Mey. subsp. rigida (Schltr.) R.Dahlgren LC
potbergensis R.Dahlgren ..... **VU**
proboscidea R.Dahlgren ..... **CR**
prostrata Eckl. & Zeyh. ..... **VU**
psoraleoides (C.Presl) Benth. ..... **EN**
puberula (Eckl. & Zeyh.) R.Dahlgren ..... **CR PE**
pulicifolia R.Dahlgren LC
pycnantha R.Dahlgren ..... **VU**
quadrata L.Bolus ..... **VU**
quinquefolia L. subsp. compacta R.Dahlgren LC
quinquefolia L. subsp. hispida (Thunb.) R.Dahlgren LC
quinquefolia L. subsp. quinquefolia LC
quinquefolia L. subsp. virgata (Thunb.) R.Dahlgren LC
radiata Garab. ex R.Dahlgren subsp. pseudosericea R.Dahlgren LC
radiata Garab. ex R.Dahlgren subsp. radiata LC
ramosissima R.Dahlgren ..... **Rare**
ramulosa E.Mey. LC
rectistyla R.Dahlgren ..... **CR**
recurva Benth. ..... **VU**
recurvispina R.Dahlgren ..... **CR**
repens R.Dahlgren ..... **CR**
retroflexa L. subsp. angustipetala R.Dahlgren LC
retroflexa L. subsp. bicolor (Eckl. & Zeyh.) R.Dahlgren ..... **CR PE**
retroflexa L. subsp. retroflexa LC
rigidifolia R.Dahlgren LC
rosea Garab. ex R.Dahlgren ..... **EN**
rostrata Benth. ..... **Rare**
rostripetala R.Dahlgren ..... **CR**
rubens Thunb. LC
rubiginosa R.Dahlgren LC
rugosa Thunb. LC
rupestris R.Dahlgren LC
rycroftii R.Dahlgren ..... **CR**
salicifolia R.Dahlgren LC
salteri L.Bolus ..... **NT**
sanguinea Thunb. subsp. foliosa R.Dahlgren ..... **VU**
sanguinea Thunb. subsp. sanguinea ..... **VU**
sceptrum-aureum R.Dahlgren LC
secunda E.Mey. ..... **DDD**
securifolia Eckl. & Zeyh. LC
sericea P.J.Bergius LC
serpens R.Dahlgren LC
setacea Eckl. & Zeyh. LC
shawii L.Bolus subsp. glabripetala (R.Dahlgren) R.Dahlgren ..... **Rare**
shawii L.Bolus subsp. longispica (R.Dahlgren) R.Dahlgren LC
shawii L.Bolus subsp. shawii LC
simii Bolus LC
singuliflora R.Dahlgren ..... **CR PE**
smithii R.Dahlgren ..... **EN**
spectabilis R.Dahlgren LC
spicata Thunb. LC
spiculata R.Dahlgren LC
spinescens Thunb. subsp. lepida (E.Mey.) R.Dahlgren LC
spinescens Thunb. subsp. spinescens LC
spinosa L. subsp. flavispina (C.Presl ex Benth.) R.Dahlgren LC
spinosa L. subsp. glauca (Eckl. & Zeyh.) R.Dahlgren LC
spinosa L. subsp. spinosa LC
spinosissima R.Dahlgren subsp. spinosissima LC
spinosissima R.Dahlgren subsp. tenuiflora R.Dahlgren LC
stenophylla Eckl. & Zeyh. LC
steudeliana Brongn. ..... **VU**
stokoei L.Bolus ..... **Rare**
stricticlada (R.Dahlgren) R.Dahlgren ..... **EN**
suaveolens Eckl. & Zeyh. ..... **Rare**
submissa R.Dahlgren LC
subtingens Eckl. & Zeyh. LC
subulata Thunb. ..... **CR**
sulphurea R.Dahlgren ..... **DDD**
taylorii R.Dahlgren ..... **VU**
tenuissima R.Dahlgren LC
teres Eckl. & Zeyh. subsp. teres LC
teres Eckl. & Zeyh. subsp. thodei R.Dahlgren LC
ternata (Thunb.) Druce ..... **VU**
theresae C.N.Cupido LC
tridentata L. subsp. fragilis R.Dahlgren ..... **Rare**
tridentata L. subsp. rotunda R.Dahlgren LC
tridentata L. subsp. staurantha (Eckl. & Zeyh.) R.Dahlgren LC
tridentata L. subsp. tridentata LC
triquetra Thunb. LC
truncata Eckl. & Zeyh. ..... **Rare**
tuberculata Walp. LC
tulbaghensis R.Dahlgren ..... **CR**
tylodes Eckl. & Zeyh. ..... **EN**
ulicina Eckl. & Zeyh. subsp. kardouwensis R.Dahlgren LC
ulicina Eckl. & Zeyh. subsp. ulicina LC
uniflora L. LC
vacciniifolia R.Dahlgren ..... **Critically Rare**
varians Eckl. & Zeyh. ..... **EN**
variegata Eckl. & Zeyh. ..... **EX**
venosa E.Mey. ..... **Rare**
verbasciformis R.Dahlgren ..... **Rare**
vermiculata Lam. LC
villosa Thunb. LC
vulnerans Thunb. LC
vulpina Garab. ex R.Dahlgren ..... **VU**
willdenowiana Benth. LC
wittebergensis Compton & P.E.Barnes LC
wurmbeana E.Mey. ..... **EN**
zeyheri (Harv.) R.Dahlgren ..... **VU**

Asparagus, 78
acocksii Jessop LC
aethiopicus L. LC
africanus Lam. LC
aggregatus (Oberm.) Fellingham & N.L.Mey. LC
alopecurus (Oberm.) Malcomber & Sebsebe LC
angusticladus (Jessop) J.-P.Lebrun & Stork LC
asparagoides (L.) Druce LC
aspergillus Jessop LC
bayeri (Oberm.) Fellingham & N.L.Mey. LC
bechuanicus Baker LC
biflorus (Oberm.) Fellingham & N.L.Mey. LC
buchananii Baker LC
burchellii Baker LC
capensis L. var. capensis LC
capensis L. var. litoralis Suess. & Karl LC
clareae (Oberm.) Fellingham & N.L.Mey. LC
coddii (Oberm.) Fellingham & N.L.Mey. LC
concinnus (Baker) Kies LC
confertus K.Krause LC
cooperi Baker LC
crassicladus Jessop LC
declinatus L. LC
densiflorus (Kunth) Jessop LC
denudatus (Kunth) Baker LC
devenishii (Oberm.) Fellingham & N.L.Mey. LC
divaricatus (Oberm.) Fellingham & N.L.Mey. LC
edulis (Oberm.) J.-P.Lebrun & Stork LC
elephantinus S.M.Burrows ..... **Rare**
exsertus (Oberm.) Fellingham & N.L.Mey. ..... **VU**
exuvialis Burch. LC
falcatus L. LC
fasciculatus Thunb. LC
filicladus (Oberm.) Fellingham & N.L.Mey. LC
flavicaulis (Oberm.) Fellingham & N.L.Mey. subsp. flavicaulis LC
flavicaulis (Oberm.) Fellingham & N.L.Mey. subsp. setulosus (Oberm.) Fellingham & N.L.Mey. LC
fourei (Oberm.) Fellingham & N.L.Mey. ..... **VU**
fractiflexus (Oberm.) Fellingham & N.L.Mey. ..... **EN**
glaucus Kies LC
graniticus (Oberm.) Fellingham & N.L.Mey. LC
hirsutus S.M.Burrows ..... **VU**
intricatus (Oberm.) Fellingham & N.L.Mey. ..... DDT
juniperoides Engl. LC
kraussianus (Kunth) J.F.Macbr. LC
krebsianus (Kunth) Jessop LC
laricinus Burch. LC
lignosus Burm.f. LC
lynnetteae (Oberm.) Fellingham & N.L.Mey. LC
macowanii Baker LC
mariae (Oberm.) Fellingham & N.L.Mey. LC
microraphis (Kunth) Baker LC
minutiflorus (Kunth) Baker LC
mollis (Oberm.) Fellingham & N.L.Mey. LC
mucronatus Jessop LC
multiflorus Baker LC
multituberosus R.A.Dyer LC
natalensis (Baker) J.-P.Lebrun & Stork LC
nelsii Schinz LC
nodulosus (Oberm.) J.-P.Lebrun & Stork LC
oliveri (Oberm.) Fellingham & N.L.Mey. LC
ovatus T.M.Salter LC
oxyacanthus Baker LC
pearsonii Kies LC
plumosus Baker LC
racemosus Willd. LC
ramosissimus Baker LC
recurvispinus (Oberm.) Fellingham & N.L.Mey. LC
retrofractus L. LC
rigidus Jessop LC
rubicundus P.J.Bergius LC
scandens Thunb. LC
schroederi Engl. LC
sekukuniensis (Oberm.) Fellingham & N.L.Mey. ..... **EN**
setaceus (Kunth) Jessop LC
spinescens Steud. ex Roem. & Schult. ..... **Rare**
stellatus Baker LC
stipulaceus Lam. ..... **NT**
striatus (L.f.) Thunb. LC
suaveolens Burch. LC
subulatus Thunb. LC
transvaalensis (Oberm.) Fellingham & N.L.Mey. LC
undulatus (L.f.) Thunb. LC
virgatus Baker LC
volubilis Thunb. LC

Aspazoma
amplectens (L.Bolus) N.E.Br. LC

Aspidoglossum, 229
araneiferum (Schltr.) Kupicha LC
biflorum E.Mey. LC
carinatum (Schltr.) Kupicha LC
delagoense (Schltr.) Kupicha LC
demissum Kupicha ..... **DDD**
difficile Hilliard ..... DDT

dissimile (N.E.Br.) Kupicha LC
fasciculare E.Mey. LC
flanaganii (Schltr.) Kupicha ..... **DDD**
glabrescens (Schltr.) Kupicha LC
glanduliferum (Schltr.) Kupicha LC
gracile (E.Mey.) Kupicha LC
grandiflorum (Schltr.) Kupicha LC
heterophyllum E.Mey. LC
interruptum (E.Mey.) Bullock LC
lamellatum (Schltr.) Kupicha LC
ovalifolium (Schltr.) Kupicha LC
restioides (Schltr.) Kupicha LC
uncinatum (N.E.Br.) Kupicha ..... **EN**
validum Kupicha ..... Thr*
virgatum (E.Mey.) Kupicha LC
woodii (Schltr.) Kupicha LC
xanthosphaerum Hilliard ..... **VU**

Aspidonepsis, 230
cognata (N.E.Br.) Nicholas & Goyder ..... **Rare**
diploglossa (Turcz.) Nicholas & Goyder LC
flava (N.E.Br.) Nicholas & Goyder LC
reenensis (N.E.Br.) Nicholas & Goyder LC
shebae Nicholas & Goyder ..... **VU**

Aspilia
mossambicensis (Oliv.) Wild LC
natalensis (Sond.) Wild LC
pluriseta Schweinf. subsp. pluriseta LC

Asplenium
adiantum-nigrum L. var. adiantum-nigrum LC
adiantum-nigrum L. var. solidum (Kunze) J.P.Roux LC
aethiopicum (Burm.f.) Bech. subsp. aethiopicum LC
aethiopicum (Burm.f.) Bech. subsp. dodecaploideum A.F.Braithw. LC
aethiopicum (Burm.f.) Bech. subsp. filare (Forssk.) A.F.Braithw. LC
aethiopicum (Burm.f.) Bech. subsp. tripinnatum (Baker) A.F.Braithw. LC
anisophyllum Kunze LC
blastophorum Hieron. LC
boltonii Hook. ex Brause & Hieron. LC
christii Hieron. LC
cordatum (Thunb.) Sw. LC
dregeanum Kunze subsp. dregeanum LC
erectum Bory ex Willd. LC
flexuosum Schrad. LC
friesiorum C.Chr. LC
gemmiferum Schrad. LC
hypomelas Kuhn LC
inaequilaterale Willd. LC
lividum Mett. ex Kuhn LC
lobatum Pappe & Rawson LC
lunulatum Sw. LC
monanthes L. LC
multiforme Krasser LC
obscurum Blume LC
phillipsianum (Kümmerle) S.S.Bir, Fraser-Jenk. & J.D.Lovis LC
platyneuron (L.) Britten, Sterns & Poggenb. LC
preussii Hieron. ex Brause LC
prionitis Kunze LC
protensum Schrad. LC
rutifolium (P.J.Bergius) Kunze LC
sandersonii Hook. LC
schelpei A.F.Braithw. LC
simii A.F.Braithw. & Schelpe LC
splendens Kunze subsp. drakensbergense A.F.Braithw. LC
splendens Kunze subsp. splendens LC
stoloniferum Bory LC
theciferum (Kunth) Mett. var. concinnum (Schrad.) Schelpe LC
trichomanes L. subsp. quadrivalens D.E.Mey. emend Lovis LC
varians Wall. ex Hook. & Grev. subsp. fimbriatum (Kunze) Schelpe LC

Astephanus
triflorus (L.f.) Schult. LC
zeyheri Turcz. LC

Aster, 245
ananthocladus Hilliard & B.L.Burtt LC
bakerianus Burtt Davy ex C.A.Sm. LC
bowiei Harv. ..... **VU**
comptonii W.Lippert LC
confertifolius Hilliard & B.L.Burtt ..... **Rare**
erucifolius (Thell.) W.Lippert LC
harveyanus Kuntze LC
laevigatus (Sond.) Kuntze ..... **VU**
lydenburgensis W.Lippert LC
nubimontis W.Lippert ..... **EN**
peglerae Bolus LC
perfoliatus Oliv. LC
pleiocephalus (Harv.) Hutch. LC
zuluensis W.Lippert LC

Astragalus
atropilosulus (Hochst.) Bunge subsp. burkeanus (Harv.) J.B.Gillett var. burkeanus LC

Astridia, 410
alba (L.Bolus) L.Bolus LC
citrina (L.Bolus) L.Bolus LC
dulcis L.Bolus LC
herrei L.Bolus ..... **Rare**
hillii L.Bolus LC
longifolia (L.Bolus) L.Bolus LC
lutata (L.Bolus) Friedrich ex H.E.K.Hartmann LC
rubra (L.Bolus) L.Bolus ..... DDT
speciosa L.Bolus ..... **Rare**
vanheerdei L.Bolus ..... **Rare**

Astripomoea
malvacea (Klotzsch) A.Meeuse var. malvacea LC

Astroloba, 84
bullulata (Jacq.) Uitewaal LC
congesta (Salm-Dyck) Uitewaal LC
corrugata N.L.Mey. & Gideon F.Sm. LC
foliolosa (Haw.) Uitewaal LC
herrei Uitewaal ..... **VU**
rubriflora (L.Bolus) Gideon F.Sm. & J.C.Manning ..... **VU**
spiralis (L.) Uitewaal LC

Asystasia
atriplicifolia Bremek. LC
gangetica (L.) T.Anderson subsp. micrantha (Nees) Ensermu LC
pinguifolia T.J.Edwards LC
retrocarpa T.J.Edwards LC
schimperi T.Anderson LC
subbiflora C.B.Clarke LC
varia N.E.Br. LC

Atalaya, 540
alata (Sim) H.M.L.Forbes LC
capensis R.A.Dyer LC
natalensis R.A.Dyer ..... **NT**

Athanasia, 245
adenantha (Harv.) Källersjö ..... **EN**
alba Källersjö ..... **Critically Rare**
bremeri Källersjö LC
calophylla Källersjö ..... **Rare**
capitata (L.) L. ..... **EN**
cochlearifolia Källersjö ..... **EN**
crenata (L.) L. ..... **EN**
crithmifolia (L.) L. subsp. crithmifolia LC
crithmifolia (L.) L. subsp. palmatifida (DC.) Källersjö LC
cuneifolia Lam. LC
dentata (L.) L. LC
elsiae Källersjö LC
filiformis L.f. LC
flexuosa Thunb. LC
grandiceps Hilliard & B.L.Burtt ..... **Rare**
hirsuta Thunb. ..... **Rare**
humilis Källersjö ..... **Rare**
imbricata Harv. ..... **DDD**
inopinata (Hutch.) Källersjö ..... **VU**
juncea (DC.) D.Dietr. LC
leptocephala Källersjö ..... **Rare**
linifolia Burm. LC
microcephala (DC.) D.Dietr. LC
microphylla DC. LC
minuta (L.f.) Källersjö subsp. inermis (E.Phillips) Källersjö LC
minuta (L.f.) Källersjö subsp. minuta LC
oocephala (DC.) Källersjö ..... **VU**
pachycephala DC. subsp. eriopoda (DC.) Källersjö LC
pachycephala DC. subsp. pachycephala LC
pectinata L.f. LC
pinnata L.f. LC
pubescens (L.) L. LC
quinquedentata Thunb. subsp. quinquedentata LC
quinquedentata Thunb. subsp. rigens Källersjö ..... **VU**
rugulosa E.Mey. ex DC. ..... **EN**
scabra Thunb. ..... **VU**
sertulifera DC. ..... **EN**
spathulata (DC.) D.Dietr. ..... **EN**
tomentosa Thunb. LC
trifurcata (L.) L. LC
vestita (Thunb.) Druce LC
virgata Jacq. LC
viridis Källersjö LC

Athrixia
angustissima DC. LC
arachnoidea J.M.Wood & M.S.Evans ex J.M.Wood LC
capensis Ker Gawl. LC
crinita (L.) Druce LC
elata Sond. LC
fontana MacOwan LC
gerrardii Harv. LC
heterophylla (Thunb.) Less. subsp. heterophylla LC
heterophylla (Thunb.) Less. subsp. sessilifolia (DC.) Kroner LC
phylicoides DC. LC

Athyrium
scandicinum (Willd.) C.Presl LC
schimperi Moug. ex Fée LC

Atrichantha
gemmifera (Bolus) Hilliard & B.L.Burtt LC

Atriplex
cinerea Poir. subsp. bolusii (C.H.Wright) Aellen var. adamsonii Aellen LC
erosa G.Brückn. & I.Verd. LC
patula L. subsp. austro-africana Aellen LC
semibaccata R.Br. var. appendiculata Aellen LC
suberecta I.Verd. LC
vestita (Thunb.) Aellen var. appendiculata Aellen LC
vestita (Thunb.) Aellen var. inappendiculata Aellen LC

Audouinia, 289
capitata (L.) Brongn. ..... **Rare**

Augea
capensis Thunb. LC

Aulax, 465
cancellata (L.) Druce LC
pallasia Stapf ..... **NT**
umbellata (Thunb.) R.Br. ..... **NT**

Australluma
ubomboensis (I.Verd.) Bruyns LC

Avicennia
marina (Forssk.) Vierh. LC

Avonia, 465
albissima (Marloth) G.D.Rowley LC
gariepensis G.Will. LC
herreana (Poelln.) G.D.Rowley ..... **VU**
mallei G.Will. ..... **Rare**
papyracea (E.Mey. ex Fenzl) G.D.Rowley subsp. namaensis (Gerbaulet) G.D.Rowley LC
papyracea (E.Mey. ex Fenzl) G.D.Rowley subsp. papyracea LC
perplexa G.Will. LC
prominens (G.Will.) G.Will. LC
quinaria (E.Mey. ex Fenzl) G.D.Rowley subsp. alstonii (Schönland) G.D.Rowley LC
quinaria (E.Mey. ex Fenzl) G.D.Rowley subsp. quinaria LC
recurvata (Schönland) G.D.Rowley subsp. buderiana (Poelln.) G.Will. ..... **VU**
recurvata (Schönland) G.D.Rowley subsp. minuta (Gerbaulet) G.D.Rowley ..... **DDD**
recurvata (Schönland) G.D.Rowley subsp. recurvata LC
rhodesica (N.E.Br.) G.D.Rowley LC
ruschii (Dinter & Poelln.) G.D.Rowley LC
ustulata (E.Mey. ex Fenzl) G.D.Rowley LC
variabilis (Poelln.) G.Will. LC

Azanza
garckeana (F.Hoffm.) Exell & Hillc. LC

Azima
tetracantha Lam. LC

Azolla
pinnata R.Br. subsp. africana (Desv.) R.M.K.Saunders & K.Fowler LC

B

Babiana, 131
ambigua (Roem. & Schult.) G.J.Lewis LC
angustifolia Sweet....NT
arenicola Goldblatt & J.C.Manning .... EN
attenuata G.J.Lewis LC
auriculata G.J.Lewis.... Rare
bainesii Baker....LC
blanda (L.Bolus) G.J.Lewis .... CR
brachystachys (Baker) G.J.Lewis .... Declining
carminea J.C.Manning & Goldblatt .... EN
cedarbergensis G.J.Lewis.... Rare
cinnamomea J.C.Manning & Goldblatt....LC
confusa (G.J.Lewis) Goldblatt & J.C.Manning .... VU
crispa G.J.Lewis....LC
cuneata J.C.Manning & Goldblatt....LC
curviscapa G.J.Lewis....LC
dregei Baker....LC
ecklonii Klatt....LC
engysiphon J.C.Manning & Goldblatt .... EN
fimbriata (Klatt) Baker....LC
flabellifolia Harv. ex Klatt....LC
foliosa G.J.Lewis .... CR PE
fourcadei G.J.Lewis LC
fragrans (Jacq.) Goldblatt & J.C.Manning.... NT
framesii L.Bolus.... Rare
gariepensis Goldblatt & J.C.Manning....LC
geniculata G.J.Lewis .... Rare
grandiflora Goldblatt & J.C.Manning LC
horizontalis G.J.Lewis.... VU
hypogaea Burch. LC
inclinata Goldblatt & J.C.Manning.... EN
karooica Goldblatt & J.C.Manning .... VU
lanata Goldblatt & J.C.Manning.... VU
lapeirousioides Goldblatt & J.C.Manning .... DDD
latifolia L.Bolus .... CR
leipoldtii G.J.Lewis .... CR
lewisiana B.Nord. .... VU
lineolata Klatt LC
lobata G.J.Lewis.... Rare
longiflora Goldblatt & J.C.Manning .... CR
melanops Goldblatt & J.C.Manning .... VU
minuta G.J.Lewis LC
montana G.J.Lewis.... EN
mucronata (Jacq.) Ker Gawl. subsp. minor (G.J.Lewis) Goldblatt & J.C.Manning.... EN
mucronata (Jacq.) Ker Gawl. subsp. mucronata LC
namaquensis Baker....LC
nana (Andrews) Spreng. subsp. maculata (Klatt) Goldblatt & J.C.Manning .... NT
nana (Andrews) Spreng. subsp. nana.... EN
noctiflora J.C.Manning & Goldblatt .... EN
odorata L.Bolus .... EN
papyracea Goldblatt & J.C.Manning.... VU
patersoniae L.Bolus....LC
patula N.E.Br..... Declining
pauciflora G.J.Lewis.... VU
petiolata Goldblatt & J.C.Manning .... EN
pilosa G.J.Lewis.... Rare
planifolia (G.J.Lewis) Goldblatt & J.C.Manning....LC
praemorsa Goldblatt & J.C.Manning.... Rare
pubescens (Lam.) G.J.Lewis....LC
purpurea (Jacq.) Ker Gawl. .... EN
pygmaea (Burm.f.) Baker.... CR
radiata Goldblatt & J.C.Manning.... CR
regia (G.J.Lewis) Goldblatt & J.C.Manning .... CR
rigidifolia Goldblatt & J.C.Manning....LC
ringens (L.) Ker Gawl.....LC
rubella Goldblatt & J.C.Manning.... VU
rubrocyanea (Jacq.) Ker Gawl. .... VU
salteri G.J.Lewis .... VU
sambucina (Jacq.) Ker Gawl. subsp. longibracteata (G.J.Lewis) Goldblatt & J.C.Manning.... EN
sambucina (Jacq.) Ker Gawl. subsp. sambucina....LC
scabrifolia Brehmer ex Klatt....LC
scariosa G.J.Lewis LC
secunda (Thunb.) Ker Gawl. .... CR
sinuata G.J.Lewis....LC
spathacea (L.f.) Ker Gawl.....LC
spiralis Baker....LC
stenomera Schltr. .... CR PE
striata (Jacq.) G.J.Lewis....LC
stricta (Aiton) Ker Gawl..... NT
tanquana J.C.Manning & Goldblatt.... Rare
thunbergii Ker Gawl. .... NT
torta G.J.Lewis LC
toximontana J.C.Manning & Goldblatt .... EN
tritonioides G.J.Lewis .... VU
tubiflora (L.f.) Ker Gawl. .... Declining
tubulosa (Burm.f.) Ker Gawl..... VU
unguiculata G.J.Lewis.... VU
vanzijliae L.Bolus.... NT
villosa (Aiton) Ker Gawl..... NT
villosula (J.F.Gmel.) Ker Gawl. ex Steud..... EN
virginea Goldblatt .... Rare

Baccharoides
adoensis (Sch.Bip. ex Walp.) H.Rob. var. kotschyana (Sch.Bip. ex Walp.) Isawumi, El-Ghazaly & B.Nord....LC
adoensis (Sch.Bip. ex Walp.) H.Rob. var. mossambiquensis (Steetz) Isawumi, El-Ghazaly & B.Nord....LC

Bachmannia
woodii (Oliv.) Gilg LC

Bacopa
crenata (P.Beauv.) Hepper....LC
floribunda (R.Br.) Wettst. LC
monnieri (L.) Pennell....LC

Baeometra
uniflora (Jacq.) G.J.Lewis LC

Balanites, 285
maughamii Sprague.... Declining
pedicellaris Mildbr. & Schltr. subsp. pedicellaris...LC

Ballota
africana (L.) Benth. LC

Baphia
massaiensis Taub. subsp. obovata (Schinz) Brummitt var. obovata LC
racemosa (Hochst.) Baker LC

Barberetta
aurea Harv.....LC

Barleria, 216
affinis C.B.Clarke....LC
albostellata C.B.Clarke LC
argillicola Oberm. .... CR
bechuanensis C.B.Clarke....LC
bolusii Oberm. LC
bremekampii Oberm.....LC
crossandriformis C.B.Clarke....LC
delagoensis Oberm. LC
dinteri Oberm. LC
dolomiticola M. & K.Balkwill .... VU
elegans S.Moore ex C.B.Clarke LC
galpinii C.B.Clarke....LC
greenii M. & K.Balkwill.... CR
gueinzii Sond. LC
holubii C.B.Clarke LC
irritans Nees....LC
jasminiflora C.B.Clarke....DDT
lancifolia T.Anderson subsp. lancifolia....LC
lichtensteiniana Nees....LC
lugardii C.B.Clarke LC
mackenii Hook.f. LC
macrostegia Nees....LC
matopensis S.Moore LC
media C.B.Clarke....LC
meyeriana Nees LC
monticola Oberm.....LC
natalensis Lindau .... EX
obtusa Nees LC
ovata E.Mey. ex Nees LC
oxyphylla Lindau .... Rare
papillosa T.Anderson....LC
pretoriensis C.B.Clarke LC
pungens L.f. LC
randii S.Moore LC
rehmannii C.B.Clarke LC
repens Nees LC
rigida Nees....LC
rogersii S.Moore LC
rotundifolia Oberm. LC
saxatilis Oberm. LC
senensis Klotzsch....LC
spinulosa Klotzsch LC
stimulans E.Mey. ex Nees....LC
transvaalensis Oberm. LC
virgula C.B.Clarke....LC
wilmsiana Lindau LC

Bartholina
burmanniana (L.) Ker Gawl.....LC
etheliae Bolus LC

Bartsia
trixago L.....LC

Basananthe
pedata (Baker f.) W.J.de Wilde LC
polygaloides (Hutch. & K.Pearce) W.J.de Wilde.....LC
sandersonii (Harv.) W.J.de Wilde....LC
triloba (Bolus) W.J.de Wilde LC

Basilicum
polystachyon (L.) Moench LC

Bassia
diffusa (Thunb.) Kuntze....LC
dinteri (Botsch.) A.J.Scott....LC
salsoloides (Fenzl) A.J.Scott LC

Bauhinia, 364
bowkeri Harv. .... NT
galpinii N.E.Br....LC
natalensis Oliv. ex Hook....LC
petersiana Bolle subsp. macrantha (Oliv.) Brummitt & J.H.Ross LC
tomentosa L.....LC

Begonia, 285
dregei Otto & A.Dietr. .... EN
geranioides Hook.f. LC
homonyma Steud..... EN
sonderiana Irmsch. var. sonderiana LC
sutherlandii Hook.f. subsp. sutherlandii....LC

Behnia
reticulata (Thunb.) Didr.....LC

Berchemia
discolor (Klotzsch) Hemsl. LC
zeyheri (Sond.) Grubov LC

Bergeranthus, 410
addoensis L.Bolus.... VU
albomarginatus A.P.Dold & S.A.Hammer.... VU
artus L.Bolus.... VU
concavus L.Bolus....LC
katbergensis L.Bolus LC
leightoniae L.Bolus LC
multiceps (Salm-Dyck) Schwantes....DDT
nanus A.P.Dold & S.A.Hammer.... VU
scapiger (Haw.) Schwantes....LC
vespertinus (A.Berger) Schwantes....LC

Bergia
anagalloides E.Mey. ex Fenzl LC
capensis L. LC
decumbens Planch. ex Harv. LC
glomerata L.f.....LC
pentheriana Keissl....LC
polyantha Sond. LC
salaria Bremek. LC

Berkheya, 247
acanthopoda (DC.) Roessler....LC
angusta Schltr..... VU
angustifolia (Houtt.) Merr. LC
annectens Harv. LC
armata (Vahl) Druce....LC
barbata (L.f.) Hutch. LC
bergiana Söderb....LC
bipinnatifida (Harv.) Roessler subsp. bipinnatifida....LC
bipinnatifida (Harv.) Roessler subsp. echinopsoides (Baker) Roessler LC
buphthalmoides (DC.) Schltr. LC
caffra MacOwan ....DDT
canescens DC. LC
cardopatifolia (DC.) Roessler....LC
carduoides (Less.) Hutch. LC
carlinifolia (DC.) Roessler subsp. carlinifolia....LC
carlinifolia (DC.) Roessler subsp. promontorii Roessler LC
carlinoides (Vahl) Willd. LC
carlinopsis Welw. ex O.Hoffm. subsp. magalismontana (Bolus) Roessler LC
chamaepeuce (S.Moore) Roessler LC
cirsiifolia (DC.) Roessler LC
coddii Roessler .... Rare
coriacea Harv. LC
cruciata (Houtt.) Willd. subsp. cruciata LC
cruciata (Houtt.) Willd. subsp. subintegra Roessler LC
cuneata (Thunb.) Willd. LC
debilis MacOwan LC
decurrens (Thunb.) Willd. LC
densifolia Bohnen ex Roessler LC

discolor (DC.) O.Hoffm. & Muschl. LC
draco Roessler .... **Rare**
dregei Harv. .... **Critically Rare**
echinacea (Harv.) O.Hoffm. ex Burtt Davy subsp. echinacea LC
eriobasis (DC.) Roessler LC
erysithales (DC.) Roessler LC
ferox O.Hoffm. var. pseudodidelta Roessler LC
ferox O.Hoffm. var. tomentosa Roessler LC
francisci Bolus .... **Rare**
fruticosa (L.) Ehrh. LC
glabrata (Thunb.) Fourc. LC
griquana Hilliard & B.L.Burtt .... **VU**
herbacea (L.f.) Druce LC
heterophylla (Thunb.) O.Hoffm. var. heterophylla LC
heterophylla (Thunb.) O.Hoffm. var. radiata (DC.) Roessler LC
insignis (Harv.) Thell. LC
latifolia J.M.Wood & M.S.Evans LC
leucaugeta Hilliard .... **Rare**
mackenii (Harv.) Roessler LC
macrocephala J.M.Wood LC
maritima J.M.Wood & M.S.Evans LC
montana J.M.Wood & M.S.Evans LC
multijuga (DC.) Roessler LC
nivea N.E.Br. LC
onobromoides (DC.) O.Hoffm. & Muschl. var. carlinoides (Thunb.) Roessler LC
onobromoides (DC.) O.Hoffm. & Muschl. var. onobromoides LC
onopordifolia (DC.) O.Hoffm. ex Burtt Davy var. glabra Bohnen ex Roessler LC
onopordifolia (DC.) O.Hoffm. ex Burtt Davy var. onopordifolia LC
pannosa Hilliard .... **Rare**
pauciflora Roessler LC
pinnatifida (Thunb.) Thell. subsp. ingrata (Bolus) Roessler LC
pinnatifida (Thunb.) Thell. subsp. pinnatifida LC
pinnatifida (Thunb.) Thell. subsp. stobaeoides (Harv.) Roessler LC
purpurea (DC.) Mast. LC
radula (Harv.) De Wild. LC
radyeri Roessler .... **Rare**
rhapontica (DC.) Hutch. & Burtt Davy subsp. aristosa (DC.) Roessler var. aristosa LC
rhapontica (DC.) Hutch. & Burtt Davy subsp. aristosa (DC.) Roessler var. exalata Roessler LC
rhapontica (DC.) Hutch. & Burtt Davy subsp. platyptera (Harv.) Roessler LC
rhapontica (DC.) Hutch. & Burtt Davy subsp. rhapontica LC
rigida (Thunb.) Bolus & Wolley-Dod ex Adamson & T.M.Salter LC
robusta Bohnen ex Roessler LC
rosulata Roessler LC
seminivea Harv. & Sond. LC
setifera DC. LC
speciosa (DC.) O.Hoffm. subsp. lanceolata Roessler LC
speciosa (DC.) O.Hoffm. subsp. ovata Roessler LC
speciosa (DC.) O.Hoffm. subsp. speciosa LC
sphaerocephala (DC.) Roessler LC
spinosa (L.f.) Druce LC
spinosissima (Thunb.) Willd. subsp. namaensis Roessler var. argentifolia Roessler LC
spinosissima (Thunb.) Willd. subsp. namaensis Roessler var. namaensis LC
spinosissima (Thunb.) Willd. subsp. spinosissima LC
subulata Harv. var. subulata LC
subulata Harv. var. wilmsiana Roessler LC
tysonii Hutch. LC
umbellata DC. LC
viscosa (DC.) Hutch. LC
zeyheri Oliv. & Hiern subsp. rehmannii (Thell.) Roessler var. rehmannii LC
zeyheri Oliv. & Hiern subsp. rehmannii (Thell.) Roessler var. rogersiana (Thell.) Roessler LC
zeyheri Oliv. & Hiern subsp. zeyheri LC

Bersama
lucens (Hochst.) Szyszyl. LC
swinnyi E.Phillips LC
tysoniana Oliv. LC

Berula
erecta (Huds.) Coville subsp. erecta LC
erecta (Huds.) Coville subsp. thunbergii (DC.) B.L.Burtt LC

Berzelia, 289
abrotanoides (L.) Brongn. LC
burchellii Dummer .... **VU**
commutata Sond. LC
cordifolia Schltdl. .... **VU**
dregeana Colozza .... **Rare**
ecklonii Pillans .... **Rare**
galpinii Pillans .... **Rare**
incurva Pillans .... **VU**
intermedia (D.Dietr.) Schltdl. LC
lanuginosa (L.) Brongn. LC
rubra Schltdl. .... **VU**
squarrosa (Thunb.) Sond. LC

Bewsia
biflora (Hack.) Gooss. LC

Bidens
kirkii (Oliv. & Hiern) Sherff. LC
schimperi Sch.Bip. ex Walp. LC

Bijlia, 411
dilatata H.E.K.Hartmann LC
tugwelliae (L.Bolus) S.A.Hammer .... **VU**

Blaeria
barbigera (Salisb.) G.Don LC

Blainvillea
gayana Cass. LC

Blechnum
attenuatum (Sw.) Mett. LC
australe L. subsp. australe LC
capense Burm.f. LC
inflexum (Kunze) Kuhn LC
punctulatum Sw. var. atherstonei (Pappe & Rawson) Sim LC
punctulatum Sw. var. intermedium Sim LC
punctulatum Sw. var. krebsii (Kunze) Sim LC
punctulatum Sw. var. punctulatum LC
tabulare (Thunb.) Kuhn LC

Blepharis, 216
acanthodioides Klotzsch LC
acuminata Oberm. .... Thr*
aequisepala Vollesen LC
angusta (Nees) T.Anderson LC
aspera Oberm. LC
breyeri Oberm. LC
capensis (L.f.) Pers. LC
dilatata C.B.Clarke .... **Rare**
diversispina (Nees) C.B.Clarke LC
espinosa E.Phillips LC
fenestralis Vollesen .... **Critically Rare**
furcata (L.f.) Pers. LC
grossa (Nees) T.Anderson LC
hirtinervia (Nees) T.Anderson LC
ilicina Oberm. LC
inaequalis C.B.Clarke LC
inermis (Nees) C.B.Clarke .... **VU**
innocua C.B.Clarke LC
integrifolia (L.f.) E.Mey. ex Schinz var. clarkei (Schinz) Oberm. LC
integrifolia (L.f.) E.Mey. ex Schinz var. integrifolia LC
laevifolia Vollesen LC
leendertziae Oberm. LC
longispica C.B.Clarke LC
macra (Nees) Vollesen LC
maderaspatensis (L.) Roth LC
marginata (Nees) C.B.Clarke LC
mitrata C.B.Clarke LC
natalensis Oberm. LC
obermeyerae Vollesen LC
obtusisepala Oberm. LC
procumbens (L.f.) Pers. LC
sericea Vollesen .... **Critically Rare**
serrulata (Nees) Ficalho & Hiern LC
sinuata (Nees) C.B.Clarke LC
spinipes Vollesen .... **DDD**
squarrosa (Nees) T.Anderson LC
stainbankiae C.B.Clarke LC
subglabra Vollesen .... **VU**
subvolubilis C.B.Clarke LC
swaziensis Vollesen LC
transvaalensis Schinz LC
uniflora C.B.Clarke .... **Rare**

Blighia
unijugata Baker LC

Blotiella
glabra (Bory) R.M.Tryon LC
natalensis (Hook.) R.M.Tryon LC

Blumea
dregeanoides Sch.Bip. ex A.Rich. LC

Bobartia, 136
aphylla (L.f.) Ker Gawl. LC
fasciculata J.B.Gillett ex Strid .... **NT**
filiformis (L.f.) Ker Gawl. LC
gladiata (L.f.) Ker Gawl. subsp. gladiata LC
gladiata (L.f.) Ker Gawl. subsp. major (G.J.Lewis) Strid .... **Rare**
gladiata (L.f.) Ker Gawl. subsp. teres Strid LC
gracilis Baker LC
indica L. LC
lilacina G.J.Lewis LC
longicyma J.B.Gillett subsp. longicyma .... **NT**
longicyma J.B.Gillett subsp. magna J.B.Gillett ex Strid LC
longicyma J.B.Gillett subsp. microflora Strid .... **VU**
macrocarpa Strid .... **VU**
macrospatha Baker subsp. anceps (Baker) Strid .... **Rare**
macrospatha Baker subsp. macrospatha LC
orientalis J.B.Gillett subsp. occidentalis Strid .... **Rare**
orientalis J.B.Gillett subsp. orientalis LC
paniculata G.J.Lewis .... **Rare**
parva J.B.Gillett .... **Rare**
robusta Baker LC
rufa Strid LC

Boerhavia
coccinea Mill. var. coccinea LC
hereroensis Heimerl LC
repens L. subsp. repens LC

Bolandia, 247
argillacea (Cron) Cron .... **Rare**
pedunculosa (DC.) Cron LC

Bolbitis
heudelotii (Bory ex Fée) Alston LC

Bolboschoenus
glaucus (Lam.) S.G.Sm. LC
maritimus (L.) Palla LC

Bolusafra
bituminosa (L.) Kuntze LC

Bolusanthus
speciosus (Bolus) Harms LC

Bolusia
capensis Benth. LC

Bolusiella
maudiae (Bolus) Schltr. LC

Bonamia
velutina Verdc. LC

Bonatea, 181
cassidea Sond. LC
lamprophylla J.L.Stewart .... **VU**
polypodantha (Rchb.f.) L.Bolus LC
porrecta (Bolus) Summerh. LC
pulchella Summerh. LC
saundersioides (Kraenzl. & Schltr.) Cortesi LC
speciosa (L.f.) Willd. LC
steudneri (Rchb.f.) T.Durand & Schinz LC

Boophone, 63
disticha (L.f.) Herb. .... **Declining**
haemanthoides F.M.Leight. LC

Borassus
aethiopum Mart. LC

Boscia
albitrunca (Burch.) Gilg & Gilg-Ben. LC
angustifolia A.Rich. var. corymbosa (Gilg) DeWolf LC
foetida Schinz subsp. filipes (Gilg) Lotter LC
foetida Schinz subsp. foetida LC
foetida Schinz subsp. longipedicellata (Gilg) Toelken LC
foetida Schinz subsp. minima Toelken LC
foetida Schinz subsp. rehmanniana (Pestal.) Toelken LC
mossambicensis Klotzsch LC
oleoides (Burch. ex DC.) Toelken LC

Bothriochloa
bladhii (Retz.) S.T.Blake LC
insculpta (Hochst. ex A.Rich.) A.Camus LC
radicans (Lehm.) A.Camus LC

Bothriocline
laxa N.E.Br. LC
Bouchea
wilmsii Gürke LC
Bowiea, 113
volubilis Harv. ex Hook.f. subsp. gariepensis (Van Jaarsv.) Bruyns LC
volubilis Harv. ex Hook.f. subsp. volubilis ..... **VU**
Bowkeria, 540
citrina Thode ..... **Rare**
cymosa MacOwan LC
verticillata (Eckl. & Zeyh.) Schinz LC
Brabejum
stellatifolium L. LC
Brachiaria
arrecta (Hack. ex T.Durand & Schinz) Stent LC
bovonei (Chiov.) Robyns LC
brizantha (A.Rich.) Stapf LC
chusqueoides (Hack.) Clayton LC
deflexa (Schumach.) C.E.Hubb. ex Robyns LC
dictyoneura (Fig. & De Not.) Stapf LC
dura Stapf var. pilosa J.G.Anderson ..... DDT
eruciformis (Sm.) Griseb. LC
glomerata (Hack.) A.Camus LC
grossa Stapf LC
humidicola (Rendle) Schweick. LC
marlothii (Hack.) Stent LC
nigropedata (Ficalho & Hiern) Stapf LC
serrata (Thunb.) Stapf LC
subulifolia (Mez) Clayton LC
xantholeuca (Schinz) Stapf LC
Brachycarpaea
juncea (P.J.Bergius) Marais LC
Brachychloa
fragilis S.M.Phillips LC
schiemanniana (Schweick.) S.M.Phillips LC
Brachycorythis, 181
conica (Summerh.) Summerh. subsp. transvaalensis Summerh. ..... **VU**
inhambanensis (Schltr.) Schltr. LC
macowaniana Rchb.f. LC
ovata Lindl. subsp. ovata LC
pleistophylla Rchb.f. subsp. pleistophylla LC
pubescens Harv. LC
tenuior Rchb.f. LC
Brachylaena
discolor DC. LC
elliptica (Thunb.) DC. LC
glabra (L.f.) Druce LC
huillensis O.Hoffm. LC
ilicifolia (Lam.) E.Phillips & Schweick. LC
neriifolia (L.) R.Br. LC
rotundata S.Moore LC
transvaalensis E.Phillips & Schweick. LC
uniflora Harv. LC
Brachypodium
bolusii Stapf LC
flexum Nees LC
fontanesianum Nees LC
Brachysiphon, 455
acutus (Thunb.) A.Juss. LC
fucatus (L.) Gilg ..... **Rare**
microphyllus Rourke ..... **Rare**
mundii Sond. ..... **VU**
rupestris Sond. ..... **Rare**
Brachystegia
spiciformis Benth. var. spiciformis LC
Brachystelma, 230
angustum Peckover ..... Thr*
arnotii Baker LC
australe R.A.Dyer LC
barberae Harv. ex Hook.f. LC
brevipedicellatum Turrill LC
bruceae R.A.Dyer subsp. bruceae LC
bruceae R.A.Dyer subsp. hirsutum R.A.Dyer LC
burchellii (Decne.) Peckover var. burchellii LC
burchellii (Decne.) Peckover var. grandiflorum (N.E.Br.) Meve LC
caffrum (Schltr.) N.E.Br. ..... **VU**
campanulatum N.E.Br. ..... **NT**
canum R.A.Dyer ..... **CR**
cathcartense R.A.Dyer ..... **VU**
chloranthum (Schltr.) Peckover LC
chlorozonum E.A.Bruce ..... **NT**
christianeae Peckover ..... **VU**
circinatum E.Mey. LC
coddii R.A.Dyer LC
comptum N.E.Br. ..... **VU**
cummingii A.P.Dold ..... **EN**
cupulatum R.A.Dyer LC
decipiens N.E.Br. LC
delicatum R.A.Dyer ..... **VU**
dimorphum R.A.Dyer subsp. dimorphum LC
dimorphum R.A.Dyer subsp. gratum R.A.Dyer ..... **Rare**
discoideum R.A.Dyer ..... **EN**
duplicatum R.A.Dyer ..... **Critically Rare**
dyeri K. & M.Balkwill ..... **VU**
elongatum (Schltr.) N.E.Br. ..... DDT
filifolium (N.E.Br.) Peckover LC
foetidum Schltr. LC
franksiae N.E.Br. subsp. franksiae ..... **VU**
franksiae N.E.Br. subsp. grandiflorum A.P.Dold & Bruyns ..... **VU**
gemmeum R.A.Dyer LC
gerrardii Harv. ..... **EN**
glenense R.A.Dyer ..... DDT
gracile E.A.Bruce LC
gracillimum R.A.Dyer ..... **CR**
gymnopodum (Schltr.) Bruyns LC
hirtellum Weim. ..... **NT**
huttonii (Harv.) N.E.Br. ..... **Rare**
incanum R.A.Dyer ..... **VU**
inconspicuum S.Venter ..... **Rare**
kerzneri Peckover ..... **VU**
longifolium (Schltr.) N.E.Br. ..... **VU**
luteum Peckover ..... **VU**
macropetalum (Schltr.) N.E.Br. LC
meyerianum Schltr. ..... **Rare**
micranthum E.Mey. ..... **DDD**
minimum R.A.Dyer ..... **Rare**
minor E.A.Bruce ..... **Rare**
modestum R.A.Dyer ..... **NT**
molaventi Peckover & A.E.van Wyk ..... **VU**
montanum R.A.Dyer ..... **Critically Rare**
nanum (Schltr.) N.E.Br. LC
natalense (Schltr.) N.E.Br. ..... **CR**
ngomense R.A.Dyer ..... **EN**
occidentale Schltr. ..... **CR**
oianthum Schltr. LC
pachypodium R.A.Dyer LC
parvulum R.A.Dyer ..... **VU**
perditum R.A.Dyer ..... **Rare**
petraeum R.A.Dyer ..... **VU**
praelongum S.Moore LC
pulchellum (Harv.) Schltr. ..... **NT**
pygmaeum (Schltr.) N.E.Br. subsp. flavidum (Schltr.) R.A.Dyer LC
pygmaeum (Schltr.) N.E.Br. subsp. pygmaeum LC
ramosissimum (Schltr.) N.E.Br. LC
remotum R.A.Dyer ..... **Rare**
rubellum (E.Mey.) Peckover LC
sandersonii (Oliv.) N.E.Br. ..... **VU**
schizoglossoides (Schltr.) N.E.Br. LC
schoenlandianum Schltr. ..... **EX**
setosum Peckover ..... Thr*
stellatum E.A.Bruce & R.A.Dyer ..... **Rare**
stenophyllum (Schltr.) R.A.Dyer LC
swazicum R.A.Dyer LC
tabularium R.A.Dyer ..... DDT
tenellum R.A.Dyer ..... **VU**
tenue R.A.Dyer ..... **EN**
thunbergii N.E.Br. LC
tuberosum (Meerb.) R.Br. ex Sims LC
vahrmeijeri R.A.Dyer ..... **EN**
villosum (Schltr.) N.E.Br. ..... **Rare**
Brackenridgea, 446
zanguebarica Oliv. ..... **CR**
Brasenia
schreberi J.F.Gmel. LC
Braunsia, 411
apiculata (Kensit) L.Bolus LC
bina (N.E.Br.) Schwantes LC
geminata (Haw.) L.Bolus LC
maximilianii (Schltr. & A.Berger) Schwantes LC
nelii Schwantes LC
stayneri (L.Bolus) L.Bolus ..... **Rare**
vanrensburgii (L.Bolus) L.Bolus ..... **Rare**
Breonadia
salicina (Vahl) Hepper & J.R.I.Wood LC
Brianhuntleya, 411
intrusa (Kensit) Chess., S.A.Hammer & I.Oliv. ..... **EN**
Bridelia
cathartica G.Bertol. subsp. cathartica LC
cathartica G.Bertol. subsp. melanthesoides (Baill.) J.Léonard var. melanthesoides LC
micrantha (Hochst.) Baill. LC
mollis Hutch. LC
Brizopyrum
acutiflorum Nees var. maius Nees LC
Bromus
firmior (Nees) Stapf LC
leptoclados Nees LC
natalensis Stapf LC
pectinatus Thunb. LC
speciosus Nees LC
Brownanthus, 411
arenosus (Schinz) Ihlenf. & Bittrich LC
corallinus (Thunb.) Ihlenf. & Bittrich LC
fraternus Klak ..... **EN**
glareicola Klak ..... **VU**
lignescens Klak ..... **VU**
marlothii (Pax) Schwantes LC
neglectus S.M.Pierce & Gerbaulet LC
nucifer (Ihlenf. & Bittrich) S.M.Pierce & Gerbaulet LC
pseudoschlichtianus S.M.Pierce & Gerbaulet LC
pubescens (N.E.Br. ex C.A.Maass) Bullock LC
schenckii (Schinz) Schwantes LC
vaginatus (Lam.) Chess. & M.Pignal LC
Brownleea
coerulea Harv. ex Lindl. LC
galpinii Bolus subsp. galpinii LC
galpinii Bolus subsp. major (Bolus) H.P.Linder LC
macroceras Sond. LC
parviflora Harv. ex Lindl. LC
recurvata Sond. LC
Bruguiera
gymnorrhiza (L.) Lam. LC
Brunia
albiflora E.Phillips LC
alopecuroides Thunb. LC
laevis Thunb. LC
macrocephala Willd. LC
neglecta Schltr. LC
noduliflora Goldblatt & J.C.Manning LC
stokoei E.Phillips LC
Brunsvigia, 64
bosmaniae F.M.Leight. LC
comptonii W.F.Barker LC
elandsmontana Snijman ..... **CR**
grandiflora Lindl. LC
gregaria R.A.Dyer LC
herrei F.M.Leight. ex W.F.Barker ..... **VU**
josephinae (Redouté) Ker Gawl. ..... **VU**
litoralis R.A.Dyer ..... **EN**
marginata (Jacq.) Aiton LC
namaquana D. & U.Müll.-Doblies ..... DDT
natalensis Baker LC
orientalis (L.) Aiton ex Eckl. LC
pulchra (W.F.Barker) D. & U.Müll.-Doblies ..... **Rare**
radula (Jacq.) Aiton ..... **VU**
radulosa Herb. LC
striata (Jacq.) Aiton LC
undulata F.M.Leight. ..... **Rare**
Bryomorphe
aretioides (Turcz.) Druce ..... DDT
Buchnera, 446
capitata Burm.f., non Benth. LC
ciliolata Engl. LC
dura Benth. LC
erinoides Jaroscz ..... DDT
longespicata Schinz LC
reducta Hiern LC
remotiflora Schinz ..... **DDD**
simplex (Thunb.) Druce LC
Buddleja
auriculata Benth. LC
dysophylla (Benth.) Radlk LC
glomerata H.L.Wendl. LC
loricata Leeuwenb. LC
pulchella N.E.Br. LC
saligna Willd. LC
salviifolia (L.) Lam. LC

Bulbine, 84
abyssinica A.Rich. LC
alba Van Jaarsv. LC
alooides (L.) Willd. LC
alveolata S.A.Hammer LC
angustifolia Poelln. LC
annua (L.) Willd. LC
asphodeloides (L.) Spreng. LC
bruynsii S.A.Hammer LC
capensis Baijnath ex G.Will. LC
capitata Poelln. LC
cepacea (Burm.f.) Wijnands LC
coetzeei Oberm. LC
cremnophila Van Jaarsv. **Rare**
dactylopsoides G.Will. LC
diphylla Schltr. ex Poelln. LC
disimilis G.Will. **Rare**
erectipilosa G.Will. LC
esterhuyseniae Baijnath **Rare**
fallax Poelln. **Rare**
favosa (Thunb.) Schult. & J.H.Schult. LC
flexicaulis Baker DDT
flexuosa Schltr. DDT
foleyi E.Phillips LC
fragilis G.Will. **Rare**
frutescens (L.) Willd. LC
hallii G.Will. DDT
haworthioides B.Nord. **VU**
inamarxiae G.Will. & A.P.Dold LC
inflata Oberm. LC
lagopus (Thunb.) N.E.Br. LC
lamprophylla G.Will. DDT
latifolia (L.f.) Schult. & J.H.Schult. var. curvata Van Jaarsv. LC
latifolia (L.f.) Schult. & J.H.Schult. var. latifolia LC
lavrani G.Will. & Baijnath LC
lolita S.A.Hammer LC
longifolia Schinz LC
louwii L.I.Hall **Rare**
margarethae L.I.Hall **VU**
meiringii Van Jaarsv. LC
melanovaginata G.Will. Thr*
mesembryanthoides Haw. subsp. mesembryanthoides LC
mesembryanthoides Haw. subsp. namaquensis G.Will. LC
minima Baker LC
monophylla Poelln. **CR**
muscicola G.Will. DDT
namaensis Schinz LC
narcissifolia Salm-Dyck LC
navicularifolia G.Will. **Rare**
nutans (Jacq.) Spreng. LC
ophiophylla G.Will. LC
pendens G.Will. & Baijnath **Critically Rare**
praemorsa (Jacq.) Spreng. LC
quartzicola G.Will. **VU**
ramosa Van Jaarsv. LC
retinens Van Jaarsv. & S.A.Hammer LC
rhopalophylla Dinter **NT**
rupicola G.Will. LC
sedifolia Schltr. ex Poelln. LC
stolonifera Baijnath ex G.Will. LC
striata Baijnath & Van Jaarsv. **Critically Rare**
subundulata G.Will. DDT
succulenta Compton LC
suurbergensis Van Jaarsv. & A.E.van Wyk LC
thomasiae Van Jaarsv. LC
torsiva G.Will. DDT
torta N.E.Br. **Rare**
truncata G.Will. DDT
vitrea G.Will. & Baijnath LC
vittatifolia G.Will. LC
wiesei L.I.Hall **Rare**

Bulbinella, 91
barkeriae P.L.Perry LC
cauda-felis (L.f.) T.Durand & Schinz LC
chartacea P.L.Perry LC
ciliolata Kunth LC
divaginata P.L.Perry LC
eburniflora P.L.Perry **VU**
elata P.L.Perry LC
elegans P.L.Perry LC
gracilis Kunth LC
graminifolia P.L.Perry LC
latifolia Kunth subsp. denticulata P.L.Perry LC
latifolia Kunth subsp. doleritica (P.L.Perry) P.L.Perry **VU**
latifolia Kunth subsp. latifolia LC
latifolia Kunth subsp. toximontana P.L.Perry **VU**
nana P.L.Perry **VU**
nutans (Thunb.) T.Durand & Schinz subsp. nutans LC
nutans (Thunb.) T.Durand & Schinz subsp. turfosicola (P.L.Perry) P.L.Perry LC
potbergensis P.L.Perry **CR**
punctulata Zahlbr. LC
trinervis (Baker) P.L.Perry LC
triquetra (L.f.) Kunth LC

Bulbophyllum
elliotii Rolfe LC
longiflorum Thouars LC
sandersonii (Hook.f.) Rchb.f. subsp. sandersonii LC
scaberulum (Rolfe) Bolus var. scaberulum LC

Bulbostylis
boeckeleriana (Schweinf.) Beetle LC
burchellii (Ficalho & Hiern) C.B.Clarke LC
contexta (Nees) M.Bodard LC
densa (Wall.) Hand.-Mazz. subsp. afromontana (Lye) R.W.Haines LC
filamentosa (Vahl) C.B.Clarke LC
hispidula (Vahl) R.W.Haines subsp. pyriformis (Lye) R.W.Haines LC
humilis (Kunth) C.B.Clarke LC
oritrephes (Ridl.) C.B.Clarke LC
parvinux C.B.Clarke LC
pusilla (A.Rich.) C.B.Clarke LC
scabricaulis Cherm. LC
schlechteri C.B.Clarke LC
schoenoides (Kunth) C.B.Clarke LC
scleropus C.B.Clarke LC

Bupleurum
mundii Cham. & Schltdl. LC

Burkea
africana Hook. LC

Burmannia
madagascariensis Mart. LC

Burnatia
enneandra P.Micheli LC

Buttonia
natalensis McKen ex Benth. LC
superba Oberm. LC

Buxus
macowanii Oliv. LC
natalensis (Oliv.) Hutch. LC

C

Cadaba
aphylla (Thunb.) Wild LC
natalensis Sond. LC
termitaria N.E.Br. LC

Cadiscus, 248
aquaticus E.Mey. ex DC. **CR**

Caesalpinia, 364
bonduc (L.) Roxb. LC
bracteata Germish. **VU**
rostrata N.E.Br. **VU**

Caesia, 110
capensis (Bolus) Oberm. **Rare**
contorta (L.f.) T.Durand & Schinz LC
sp. nov. (*Manning 1023* NBG) **VU**

Calamagrostis
epigejos (L.) Roth var. capensis Stapf LC

Calamophyllum
cylindricum (Haw.) Schwantes DDT
teretifolium (Haw.) Schwantes DDT
teretiusculum (Haw.) Schwantes DDT

Calanthe
sylvatica (Thouars) Lindl. LC

Calicorema
capitata (Moq.) Hook.f. LC
squarrosa (Schinz) Schinz LC

Calliandra
redacta (J.H.Ross) Thulin & Asfaw LC

Callichilia
orientalis S.Moore LC

Callilepis, 248
caerulea (Hutch.) Leins LC
lancifolia Burtt Davy LC
laureola DC. LC
leptophylla Harv. **Declining**
salicifolia Oliv. LC

Callitriche
bolusii Schönland & Pax ex Marloth DDT
compressa N.E.Br. DDT

Calodendrum
capense (L.f.) Thunb. LC

Calopsis, 205
adpressa Esterh. LC
andreaeana (Pillans) H.P.Linder LC
aspera (Mast.) H.P.Linder LC
burchellii (Mast.) H.P.Linder LC
clandestina Esterh. **Rare**
dura Esterh. **Rare**
esterhuyseniae (Pillans) H.P.Linder LC
filiformis (Mast.) H.P.Linder LC
fruticosa (Mast.) H.P.Linder LC
gracilis (Mast.) H.P.Linder LC
hyalina (Mast.) H.P.Linder LC
impolita (Kunth) H.P.Linder **VU**
levynsiae (Pillans) H.P.Linder **Rare**
marlothii (Pillans) H.P.Linder LC
membranacea (Pillans) H.P.Linder LC
monostylis (Pillans) H.P.Linder **Rare**
muirii (Pillans) H.P.Linder DDT
nudiflora (Pillans) H.P.Linder LC
paniculata (Rottb.) Desv. LC
pulchra Esterh. LC
rigida (Mast.) H.P.Linder LC
rigorata (Mast.) H.P.Linder LC
sparsa Esterh. **VU**
viminea (Rottb.) H.P.Linder LC

Calostephane
divaricata Benth. LC

Calotesta, 248
alba P.O.Karis **Critically Rare**

Calpurnia, 371
aurea (Aiton) Benth. subsp. aurea LC
capensis (Burm.f.) Druce LC
floribunda Harv. LC
glabrata Brummitt LC
intrusa (R.Br. in W.T.Aiton) E.Mey. LC
reflexa A.J.Beaumont **Rare**
sericea Harv. LC
woodii Schinz **VU**

Camptorrhiza
strumosa (Baker) Oberm. LC

Campylostachys, 555
cernua (L.f.) Kunth LC
sp. nov. (*Helme 1226* NBG) **EN**

Canavalia
bonariensis Lindl. LC
rosea (Sw.) DC. LC
virosa (Roxb.) Wight & Arn. LC

Cannomois, 205
arenicola H.P.Linder LC
aristata Mast. **Rare**
congesta Mast. LC
dolichocaryon H.P.Linder LC
grandis H.P.Linder LC
nitida (Mast.) Pillans LC
parviflora (Thunb.) Pillans LC
primosii (Pillans) H.P.Linder LC
saundersii H.P.Linder LC
schlechteri Mast. LC
scirpoides (Kunth) Mast. LC
virgata (Rottb.) Steud. LC

Canthium, 520
ciliatum (Klotzsch) Kuntze LC
inerme (L.f.) Kuntze LC
kuntzeanum Bridson LC
setiflorum Hiern subsp. setiflorum LC
spinosum (Klotzsch) Kuntze LC
suberosum Codd LC
vanwykii Tilney & Kok **NT**

Capelio, 248
caledonica B.Nord. **Rare**
tabularis (Thunb.) B.Nord. LC
tomentosa (Burm.f.) B.Nord. LC

Capeobolus
brevicaulis (C.B.Clarke) Browning LC

Caperonia
stuhlmannii Pax LC

Capnophyllum, 221
africanum (L.) Gaertn. ..... NT
leiocarpon (Sond.) Manning & Goldblatt ..... Declining
Capparis
brassii DC. LC
fascicularis DC. var. fascicularis LC
fascicularis DC. var. zeyheri (Turcz.) Toelken LC
sepiaria L. var. citrifolia (Lam.) Toelken LC
sepiaria L. var. subglabra (Oliv.) DeWolf LC
tomentosa Lam. LC
Caralluma
chlorantha Schltr. LC
intermedia (N.E.Br.) Schltr. ..... DDT
Cardamine
africana L. LC
trichocarpa Hochst. ex A.Rich. subsp. trichocarpa LC
Cardiospermum
corindum L. LC
halicacabum L. var. halicacabum LC
halicacabum L. var. microcarpum (Kunth) Blume .. LC
Carex, 103
acocksii C.Archer ..... VU
aethiopica Schkuhr LC
austro-africana (Kük.) Raymond LC
burchelliana Boeck. LC
clavata Thunb. LC
cognata Kunth. LC
ecklonii Nees LC
glomerabilis Krecz. LC
monotropa Nelmes LC
mossii Nelmes LC
spicato-paniculata C.B.Clarke LC
subinflata Nelmes ..... VU
zuluensis C.B.Clarke LC
Carissa
bispinosa (L.) Desf. ex Brenan subsp. bispinosa LC
bispinosa (L.) Desf. ex Brenan subsp. zambesiensis Kupicha LC
edulis (Forssk.) Vahl LC
macrocarpa (Eckl.) A.DC. LC
tetramera (Sacleux) Stapf LC
Carpacoce, 520
burchellii Puff. LC
curvifolia Puff. LC
gigantea Puff ..... Rare
heteromorpha (H.Buek) L.Bolus LC
scabra (Thunb.) Sond. subsp. rupestris Puff .... Rare
scabra (Thunb.) Sond. subsp. scabra LC
spermacocea (Rchb.f.) Sond. subsp. orientalis Puff. LC
spermacocea (Rchb.f.) Sond. subsp. spermacocea LC
vaginellata T.M.Salter LC
Carpanthea
pomeridiana (L.) N.E.Br. LC
Carpha, 103
bracteosa C.B.Clarke LC
capitellata (Nees) Boeck. LC
filifolia Reid & T.H.Arnold LC
glomerata (Thunb.) Nees LC
schlechteri C.B.Clarke ..... DDD
Carpobrotus, 411
acinaciformis (L.) L.Bolus LC
deliciosus (L.Bolus) L.Bolus LC
dimidiatus (Haw.) L.Bolus LC
edulis (L.) L.Bolus subsp. edulis LC
edulis (L.) L.Bolus subsp. parviflorus Wisura & Glen LC
mellei (L.Bolus) L.Bolus LC
muirii (L.Bolus) L.Bolus ..... NT
quadrifidus L.Bolus LC
Carruanthus
peersii L.Bolus LC
ringens (L.) Boom LC
Caryotophora, 411
skiatophytoides Leistner ..... EN
Casearia
gladiiformis Mast. LC
Cassia
abbreviata Oliv. subsp. beareana (Holmes) Brenan LC
Cassine
parvifolia Sond. LC
peragua L. subsp. affinis (Sond.) R.H.Archer LC
peragua L. subsp. barbara (L.) R.H.Archer LC
peragua L. subsp. peragua LC
schinoides (Spreng.) R.H.Archer LC
Cassinopsis
ilicifolia (Hochst.) Kuntze LC
tinifolia Harv. LC
Cassipourea, 515
flanaganii (Schinz) Alston ..... EN
gummiflua Tul. var. verticillata (N.E.Br.) J.Lewis ..... VU*
malosana (Baker) Alston ..... Declining
mossambicensis (Brehmer) Alston LC
swaziensis Compton LC
Cassytha
ciliolata Nees LC
pondoensis Engl. var. pondoensis LC
Catalepis
gracilis Stapf & Stent LC
Catha
edulis (Vahl) Forssk. ex Endl. LC
Catophractes
alexandri D.Don LC
Catunaregam
obovata (Hochst.) Gonç. LC
taylorii (S.Moore) Bridson LC
Caulipsolon
rapaceum (Jacq.) Klak LC
Cavacoa
aurea (Cavaco) J.Léonard LC
Cayratia
gracilis (Guill. & Perr.) Suess. LC
Celosia
nervosa C.C.Towns. LC
trigyna L. LC
Celtis
africana Burm.f. LC
gomphophylla Baker LC
mildbraedii Engl. LC
Cenchrus
ciliaris L. LC
Centella, 221
affinis (Eckl. & Zeyh.) Adamson var. affinis LC
affinis (Eckl. & Zeyh.) Adamson var. oblonga Adamson LC
annua M.T.R.Schub. & B.-E.van Wyk LC
asiatica (L.) Urb. LC
brachycarpa M.T.R.Schub. & B.-E.van Wyk LC
caespitosa Adamson ..... VU
calcaria M.T.R.Schub. & B.-E.van Wyk ..... NT
calliodus (Cham. & Schltdl.) Drude LC
capensis (L.) Domin LC
cochlearia (Domin) Adamson LC
comptonii Adamson LC
coriacea Nannf. LC
cryptocarpa M.T.R.Schub. & B.-E.van Wyk ..... Critically Rare
debilis (Eckl. & Zeyh.) Drude LC
dentata Adamson LC
didymocarpa Adamson LC
difformis (Eckl. & Zeyh.) Adamson LC
dolichocarpa M.T.R.Schub. & B.-E.van Wyk ..... Rare
eriantha (Rich.) Drude var. eriantha LC
eriantha (Rich.) Drude var. orientalis Adamson LC
eriantha (Rich.) Drude var. rotundifolia Adamson ..... DDT
flexuosa (Eckl. & Zeyh.) Drude LC
fourcadei Adamson LC
fusca (Eckl. & Zeyh.) Adamson LC
glabrata L. var. bracteata Adamson LC
glabrata L. var. glabrata LC
glabrata L. var. natalensis Adamson LC
glauca M.T.R.Schub. & B.-E.van Wyk LC
graminifolia Adamson LC
gymnocarpa M.T.R.Schub. & B.-E.van Wyk ..... NT
laevis Adamson LC
lanata Compton LC
lasiophylla Adamson LC
linifolia (L.f.) Drude var. depressa Adamson LC
linifolia (L.f.) Drude var. linifolia LC
longifolia (Adamson) M.T.R.Schub. & B.-E.van Wyk ..... Rare
macrocarpa (Rich.) Adamson var. macrocarpa LC
macrocarpa (Rich.) Adamson var. saxatilis Adamson LC
macrodus (Spreng.) B.L.Burtt LC
montana (Cham. & Schltdl.) Domin LC
pilosa M.T.R.Schub. & B.-E.van Wyk ..... Rare
pottebergensis Adamson ..... VU
recticarpa Adamson LC
restioides Adamson LC
rupestris (Eckl. & Zeyh.) Adamson ..... VU
scabra Adamson LC
sessilis Adamson LC
sp. nov. (*Esterhuysen 36426* BOL) ..... EN
stenophylla Adamson LC
stipitata Adamson LC
ternata M.T.R.Schub. & B.-E.van Wyk ..... Rare
thesioides M.T.R.Schub. & B.-E.van Wyk ..... VU
tridentata (L.f.) Drude ex Domin var. dregeana (Sond.) M.T.R.Schub. & B.-E.van Wyk ..... EN
tridentata (L.f.) Drude ex Domin var. hermanniifolia (Eckl. & Zeyh.) M.T.R.Schub. & B.-E.van Wyk ..... Rare
tridentata (L.f.) Drude ex Domin var. litoralis (Eckl. & Zeyh.) M.T.R.Schub. & B.-E.van Wyk LC
tridentata (L.f.) Drude ex Domin var. tridentata LC
triloba (Thunb.) Drude LC
umbellata M.T.R.Schub. & B.-E.van Wyk ..... Rare
villosa L. var. latifolia (Eckl. & Zeyh.) Adamson LC
villosa L. var. villosa LC
virgata (L.f.) Drude var. congesta Adamson LC
virgata (L.f.) Drude var. gracilescens Domin LC
virgata (L.f.) Drude var. virgata LC
Centema
subfusca (Moq.) T.Cooke LC
Centropodia
glauca (Nees) Cope LC
Centrostigma
occultans (Welw. ex Rchb.f.) Schltr. LC
Cephalanthus
natalensis Oliv. LC
Cephalaria, 312
armerioides Szabó ..... DDD
attenuata (L.f.) Roem. & Schult. LC
decurrens (Thunb.) Roem. & Schult. ..... Rare
foliosa Compton ..... VU
galpiniana Szabó subsp. galpiniana ..... VU
galpiniana Szabó subsp. simplicior B.L.Burtt LC
humilis (Thunb.) Roem. & Schult. LC
natalensis Kuntze LC
oblongifolia (Kuntze) Szabó LC
pungens Szabó LC
rigida (L.) Roem. & Schult. LC
scabra (L.f.) Roem. & Schult. LC
wilmsiana Szabó ..... DDD
zeyheriana Szabó LC
Cephalocroton
mollis Klotzsch LC
Cephalomanes
rigidum (Sw.) K.Iwats. LC
Cephalophyllum, 411
alstonii Marloth ex L.Bolus LC
caespitosum H.E.K.Hartmann LC
corniculatum (L.) Schwantes LC
curtophyllum (L.Bolus) Schwantes LC
diversiphyllum (Haw.) H.E.K.Hartmann ..... NT
ebracteatum (Pax ex Schltr. & Diels) Dinter & Schwantes LC
framesii L.Bolus LC
fulleri L.Bolus ..... Rare
goodii L.Bolus LC
griseum (S.A.Hammer & Schmiedel) H.E.K.Hartmann LC
hallii L.Bolus LC
herrei L.Bolus LC
inaequale L.Bolus LC
loreum (L.) Schwantes LC
niveum L.Bolus LC
numeesense H.E.K.Hartmann LC
parvibracteatum (L.Bolus) H.E.K.Hartmann LC
parviflorum L.Bolus ..... CR
parvulum (Schltr.) H.E.K.Hartmann ..... EX
pillansii L.Bolus LC
pulchellum L.Bolus ..... VU
pulchrum L.Bolus ..... VU
purpureo-album (Haw.) Schwantes LC
regale L.Bolus LC
rigidum L.Bolus LC
rostellum (L.Bolus) H.E.K.Hartmann ..... EN

spissum H.E.K.Hartmann LC
staminodiosum L.Bolus.... **Rare**
subulatoides (Haw.) N.E.Br. LC
tetrastichum H.E.K.Hartmann....**VU**
tricolorum (Haw.) Schwantes LC

Ceraria
fruticulosa H.Pearson & Stephens....LC
namaquensis (Sond.) H.Pearson & Stephens....LC

Cerastium
arabidis E.Mey. ex Fenzl....LC
capense Sond.....LC
dichotomum L.....LC
fontanum Baumg. subsp. triviale (Link) Jalas LC
glomeratum Thuill. LC
indicum Wight & Arn.....LC

Ceratandra, 181
atrata (L.) T.Durand & Schinz LC
bicolor Sond. ex Bolus LC
globosa Lindl. LC
grandiflora Lindl. LC
harveyana Lindl.....LC
venosa (Lindl.) Schltr. ....**NT**

Ceratiosicyos
laevis (Thunb.) A.Meeuse LC

Ceratocaryum, 205
argenteum Kunth LC
caespitosum H.P.Linder....LC
decipiens (N.E.Br.) H.P.Linder LC
fimbriatum (Kunth) H.P.Linder LC
fistulosum Mast.... **Rare**
persistens H.P.Linder .... **Rare**
pulchrum H.P.Linder.... **CR**
xerophilum (Pillans) H.P.Linder LC

Ceratophyllum
demersum L. var. demersum....LC
muricatum Cham. subsp. muricatum....LC
submersum L. subsp. submersum var. submersum LC

Ceratopteris
thalictroides (L.) Brongn. LC

Ceratotheca, 455
saxicola E.A.Bruce .... **Rare**
triloba (Bernh.) Hook.f. LC

Ceriops
tagal (Perr.) C.B.Rob. LC

Cerochlamys
gemina (L.Bolus) H.E.K.Hartmann....LC
pachyphylla (L.Bolus) L.Bolus LC
trigona N.E.Br.....LC

Ceropegia, 234
africana R.Br. subsp. africana LC
africana R.Br. subsp. barklyi Bruyns LC
ampliata E.Mey. var. ampliata....LC
antennifera Schltr..... **EX**
arenaria R.A.Dyer .... **EN**
barbata R.A.Dyer .... **DDD**
bowkeri Harv. subsp. bowkeri.... **EX**
bowkeri Harv. subsp. sororia (Harv. ex Hook.f.) R.A.Dyer....LC
cancellata Rchb. LC
carnosa E.Mey. LC
cimiciodora Oberm. ....**VU**
conrathii Schltr.....LC
craibii J.Victor.... **VU**
crassifolia Schltr. var. crassifolia....LC
cycniflora R.A.Dyer.... **VU**
decidua E.A.Bruce subsp. decidua LC
decidua E.A.Bruce subsp. pretoriensis R.A.Dyer.... **VU**
distincta N.E.Br. subsp. verruculosa R.A.Dyer.... **DDD**
dubia R.A.Dyer ....DDT
filiformis (Burch.) Schltr.....LC
fimbriata E.Mey. subsp. connivens (R.A.Dyer) Bruyns ....DDT
fimbriata E.Mey. subsp. fimbriata.... **VU**
fimbriata E.Mey. subsp. geniculata (R.A.Dyer) Bruyns LC
fortuita R.A.Dyer....LC
haygarthii Schltr.....LC
insignis R.A.Dyer .... **Rare**
linearis E.Mey. subsp. linearis....LC
linearis E.Mey. subsp. tenuis (N.E.Br.) Bruyns LC
linearis E.Mey. subsp. woodii (Schltr.) H.Huber LC
macmasteri A.P.Dold.... **VU**
mafekingensis (N.E.Br.) R.A.Dyer....LC
meyeri Decne.....LC
multiflora Baker subsp. multiflora LC
multiflora Baker subsp. tentaculata (N.E.Br.) H.Huber LC
namaquensis Bruyns LC
nilotica Kotschy var. nilotica LC
occidentalis R.A.Dyer.... **NT**
occulta R.A.Dyer ....Thr*
pachystelma Schltr. subsp. pachystelma LC
radicans Schltr. subsp. radicans.... **VU**
radicans Schltr. subsp. smithii (M.R.Hend.) R.A.Dyer....DDT
rendallii N.E.Br. LC
rudatisii Schltr..... **CR PE**
sandersonii Decne. ex Hook.....LC
scabriflora N.E.Br..... **DDD**
stapeliiformis Haw. subsp. serpentina (E.A.Bruce) R.A.Dyer....LC
stapeliiformis Haw. subsp. stapeliiformis LC
stenantha K.Schum. LC
stentiae E.A.Bruce .... **VU**
tomentosa Schltr. .... **CR PE**
turricula E.A.Bruce .... **NT**
zeyheri Schltr. LC

Chaenostoma, 540
aethiopicum (L.) Benth.....LC
affine Bernh. LC
archeri (Compton) Kornhall LC
caeruleum (L.f.) Kornhall LC
calciphilum (Hilliard) Kornhall....LC
calycinum Benth.....LC
campanulatum Benth.....LC
cinereum (Hilliard) Kornhall....LC
comptonii (Hilliard) Kornhall LC
cordatum (Thunb.) Benth.....LC
debile (Hutch.) Kornhall LC
decipiens (Hilliard) Kornhall....LC
denudatum Benth. LC
floribundum Benth.....LC
glabratum Benth. LC
glanduliferum (Hilliard) Kornhall....LC
halimifolium Benth. LC
hispidum (Thunb.) Benth. LC
impeditum (Hilliard) Kornhall LC
integrifolium (L.f.) Benth.....LC
langebergense (Hilliard) Kornhall....LC
leve (Hiern) Kornhall LC
longipedicellatum (Hilliard) Kornhall.... **Rare**
macrosiphon Schltr. LC
marifolium Benth.....LC
multiramosum (Hilliard) Kornhall ....**VU**
neglectum J.M.Wood & M.S.Evans....LC
paniculatum (Hilliard) Kornhall LC
patrioticum (Hiern) Kornhall LC
pauciflorum Benth. LC
placidum (Hilliard) Kornhall ....DDT
platysepalum (Hiern) Kornhall.... **Rare**
polelense (Hiern) Kornhall subsp. fraterna (Hilliard) Kornhall....LC
polelense (Hiern) Kornhall subsp. polelense....LC
polyanthum Benth. LC
racemosum Benth. ....**DDD**
revolutum (Thunb.) Benth.....LC
roseoflavum (Hiern) Kornhall LC
rotundifolium Benth. LC
subnudum N.E.Br. LC
subsessile (Hilliard) Kornhall....LC
subspicatum Benth. LC
tenuicaule (Hilliard) Kornhall LC
titanophilum (Hilliard) Kornhall.... **VU**
uncinatum (Desr.) Kornhall....LC
violaceum Schltr.....LC

Chaetacanthus
burchellii Nees LC
costatus Nees....LC
setiger (Pers.) Lindl. LC

Chaetacme
aristata Planch....LC

Chaetobromus
involucratus (Schrad.) Nees subsp. dregeanus (Nees) Verboom LC
involucratus (Schrad.) Nees subsp. involucratus....LC
involucratus (Schrad.) Nees subsp. sericeus (Nees) Verboom LC

Chamaecrista
absus (L.) H.S.Irwin & Barneby....LC
biensis (Steyaert) Lock LC
capensis (Thunb.) E.Mey. var. capensis....LC
capensis (Thunb.) E.Mey. var. flavescens (Thunb.) E.Mey. LC
comosa E.Mey. var. capricornia (Steyaert) Lock LC
comosa E.Mey. var. comosa....LC
huillensis (Mendonça & Torre) Lock....LC
mimosoides (L.) Greene LC
plumosa E.Mey. var. erecta (Schorn & Gordon-Gray) Lock LC
plumosa E.Mey. var. plumosa LC
stricta E.Mey. LC

Chamaecrypta, 541
diasciifolia Schltr. & Diels ....**DDD**

Chamarea, 223
capensis (Thunb.) Eckl. & Zeyh. LC
esterhuyseniae B.L.Burtt ....**Critically Rare**
gracillima (H.Wolff) B.L.Burtt LC
longipedicellata B.L.Burtt LC
snijmaniae B.L.Burtt.... **Rare**

Chamira
circaeoides (L.f.) Zahlbr. LC

Charadrophila, 541
capensis Marloth.... **Rare**

Chascanum
adenostachyum (Schauer) Moldenke LC
caespitosum (H.Pearson) Moldenke....LC
cernuum (L.) E.Mey.....LC
cuneifolium (L.f.) E.Mey.....LC
garipense E.Mey.....LC
hederaceum (Sond.) Moldenke var. hederaceum LC
hederaceum (Sond.) Moldenke var. natalense (H.Pearson) Moldenke....LC
incisum (H.Pearson) Moldenke LC
integrifolium (H.Pearson) Moldenke....DDT
krookii (Gürke ex Zahlbr.) Moldenke LC
latifolium (Harv.) Moldenke var. glabrescens (H.Pearson) Moldenke....LC
latifolium (Harv.) Moldenke var. latifolium....LC
latifolium (Harv.) Moldenke var. transvaalense Moldenke....LC
namaquanum (Bolus ex H.Pearson) Moldenke....LC
pinnatifidum (L.f.) E.Mey. var. pinnatifidum LC
pinnatifidum (L.f.) E.Mey. var. racemosum Schinz ex Moldenke....LC
pumilum E.Mey. LC
schlechteri (Gürke) Moldenke....LC

Chasmanthe, 137
aethiopica (L.) N.E.Br.....LC
bicolor (Gasp.) N.E.Br.....**VU**
floribunda (Salisb.) N.E.Br.....LC

Chasmatophyllum, 412
braunsii Schwantes ....**DDD**
maninum L.Bolus ....**DDD**
musculinum (Haw.) Dinter & Schwantes LC
nelii Schwantes....LC
rouxii L.Bolus ....**DDD**
stanleyi (L.Bolus) H.E.K.Hartmann LC
verdoorniae (N.E.Br.) L.Bolus....LC
willowmorense (L.Bolus) L.Bolus .... **Rare**

Cheilanthes, 54
bergiana Schltdl. LC
botswanae Schelpe & N.C.Anthony....LC
capensis (Thunb.) Sw.....LC
contracta (Kunze) Mett. ex Kuhn LC
deltoidea Kunze....LC
deltoidea Kunze subsp. nov. (*Klopper & Klopper 217 PRE*)....**VU**
depauperata Baker....LC
dolomiticola (Schelpe) Schelpe & N.C.Anthony LC
eckloniana (Kunze) Mett. LC
hastata (L.f.) Kunze....LC
hirta Sw. LC
inaequalis (Kunze) Mett. var. buchananii (Baker) Schelpe LC
inaequalis (Kunze) Mett. var. inaequalis....LC
induta Kunze....LC
involuta (Sw.) Schelpe & N.C.Anthony var. involuta....LC
involuta (Sw.) Schelpe & N.C.Anthony var. obscura (N.C.Anthony) N.C.Anthony....LC
kunzei Mett. LC

marlothii (Hieron.) Schelpe LC
multifida (Sw.) Sw. LC
namaquensis (Baker) Schelpe & N.C.Anthony LC
nielsii Jacobsen LC
parviloba (Sw.) Sw. LC
pentagona Schelpe & N.C.Anthony LC
quadripinnata (Forssk.) Kuhn LC
rawsonii (Pappe) Mett. ex Kuhn LC
robusta (Kunze) R.M.Tryon LC
viridis (Forssk.) Sw. var. glauca (Sim) Schelpe & N.C.Anthony LC
viridis (Forssk.) Sw. var. macrophylla (Kunze) Schelpe & N.C.Anthony LC
viridis (Forssk.) Sw. var. viridis LC

Cheiridopsis, 412
acuminata L.Bolus LC
amabilis S.A.Hammer ..... Rare
aspera L.Bolus LC
brownii Schick & Tischer LC
campanulata G.Will ..... Rare
delphinoides S.A.Hammer ..... VU
denticulata (Haw.) N.E.Br. LC
derenbergiana Schwantes LC
gamoepensis S.A.Hammer LC
glomerata S.A.Hammer ..... Rare
herrei L.Bolus LC
imitans L.Bolus LC
meyeri N.E.Br. LC
minor (L.Bolus) H.E.K.Hartmann LC
namaquensis (Sond.) H.E.K.Hartmann LC
nelii Schwantes LC
pearsonii N.E.Br. ..... EN
peculiaris N.E.Br. ..... CR
pillansii L.Bolus LC
pilosula L.Bolus LC
ponderosa S.A.Hammer LC
purpurea L.Bolus ..... Rare
robusta (Haw.) N.E.Br. LC
rostrata (L.) N.E.Br. ..... VU
rudis L.Bolus ..... DDD
schlechteri Tischer LC
speciosa L.Bolus LC
turbinata L.Bolus LC
umbrosa S.A.Hammer & Desmet LC
umdausensis L.Bolus ..... VU
velox S.A.Hammer ..... VU
verrucosa L.Bolus LC

Cheirostylis
gymnochiloides (Ridl.) Rchb.f. LC

Chenopodiopsis, 541
chenopodioides (Diels) Hilliard ..... Rare
hirta (L.f.) Hilliard LC
retrorsa Hilliard ..... VU

Chenopodium
hederiforme (Murr) Aellen var. dentatum Aellen LC
hederiforme (Murr) Aellen var. undulatum Aellen LC
mucronatum Thunb. LC
olukondae (Murr) Murr LC
petiolariforme (Aellen) Aellen LC

Chionanthus
battiscombei (Hutch.) Stearn LC
foveolatus (E.Mey.) Stearn subsp. foveolatus LC
foveolatus (E.Mey.) Stearn subsp. major (I.Verd.) Stearn LC
foveolatus (E.Mey.) Stearn subsp. tomentellus (I.Verd.) Stearn LC
peglerae (C.H.Wright) Stearn LC

Chironia, 388
albiflora Hilliard ..... Rare
arenaria E.Mey. LC
baccifera L. LC
decumbens Levyns LC
jasminoides L. LC
krebsii Griseb. LC
laxa Gilg LC
linoides L. subsp. emarginata (Jaroscz) I.Verd. LC
linoides L. subsp. linoides LC
linoides L. subsp. macrocalyx (Prain) I.Verd. LC
linoides L. subsp. nana I.Verd. LC
melampyrifolia Lam. LC
palustris Burch. subsp. palustris LC
palustris Burch. subsp. rosacea (Gilg) I.Verd. LC
palustris Burch. subsp. transvaalensis (Gilg) I.Verd. LC
pedunculatis Lindl. LC
peglerae Prain LC
purpurascens (E.Mey.) Benth. & Hook.f. subsp. humilis (Gilg) I.Verd. LC
purpurascens (E.Mey.) Benth. & Hook.f. subsp. purpurascens LC
serpyllifolia Lehm. LC
stokoei I.Verd. ..... Rare
tetragona L.f. LC

Chloris
diluta Renvoize LC
gayana Kunth LC
mossambicensis K.Schum. LC
pycnothrix Trin. LC
roxburghiana Schult. LC
virgata Sw. LC

Chlorophytum, 77
acutum (C.H.Wright) Nordal LC
angulicaule (Baker) Kativu LC
aridum Oberm. LC
bowkeri Baker LC
calyptrocarpum (Baker) Kativu LC
capense (L.) Voss LC
comosum (Thunb.) Jacques LC
cooperi (Baker) Nordal LC
crassinerve (Baker) Oberm. LC
crispum (Thunb.) Baker LC
cyperaceum (Oberm.) Nordal LC
fasciculatum (Baker) Kativu LC
galpinii (Baker) Kativu var. galpinii LC
galpinii (Baker) Kativu var. matabelense (Baker) Kativu LC
galpinii (Baker) Kativu var. norlindhii (Weim.) Kativu LC
haygarthii J.M.Wood & M.S.Evans LC
krauseanum (Dinter) Kativu LC
krookianum Zahlbr. LC
lewisiae Oberm. ..... Rare
macrosporum Baker LC
modestum Baker LC
monophyllum Oberm. ..... DDD
namaquense Poelln. LC
pauciphyllum Oberm. ..... Rare
radula (Baker) Nordal ..... CR
rangei (Engl. & K.Krause) Nordal LC
recurvifolium (Baker) C.Archer & Kativu LC
rigidum Kunth LC
saundersiae (Baker) Nordal LC
transvaalense (Baker) Kativu LC
trichophlebium (Baker) Nordal LC
triflorum (Aiton) Kunth LC
undulatum (Jacq.) Oberm. LC
viscosum Kunth LC

Chondropetalum
deustum Rottb. LC
mucronatum (Nees) Pillans LC
nudum Rottb. LC

Chorisochora
transvaalensis (A.Meeuse) Vollesen LC

Choristylis
rhamnoides Harv. LC

Choritaenia
capensis Benth. LC

Chortolirion
angolense (Baker) A.Berger LC

Christella, 54
altissima Holttum ..... DDD
buchananii (Schelpe) J.P.Roux LC
chaseana (Schelpe) Holttum LC
dentata (Forssk.) Holttum LC
gueinziana (Mett.) Holttum LC
hispidula (Decne.) Holttum LC

Chrozophora
plicata (Vahl) A.Juss. ex Spreng. LC

Chrysanthemoides
incana (Burm.f.) Norl. LC
monilifera (L.) Norl. subsp. canescens (DC.) Norl. LC
monilifera (L.) Norl. subsp. monilifera LC
monilifera (L.) Norl. subsp. pisifera (L.) Norl. LC
monilifera (L.) Norl. subsp. rotundata (DC.) Norl. LC
monilifera (L.) Norl. subsp. septentrionalis Norl. LC
monilifera (L.) Norl. subsp. subcanescens (DC.) Norl. LC

Chrysitrix
capensis L. var. capensis LC
capensis L. var. subteres C.B.Clarke LC
dodii C.B.Clarke LC
junciformis Nees LC

Chrysocoma, 248
acicularis Ehr.Bayer LC
candelabrum Ehr.Bayer LC
cernua L. LC
ciliata L. LC
coma-aurea L. LC
esterhuyseniae Ehr.Bayer ..... CR
flava Ehr.Bayer ..... DDD
hantamensis J.C.Manning & Goldblatt ..... VU
longifolia DC. LC
microphylla Thunb. LC
mozambicensis Ehr.Bayer LC
oblongifolia DC. LC
obtusata (Thunb.) Ehr.Bayer LC
puberula Merxm. LC
rigidula (DC.) Ehr.Bayer LC
schlechteri Ehr.Bayer LC
sparsifolia Hutch. LC
strigosa Ehr.Bayer LC
tomentosa L. LC
tridentata DC. LC
valida Ehr.Bayer LC

Chrysophyllum
viridifolium J.M.Wood & Franks LC

Chrysopogon
serrulatus Trin. LC

Cienfuegosia
digitata Cav. LC
gerrardii (Harv.) Hochr. LC
hildebrandtii Garcke LC

Cineraria, 248
albicans N.E.Br. LC
alchemilloides DC. subsp. alchemilloides ..... Rare
angulosa Lam. ..... EN
aspera Thunb. LC
atriplicifolia DC. ..... VU
austrotransvaalensis Cron ..... NT
canescens J.C.Wendl. ex Link var. canescens LC
canescens J.C.Wendl. ex Link var. flabellifolia Harv. LC
cyanomontana Cron ..... EN
decipiens Harv. LC
deltoidea Sond. LC
dryogeton Cron ..... VU
erodioides DC. var. erodioides LC
erodioides DC. var. tomentosa Cron ..... Critically Rare
erosa (Thunb.) Harv. LC
exilis DC. ..... DDT
geifolia (L.) L. LC
geraniifolia DC. LC
glandulosa Cron ..... VU
grandibracteata Hilliard LC
humifusa L'Hér. LC
lanosa DC. ..... DDD
lobata L'Hér. subsp. lasiocaulis Cron ..... Rare
lobata L'Hér. subsp. lobata LC
lobata L'Hér. subsp. platyptera Cron ..... NT
lobata L'Hér. subsp. soutpansbergensis Cron LC
longipes S.Moore ..... VU
lyratiformis Cron LC
mollis E.Mey. ex DC. LC
othonnoides Harv. ..... DDT
parvifolia Burtt Davy LC
pinnata O.Hoffm. ..... NT*
platycarpa DC. LC
saxifraga DC. LC
vagans Hilliard ..... EN
vallis-pacis Dinter ex Merxm. LC
volubilis Spreng.f. ..... DDD

Circandra, 413
serrata (L.) N.E.Br. ..... CR

Cissampelos
capensis L.f. LC
hirta Klotzsch LC
mucronata A.Rich. LC
torulosa E.Mey. ex Harv. LC

Cissus
cactiformis Gilg LC
cornifolia (Baker) Planch. LC

cussonioides Schinz....LC
diversilobata C.A.Sm....LC
fragilis E.Mey. ex Kunth....LC
quadrangularis L. var. quadrangularis....LC
rotundifolia (Forssk.) Vahl var. rotundifolia....LC

Citrullus
ecirrhosus Cogn....LC
lanatus (Thunb.) Matsum. & Nakai....LC

Cladium
mariscus (L.) Pohl subsp. jamaicense (Crantz) Kük....LC

Cladoraphis
cyperoides (Thunb.) S.M.Phillips....LC
spinosa (L.f.) S.M.Phillips....LC

Cladostemon
kirkii (Oliv.) Pax & Gilg....LC

Clausena
anisata (Willd.) Hook.f. ex Benth. var. anisata....LC

Cleistachne
sorghoides Benth....LC

Cleistanthus
schlechteri (Pax) Hutch. var. schlechteri....LC

Clematis
bowkeri Burtt Davy ex W.T.Wang....LC
brachiata Thunb....LC
hirsuta Perr. & Guill. var. junodii (Burtt Davy) W.T.Wang....LC
massoniana DC....LC
villosa DC. subsp. stanleyi (Hook.) Kuntze....LC

Cleome, 298
angustifolia Forssk. subsp. diandra (Burch.) Kers .LC
angustifolia Forssk. subsp. petersiana (Klotzsch ex Sond.) Kers....LC
bororensis (Klotzsch) Oliv....LC
conrathii Burtt Davy....NT
foliosa Hook.f. var. lutea (Sond.) Codd & Kers....LC
gynandra L....LC
hirta (Klotzsch) Oliv....LC
kalachariensis (Schinz) Gilg & Gilg-Ben....LC
macrophylla (Klotzsch) Briq....LC
maculata (Sond.) Szyszyl....LC
monophylla L....LC
oxyphylla Burch. var. oxyphylla....LC
oxyphylla Burch. var. robusta Kers....LC
paxii (Schinz) Gilg & Gilg-Ben....LC
rubella Burch....LC
schlechteri Briq....DDD

Cleretum, 413
herrei (Schwantes) Ihlenf. & Struck....LC
lyratifolium Ihlenf. & Struck....Rare
papulosum (L.f.) L.Bolus subsp. papulosum....LC
papulosum (L.f.) L.Bolus subsp. schlechteri (Schwantes) Ihlenf. & Struck....LC

Clerodendrum
africanum Moldenke....LC
glabrum E.Mey....LC
pleiosciadium Gürke....LC
suffruticosum Gürke var. natalense Moldenke....LC
ternatum Schinz....LC
transvaalense E.Thomas....LC

Cliffortia, 515
acanthophylla C.M.Whitehouse....EN
acockii Weim....CR
aculeata Weim....Rare
acutifolia Weim....LC
alata N.E.Br....VU
amplexistipula Schltr....LC
anthospermoides Fellingham....EN
apiculata Weim....CR
arborea Marloth....VU
arcuata Weim....LC
atrata Weim....LC
baccans Harv....LC
brevifolia Weim....LC
browniana Burtt Davy....LC
burchellii Stapf....LC
burgersii E.G.H.Oliv. & Fellingham....EN
carinata Weim....Rare
castanea Weim....LC
ceresana C.M.Whitehouse....Rare
cervicornu Weim....LC
complanata E.Mey....LC
concinna Weim....DDT
conifera E.G.H.Oliv. & Fellingham....EN
crassinervis Weim....Rare
crenata L.f....LC
crenulata Weim....DDT
cristata Weim....LC
cruciata C.M.Whitehouse....VU
cuneata Aiton....LC
curvifolia Weim....EN
cymbifolia Weim....DDT
densa Weim....LC
dentata Willd....LC
denticulata (Weim.) C.M.Whitehouse....LC
dichotoma Fellingham....VU
discolor Weim....DDT
dispar Weim....LC
dodecandra Weim....LC
dracomontana C.M.Whitehouse....LC
dregeana C.Presl var. dregeana....LC
dregeana C.Presl var. meyeriana (C.Presl) Weim. ..LC
drepanoides Eckl. & Zeyh....LC
erectisepala Weim....LC
ericifolia L.f....EN
eriocephalina Cham....LC
esterhuyseniae Weim....Rare
exilifolia Weim....LC
falcata L.f....LC
fasciculata Weim....DDT
ferricola C.M.Whitehouse....LC
ferruginea L.f....LC
filicaulis Schltdl. var. filicaulis....LC
filicaulis Schltdl. var. octandra (Cham.) Weim....LC
filicauloides Weim....LC
filifolia L.f....LC
geniculata Weim....DDT
glauca Weim....LC
gracilis Harv....DDT
gracillima C.M.Whitehouse....LC
graminea L.f. var. convoluta Weim....LC
graminea L.f. var. elegans Weim....DDT
graminea L.f. var. graminea....LC
grandifolia Eckl. & Zeyh. var. grandifolia....Rare
hantamensis Diels....LC
hermaphroditica Weim....DDT
heterophylla Weim....Rare
hexandra Weim....LC
hirsuta Eckl. & Zeyh....LC
hirta Burm.f....EN
ilicifolia L. var. cordifolia (Lam.) Harv....LC
ilicifolia L. var. ilicifolia....LC
ilicifolia L. var. incisa Harv....LC
incana Weim....VU
integerrima Weim....VU
intermedia Eckl. & Zeyh....DDT
juniperina L.f. var. juniperina....LC
juniperina L.f. var. pilosula Weim....LC
lanata Weim....DDT
lanceolata Weim....Rare
lepida Weim....LC
linearifolia Eckl. & Zeyh....LC
longifolia (Eckl. & Zeyh.) Weim....VU
marginata Eckl. & Zeyh....EN
micrantha Weim....LC
mirabilis Weim....LC
monophylla Weim....VU
montana Weim....Rare
multiformis Weim....NT
neglecta Schltr....LC
nitidula (Engl.) R.E. & T.C.E.Fr. subsp. nitidula....LC
nitidula (Engl.) R.E. & T.C.E.Fr. subsp. pilosa Weim....LC
nivenioides Fellingham....VU
obcordata L.f....LC
obovata E.Mey....LC
odorata L.f....LC
oligodonta C.M.Whitehouse....Rare
ovalis Weim....Rare
paucistaminea Weim. var. australis C.M.Whitehouse....LC
paucistaminea Weim. var. paucistaminea....LC
pedunculata Schltr....LC
perpendicularis C.M.Whitehouse....DDT
phillipsii Weim....VU
phyllanthoides Schltr....LC
pilifera Bolus....VU
polita Weim....LC
polygonifolia L. var. membranifolia Weim....LC
polygonifolia L. var. polygonifolia....LC
polygonifolia L. var. pubescens Weim....LC
polygonifolia L. var. trifoliata (L.) Harv....LC
prionota C.M.Whitehouse....Rare
propinqua Eckl. & Zeyh....LC
pterocarpa (Harv.) Weim....LC
pulchella L.f. var. mucronulata Weim....DDT
pulchella L.f. var. pulchella....LC
pungens C.Presl....LC
ramosissima Schltr....LC
recurvata (Weim.) C.M.Whitehouse....VU
reniformis (Weim.) C.M.Whitehouse....VU
repens Schltr....LC
reticulata Eckl. & Zeyh....DDT
rigida Weim....DDT
robusta Weim....LC
ruscifolia L. var. purpurea Weim....Rare
ruscifolia L. var. ruscifolia....LC
scandens C.M.Whitehouse....VU
schlechteri (Weim.) C.M.Whitehouse....NT
semiteres Weim....DDT
sericea Eckl. & Zeyh....LC
serpyllifolia Cham. & Schltdl....LC
setifolia Weim....Rare
sp. nov. (*Whitehouse 145* BOL)....CR
spathulata Weim....LC
stricta Weim....LC
strigosa Weim....Rare
strobilifera L....LC
subdura Weim....DDT
subsetacea (Eckl. & Zeyh.) Diels ex Bolus & Wolley-Dod....LC
tenuis Weim....VU
teretifolia L.f....LC
theodori-friesii Weim. var. puberula Weim....DDT
theodori-friesii Weim. var. theodori-friesii....LC
tricuspidata Harv....LC
triloba Harv....LC
tuberculata (Harv.) Weim. var. muricata (Harv.) Weim....LC
tuberculata (Harv.) Weim. var. tuberculata....LC
uncinata Weim. var. recta Weim....LC
uncinata Weim. var. uncinata....LC
varians Weim....DDT
verrucosa Weim....Rare
virgata Weim....LC
viridis Weim....VU
weimarckii C.M.Whitehouse....Rare

Clivia, 64
caulescens R.A.Dyer....NT
gardenii Hook....VU
miniata (Lindl.) Regel var. citrina Watson....DDT
miniata (Lindl.) Regel var. miniata....VU
mirabilis Rourke....VU
nobilis Lindl....VU
robusta B.G.Murray, Ran, De Lange, Hammett, Truter & Swanevelder....VU

Clutia
abyssinica Jaub. & Spach var. abyssinica....LC
affinis Sond....LC
africana Poir....DDT
alaternoides L. var. alaternoides....LC
alaternoides L. var. angustifolia E.Mey. ex Sond...LC
alaternoides L. var. brevifolia E.Mey. ex Sond....LC
alpina Prain....LC
cordata Bernh....LC
daphnoides Lam....LC
disceptata Prain....LC
dregeana Scheele....LC
ericoides Thunb. var. ericoides....LC
ericoides Thunb. var. pachyphylla Prain....LC
ericoides Thunb. var. tenuis Sond....LC
govaertsii Radcl.-Sm....LC
heterophylla Thunb....LC
hirsuta (Sond.) Müll.Arg. var. hirsuta....LC
hirsuta (Sond.) Müll.Arg. var. robusta Prain....LC
imbricata E.Mey. ex Sond....LC
impedita Prain....LC
katharinae Pax....LC
laxa Eckl. ex Sond....LC
marginata E.Mey. ex Sond....LC
monticola S.Moore var. monticola....LC
nana Prain....LC
natalensis Bernh....LC
ovalis Sond....LC
platyphylla Pax & K.Hoffm....LC
polifolia Jacq....LC
polygonoides L....LC
pterogona Müll.Arg....LC

pubescens Thunb. LC
pulchella L. var. franksiae Prain LC
pulchella L. var. obtusata Sond. LC
pulchella L. var. pulchella LC
rubricaulis Eckl. ex Sond. LC
sericea Müll.Arg. LC
thunbergii Sond. LC
tomentosa L. LC
virgata Pax & K.Hoffm. LC

Cnestis
polyphylla Lam. LC

Coccinia
adoensis (A.Rich.) Cogn. LC
hirtella Cogn. LC
palmata (Sond.) Cogn. LC
quinqueloba (Thunb.) Cogn. LC
rehmannii Cogn. LC
sessilifolia (Sond.) Cogn. LC
variifolia A.Meeuse LC

Coddia
rudis (E.Mey. ex Harv.) Verdc. LC

Codon
royenii L. LC
schenckii Schinz LC

Coelachyrum
yemenicum (Schweinf.) S.M.Phillips LC

Coelanthum
grandiflorum E.Mey. ex Fenzl LC
semiquinquefidum (Hook.f.) Druce LC
verticillatum Adamson LC

Coelorachis
capensis Stapf LC

Coffea
racemosa Lour. LC
zanguebariae Lour. LC

Cola
greenwayi Brenan var. greenwayi LC
natalensis Oliv. LC

Colchicum, 102
albanense (Schönland) J.C.Manning & Vinn. LC
albomarginatum (Schinz) J.C.Manning & Vinn. LC
asteroides (J.C.Manning & Goldblatt) J.C.Manning & Vinn. LC
austrocapense (U. & D.Müll.-Doblies) J.C.Manning & Vinn. LC
burkei (Baker) J.C.Manning & Vinn. LC
capense (L.) J.C.Manning & Vinn. subsp. capense LC
capense (L.) J.C.Manning & Vinn. subsp. ciliolatum (Schltr. & K.Krause) J.C.Manning & Vinn. LC
cedarbergense (U.Müll.-Doblies, Hähnl., U.U.Müll.-Doblies & D.Müll.-Doblies) J.C.Manning & Vinn. .. LC
circinatum (Baker) J.C.Manning & Vinn. subsp. circinatum LC
circinatum (Baker) J.C.Manning & Vinn. subsp. vestitum (U. & D.Müll.-Doblies) J.C.Manning & Vinn. LC
clanwilliamense (Pedrola, Membrives & J.M.Monts.) J.C.Manning & Vinn. ..... DDT
coloratum J.C.Manning & Vinn. subsp. burchellii (Baker) J.C.Manning & Vinn. LC
coloratum J.C.Manning & Vinn. subsp. coloratum ..... DDT
crenulatum (U.Müll.-Doblies, E.G.H.Oliv. & D.Müll.-Doblies) J.C.Manning & Vinn. LC
crispum (Schinz) J.C.Manning & Vinn. LC
cruciatum (U. & D.Müll.-Doblies) J.C.Manning & Vinn. ..... VU
cuspidatum (Baker) J.C.Manning & Vinn. LC
decipiens (N.E.Br.) J.C.Manning & Vinn. LC
dregei (C.Presl.) J.C.Manning & Vinn. LC
eghimbocymbion (U. & D.Müll.-Doblies) J.C.Manning & Vinn. LC
eucomoides (Jacq.) J.C.Manning & Vinn. LC
exiguum (Roessler) J.C.Manning & Vinn. subsp. vogelii (U. & D.Müll.-Doblies) J.C.Manning & Vinn. LC
greuterocymbium (U.Müll.-Doblies, Raus & D.Müll.-Doblies) J.C.Manning & Vinn. LC
hantamense (Engl.) J.C.Manning & Vinn. LC
henssenianum (U. & D.Müll.-Doblies) J.C.Manning & Vinn. ..... VU
hughocymbion (U. & D.Müll.-Doblies) J.C.Manning & Vinn. ..... VU
huntleyi (Pedrola, Membrives, J.M.Monts. & Caujapé) J.C.Manning & Vinn. ..... Rare
irroratum (Schltr. & K.Krause) J.C.Manning & Vinn. LC
karooparkense (U.Müll.-Doblies, Daber, J.M.Anderson & D.Müll.-Doblies) J.C.Manning & Vinn. LC
knersvlaktense (U. & D.Müll.-Doblies) J.C.Manning & Vinn. LC
kunkelianum (U. & D.Müll.-Doblies) J.C.Manning & Vinn. ..... DDD
leistneri (U.Müll.-Doblies & D.Müll.-Doblies) C.Archer LC
longipes (Baker) J.C.Manning & Vinn. LC
melanthoides (Willd.) J.C.Manning & Vinn. subsp. australe (U. & D.Müll.-Doblies) J.C.Manning & Vinn LC
melanthoides (Willd.) J.C.Manning & Vinn. subsp. melanthoides LC
melanthoides (Willd.) J.C.Manning & Vinn. subsp. transvaalense (U. & D.Müll.-Doblies) J.C.Manning & Vinn LC
natalense (Baker) J.C.Manning & Vinn. LC
orientiicapense (U. & D.Müll.-Doblies) J.C.Manning & Vinn. LC
poeltianum (U. & D.Müll.-Doblies) J.C.Manning & Vinn LC
praeirroratum (U. & D.Müll.-Doblies) J.C.Manning & Vinn LC
roseum (Engl.) J.C.Manning & Vinn. LC
scabromarginatum (Schltr. & K.Krause) J.C.Manning & Vinn. LC
stirtonii (U. & D.Müll.-Doblies) J.C.Manning & Vinn LC
striatum (Hochst. ex A.Rich.) J.C.Manning & Vinn LC
swazicum (U. & D.Müll.-Doblies) J.C.Manning & Vinn. ..... DDD
undulatum (U. & D.Müll.-Doblies) J.C.Manning & Vinn. ..... Rare
vanjaarsveldii (U.Müll.-Doblies, Hähnl., U.U.Müll.-Doblies & D.Müll.-Doblies) J.C.Manning & Vinn. ..... Rare
villosum (U. & D.Müll.-Doblies) J.C.Manning & Vinn. ..... Critically Rare
volutare (Burch.) J.C.Manning & Vinn. LC
walteri (Pedrola, Membrives & J.M.Monts.) J.C.Manning & Vinn. LC
worsonense (U. & D.Müll.-Doblies) J.C.Manning & Vinn LC

Coldenia
procumbens L. LC

Coleochloa
pallidior Nelmes LC
setifera (Ridl.) Gilly LC

Coleonema, 531
album (Thunb.) Bartl. & H.L.Wendl. LC
aspalathoides Juss. ex Don LC
calycinum (Steud.) I.Williams LC
juniperinum Sond. LC
nubigenum Esterh. LC
pulchellum I.Williams LC
pulchrum Hook. ..... Rare
virgatum (Schltdl.) Eckl. & Zeyh. ..... Rare

Coleotrype
natalensis C.B.Clarke LC

Colophospermum
mopane (J.Kirk ex Benth.) J.Kirk ex J.Léonard LC

Colpias
mollis E.Mey. ex Benth. LC

Colpodium, 200
drakensbergense Hedberg & I.Hedberg ..... VU

Colubrina, 507
nicholsonii A.E.van Wyk & Schrire ..... VU

Comborhiza, 249
longipes (K.Bremer) Anderb. & K.Bremer ..... Rare
virgata (N.E.Br.) Anderb. & K.Bremer LC

Combretum, 300
apiculatum Sond. subsp. apiculatum LC
bracteosum (Hochst.) Engl. & Diels LC
caffrum (Eckl. & Zeyh.) Kuntze LC
celastroides Welw. ex M.A.Lawson subsp. orientale Exell LC
collinum Fresen. subsp. gazense (Swynn. & Baker f.) Okafor LC
collinum Fresen. subsp. suluense (Engl. & Diels) Okafor LC
collinum Fresen. subsp. taborense (Engl.) Okafor LC
edwardsii Exell LC
erythrophyllum (Burch.) Sond. LC
hereroense Schinz subsp. hereroense LC
imberbe Wawra LC
kraussii Hochst. LC
microphyllum Klotzsch LC
mkuzense J.D.Carr & Retief ..... NT
moggii Exell LC
molle R.Br. ex G.Don LC
mossambicense (Klotzsch) Engl. LC
nelsonii Dummer LC
padoides Engl. & Diels LC
petrophilum Retief ..... Rare
tenuipes Engl. & Diels LC
vendae A.E.van Wyk LC
woodii Dummer LC
zeyheri Sond. LC

Commelina, 103
africana L. var. africana LC
africana L. var. barberae (C.B.Clarke) C.B.Clarke ... LC
africana L. var. krebsiana (Kunth) C.B.Clarke LC
africana L. var. lancispatha C.B.Clarke LC
bella Oberm. ..... DDT
benghalensis L. LC
diffusa Burm.f. subsp. diffusa LC
diffusa Burm.f. subsp. scandens (Welw. ex C.B.Clarke) Oberm. LC
eckloniana Kunth LC
erecta L. LC
forskaolii Vahl LC
imberbis Ehrenb. ex Hassk. LC
livingstonii C.B.Clarke LC
modesta Oberm. LC
petersii Hassk. LC
rogersii Burtt Davy ..... VU
subulata Roth LC
zambesica C.B.Clarke LC

Commicarpus
chinensis (L.) Heimerl subsp. natalensis Meikle LC
decipiens Meikle LC
helenae (Roem. & Schult.) Meikle var. helenae LC
pentandrus (Burch.) Heimerl LC
pilosus (Heimerl) Meikle LC
plumbagineus (Cav.) Standl. var. plumbagineus LC

Commiphora
africana (A.Rich.) Engl. var. africana LC
angolensis Engl. LC
capensis (Sond.) Engl. LC
cervifolia J.J.A.van der Walt LC
edulis (Klotzsch) Engl. subsp. edulis LC
glandulosa Schinz LC
gracilifrondosa Dinter ex J.J.A.van der Walt LC
harveyi (Engl.) Engl. LC
marlothii Engl. LC
mollis (Oliv.) Engl. LC
namaensis Schinz LC
neglecta I.Verd. LC
pyracanthoides Engl. LC
schimperi (O.Berg) Engl. LC
tenuipetiolata Engl. LC
viminea Burtt Davy LC
woodii Engl. LC
zanzibarica (Baill.) Engl. LC

Conicosia
elongata (Haw.) N.E.Br. LC
pugioniformis (L.) N.E.Br. subsp. alborosea (L.Bolus) Ihlenf. & Gerbaulet LC
pugioniformis (L.) N.E.Br. subsp. muiri (N.E.Br.) Ihlenf. & Gerbaulet LC
pugioniformis (L.) N.E.Br. subsp. pugioniformis ... LC

Conium
chaerophylloides (Thunb.) Sond. LC
fontanum Hilliard & B.L.Burtt var. alticola Hilliard & B.L.Burtt LC
fontanum Hilliard & B.L.Burtt var. fontanum LC
fontanum Hilliard & B.L.Burtt var. silvaticum Hilliard & B.L.Burtt LC
sphaerocarpum Hilliard & B.L.Burtt LC

Conophytum, 413
achabense S.A.Hammer ..... VU
acutum L.Bolus ..... VU
albiflorum (Rawé) S.A.Hammer LC

angelicae (Dinter & Schwantes) N.E.Br. subsp. angelicae LC
angelicae (Dinter & Schwantes) N.E.Br. subsp. tetragonum Rawé & S.A.Hammer LC
armianum S.A.Hammer ..... NT
arthurolfago S.A.Hammer LC
auriflorum Tischer subsp. auriflorum ..... Rare
auriflorum Tischer subsp. turbiniforme (Rawé) S.A.Hammer ..... Rare
bachelorum S.A.Hammer ..... VU
bicarinatum L.Bolus LC
bilobum (Marloth) N.E.Br. subsp. altum (L.Bolus) S.A.Hammer LC
bilobum (Marloth) N.E.Br. subsp. bilobum var. bilobum LC
bilobum (Marloth) N.E.Br. subsp. bilobum var. elishae (N.E.Br.) S.A.Hammer LC
bilobum (Marloth) N.E.Br. subsp. bilobum var. linearilucidum (L.Bolus) S.A.Hammer LC
bilobum (Marloth) N.E.Br. subsp. bilobum var. muscosipapillatum (Lavis) S.A.Hammer LC
bilobum (Marloth) N.E.Br. subsp. claviferens S.A.Hammer LC
bilobum (Marloth) N.E.Br. subsp. gracilistylum (L.Bolus) S.A.Hammer LC
blandum L.Bolus ..... NT
bolusiae Schwantes subsp. bolusiae ..... Rare
bolusiae Schwantes subsp. primavernum S.A.Hammer LC
breve N.E.Br. LC
brunneum S.A.Hammer LC
bruynsii S.A.Hammer LC
burgeri L.Bolus ..... EN
calculus (A.Berger) N.E.Br. subsp. calculus LC
calculus (A.Berger) N.E.Br. subsp. vanzylii (Lavis) S.A.Hammer LC
caroli Lavis ..... Rare
carpianum L.Bolus ..... Rare
chauviniae (Schwantes) S.A.Hammer LC
chrisocruxum S.A.Hammer LC
chrisolum S.A.Hammer ..... Critically Rare
comptonii N.E.Br. LC
concavum L.Bolus ..... Rare
concordans G.D.Rowley ..... Rare
cubicum Pavelka LC
cupreiflorum Tischer LC
depressum Lavis subsp. depressum LC
depressum Lavis subsp. perdurans S.A.Hammer LC
devium G.D.Rowley subsp. devium LC
devium G.D.Rowley subsp. stiriferum S.A.Hammer & Barnhill LC
ectypum N.E.Br. subsp. brownii (Tischer) S.A.Hammer LC
ectypum N.E.Br. subsp. cruciatum S.A.Hammer ..... Critically Rare
ectypum N.E.Br. subsp. ectypum LC
ectypum N.E.Br. subsp. ignavum S.A.Hammer LC
ectypum N.E.Br. subsp. sulcatum (L.Bolus) S.A.Hammer LC
ernstii S.A.Hammer subsp. ernstii ..... Rare
fibuliforme (Haw.) N.E.Br. ..... DDT
ficiforme (Haw.) N.E.Br. LC
flavum N.E.Br. subsp. flavum LC
flavum N.E.Br. subsp. novicium (N.E.Br.) S.A.Hammer LC
francoiseae (S.A.Hammer) S.A.Hammer LC
fraternum (N.E.Br.) N.E.Br. LC
friedrichiae (Dinter) Schwantes LC
frutescens Schwantes ..... Rare
fulleri L.Bolus LC
globosum (N.E.Br.) N.E.Br. ..... Rare
hammeri G.Will. & H.C.Kenn ..... Critically Rare
hermarium (S.A.Hammer) S.A.Hammer ..... Rare
herreanthus S.A.Hammer subsp. herreanthus ..... CR PE
herreanthus S.A.Hammer subsp. rex S.A.Hammer LC
hians N.E.Br. LC
inornatum N.E.Br. LC
irmae S.A.Hammer & Barnhill ..... Rare
jarmilae Halda ..... DDT
joubertii Lavis LC
jucundum (N.E.Br.) N.E.Br. subsp. fragile (Tischer) S.A.Hammer LC
jucundum (N.E.Br.) N.E.Br. subsp. jucundum LC
jucundum (N.E.Br.) N.E.Br. subsp. marlothii (N.E.Br.) S.A.Hammer LC
jucundum (N.E.Br.) N.E.Br. subsp. ruschii (Schwantes) S.A.Hammer LC
khamiesbergense (L.Bolus) Schwantes ..... VU
kubusanum N.E.Br. ..... DDT
limpidum S.A.Hammer ..... NT
lithopsoides L.Bolus subsp. boreale (L.Bolus) S.A.Hammer ..... DDD
lithopsoides L.Bolus subsp. koubergense (L.Bolus) S.A.Hammer ..... Rare
lithopsoides L.Bolus subsp. lithopsoides LC
loeschianum Tischer LC
longibracteatum L.Bolus ..... Rare
longum N.E.Br. LC
luckhoffii Lavis LC
lydiae (H.Jacobsen) G.D.Rowley LC
marginatum Lavis subsp. haramoepense (L.Bolus) S.A.Hammer LC
marginatum Lavis subsp. littlewoodii (L.Bolus) S.A.Hammer ..... Rare
marginatum Lavis subsp. marginatum LC
maughanii N.E.Br. subsp. armeniacum S.A.Hammer LC
maughanii N.E.Br. subsp. latum (Tischer) S.A.Hammer LC
maughanii N.E.Br. subsp. maughanii LC
meyeri N.E.Br. ..... Rare
minimum (Haw.) N.E.Br. LC
minusculum (N.E.Br.) N.E.Br. subsp. aestiflorens S.A.Hammer & T.Smale LC
minusculum (N.E.Br.) N.E.Br. subsp. leipoldtii (N.E.Br.) S.A.Hammer LC
minusculum (N.E.Br.) N.E.Br. subsp. minisculum LC
minutum (Haw.) N.E.Br. var. minutum LC
minutum (Haw.) N.E.Br. var. nudum (Tischer) Boom LC
minutum (Haw.) N.E.Br. var. pearsonii (N.E.Br.) Boom LC
mirabile A.R.Mitch. & S.A.Hammer ..... Critically Rare
obcordellum (Haw.) N.E.Br. subsp. obcordellum var. ceresianum (L.Bolus) S.A.Hammer LC
obcordellum (Haw.) N.E.Br. subsp. obcordellum var. obcordellum LC
obcordellum (Haw.) N.E.Br. subsp. rolfii (de Boer) S.A.Hammer LC
obcordellum (Haw.) N.E.Br. subsp. stenandrum (L.Bolus) S.A.Hammer LC
obscurum N.E.Br. subsp. barbatum (L.Bolus) S.A.Hammer ..... DDT
obscurum N.E.Br. subsp. obscurum LC
obscurum N.E.Br. subsp. sponsaliorum (S.A.Hammer) S.A.Hammer LC
obscurum N.E.Br. subsp. vitreopapillum (Rawé) S.A.Hammer LC
pageae (N.E.Br.) N.E.Br. LC
pellucidum Schwantes subsp. cupreatum (Tischer) S.A.Hammer var. cupreatum LC
pellucidum Schwantes subsp. cupreatum (Tischer) S.A.Hammer var. terrestre (Tischer) S.A.Hammer LC
pellucidum Schwantes subsp. pellucidum var. lilianum (Littlew.) S.A.Hammer LC
pellucidum Schwantes subsp. pellucidum var. neohallii S.A.Hammer LC
pellucidum Schwantes subsp. pellucidum var. pellucidum LC
pellucidum Schwantes subsp. pellucidum var. terricolor (Tischer) Littlew. ex S.A.Hammer LC
pellucidum Schwantes subsp. saueri S.A.Hammer & T.Smale LC
phoenicium S.A.Hammer ..... VU
piluliforme (N.E.Br.) N.E.Br. subsp. edwardii (Schwantes) S.A.Hammer ..... Rare
piluliforme (N.E.Br.) N.E.Br. subsp. piluliforme LC
praesectum N.E.Br. LC
pubescens (Tischer) G.D.Rowley LC
pubicalyx Lavis LC
quaesitum (N.E.Br.) N.E.Br. subsp. quaesitum var. quaesitum LC
quaesitum (N.E.Br.) N.E.Br. subsp. quaesitum var. rostratum (Tischer) S.A.Hammer LC
ratum S.A.Hammer ..... VU
reconditum A.R.Mitch. subsp. buysianum (A.R.Mitch. & S.A.Hammer) S.A.Hammer ..... Rare
reconditum A.R.Mitch. subsp. reconditum LC
regale Lavis ..... Critically Rare
roodiae N.E.Br. subsp. corrugatum T.Smale LC
roodiae N.E.Br. subsp. cylindratum (Schwantes) T.Smale LC
roodiae N.E.Br. subsp. roodiae LC
roodiae N.E.Br. subsp. sanguineum (S.A.Hammer) T.Smale ..... VU
rugosum S.A.Hammer LC
saxetanum (N.E.Br.) N.E.Br. LC
schlechteri Schwantes ..... Critically Rare
semivestitum L.Bolus ..... EX
smorenskaduense de Boer ..... VU
stephanii Schwantes subsp. helmutii (Lavis) S.A.Hammer LC
stephanii Schwantes subsp. stephanii LC
stevens-jonesianum L.Bolus LC
subfenestratum Schwantes LC
subterraneum T.Smale & T.Jacobs ..... Rare
swanepoelianum Rawé subsp. proliferans S.A.Hammer LC
swanepoelianum Rawé subsp. rubrolineatum (Rawé) S.A.Hammer LC
swanepoelianum Rawé subsp. swanepoelianum ..... Rare
tantillum N.E.Br. subsp. amicorum S.A.Hammer & Barnhill LC
tantillum N.E.Br. subsp. eenkokerense (L.Bolus) S.A.Hammer ..... Rare
tantillum N.E.Br. subsp. heleniae (Rawé) S.A.Hammer LC
tantillum N.E.Br. subsp. inexpectatum S.A.Hammer ..... Rare
tantillum N.E.Br. subsp. lindenianum (Lavis & S.A.Hammer) S.A.Hammer LC
tantillum N.E.Br. subsp. tantillum ..... Rare
taylorianum (Dinter & Schwantes) N.E.Br. subsp. rosynense S.A.Hammer LC
tomasi Halda ..... DDT
truncatum (Thunb.) N.E.Br. subsp. truncatum var. truncatum LC
truncatum (Thunb.) N.E.Br. subsp. truncatum var. wiggettiae (N.E.Br.) Rawé LC
truncatum (Thunb.) N.E.Br. subsp. viridicatum (N.E.Br.) S.A.Hammer LC
turrigerum (N.E.Br.) N.E.Br. ..... Rare
uviforme (Haw.) N.E.Br. subsp. decoratum (N.E.Br.) S.A.Hammer LC
uviforme (Haw.) N.E.Br. subsp. rauhii (Tischer) S.A.Hammer LC
uviforme (Haw.) N.E.Br. subsp. subincanum (Tischer) S.A.Hammer ..... VU
uviforme (Haw.) N.E.Br. subsp. uviforme LC
vanheerdei Tischer ..... Rare
velutinum Schwantes subsp. polyandrum (Lavis) S.A.Hammer ..... Rare
velutinum Schwantes subsp. velutinum ..... Rare
verrucosum (Lavis) G.D.Rowley ..... Rare
violaciflorum Schick & Tischer LC
wettsteinii (A.Berger) N.E.Br. LC

Conostomium

natalense (Hochst.) Bremek. var. glabrum Bremek. LC
natalense (Hochst.) Bremek. var. natalense LC
natalense (Hochst.) Bremek. var. ovalifolium Bremek. LC
natalense (Hochst.) Bremek. var. tomentellum Bremek. LC
zoutpansbergense (Bremek.) Bremek. LC

Convolvulus

aschersonii Engl. LC
bidentatus Bernh. ex C.Krauss LC
boedeckerianus Peter LC
capensis Burm.f. LC
dregeanus Choisy LC
farinosus L. LC
galpinii C.H.Wright LC
multifidus Thunb. LC
natalensis Bernh. ex Krauss LC
ocellatus Hook.f. var. ocellatus LC
sagittatus Thunb. LC
thunbergii Roem. & Schult. LC

Conyza

aegyptiaca (L.) Aiton LC
attenuata DC. LC
gouanii (L.) Willd. LC
obscura DC. LC
pinnata (L.f.) Kuntze LC

pinnatifida (Thunb.) Less. LC
podocephala DC....LC
scabrida DC....LC
ulmifolia (Burm.f.) Kuntze LC

Coptosperma
littorale (Hiern) Degreef....LC
rhodesiacum (Bremek.) Degreef LC
supra-axillare (Hemsl.) Degreef....LC
zygoon (Bridson) Degreef LC

Corallocarpus
bainesii (Hook.f.) A.Meeuse LC
dissectus Cogn.....LC
schinzii Cogn. LC
triangularis Cogn. LC

Corbichonia
decumbens (Forssk.) Exell....LC
rubriviolacea (Friedrich) C.Jeffrey LC

Corchorus
asplenifolius Burch....LC
confusus Wild LC
junodii (Schinz) N.E.Br.....LC
kirkii N.E.Br. LC
longipedunculatus Mast....LC
pinnatipartitus Wild....LC
psammophilus Codd ....Thr*
schimperi Cufod....LC
sulcatus I.Verd....LC
velutinus Wild....LC

Cordia
africana Lam....LC
caffra Sond.....LC
grandicalyx Oberm....LC
ovalis R.Br. ex A.DC.....LC
quercifolia Klotzsch LC
sinensis Lam....LC

Cordyla
africana Lour. LC

Cordylogyne
globosa E.Mey.....LC

Corpuscularia, 417
angustifolia (L.Bolus) H.E.K.Hartmann LC
angustipetala (Lavis) H.E.K.Hartmann ....VU
appressa (L.Bolus) H.E.K.Hartmann....LC
britteniae (L.Bolus) H.E.K.Hartmann LC
cymbiformis (Haw.) Schwantes LC
gracilis (L.Bolus) H.E.K.Hartmann LC
lehmannii (Eckl. & Zeyh.) Schwantes .... CR
taylori (N.E.Br.) Schwantes LC

Corrigiola
capensis Willd. subsp. capensis....LC
litoralis L. subsp. litoralis var. litoralis LC
litoralis L. subsp. litoralis var. perennans Chaudhri LC

Corycium, 181
alticola Parkman & Schelpe....LC
bicolorum (Thunb.) Sw.....LC
bifidum Sond.....CR
carnosum (Lindl.) Rolfe LC
crispum (Thunb.) Sw. LC
deflexum (Bolus) Rolfe LC
dracomontanum Parkman & Schelpe....LC
excisum Lindl. LC
flanaganii (Bolus) Kurzweil & H.P.Linder LC
ingeanum E.G.H.Oliv. .... EN
microglossum Lindl.... CR
nigrescens Sond....LC
orobanchoides (L.f.) Sw.....LC
tricuspidatum Bolus....DDD

Corymbium, 250
africanum L. subsp. africanum LC
africanum L. subsp. scabridum (P.J.Bergius) Weitz var. fourcadei (Hutch.) Weitz....LC
africanum L. subsp. scabridum (P.J.Bergius) Weitz var. gramineum (Burm.f.) Weitz LC
africanum L. subsp. scabridum (P.J.Bergius) Weitz var. scabridum....LC
congestum E.Mey. ex DC. LC
cymosum E.Mey. ex DC.....LC
elsiae Weitz .... Rare
enerve Markötter....LC
glabrum L. var. glabrum LC
glabrum L. var. rogersii (Markötter) Weitz....LC
laxum Compton subsp. bolusii Weitz..... Rare
laxum Compton subsp. laxum LC
theileri Markötter ....Critically Rare
villosum L.f.....LC

Corymborkis
corymbis Thouars LC

Costularia
natalensis C.B.Clarke....LC

Cotula, 250
andreae (E.Phillips) K.Bremer & Humphries .... Rare
anthemoides L. LC
australis (Spreng.) Hook.f.....LC
barbata DC.....LC
bipinnata Thunb. LC
bracteolata E.Mey. ex DC. ....Thr*
burchellii DC.....LC
ceniifolia DC. LC
coronopifolia L.....LC
dielsii Muschl.....LC
duckittiae (L.Bolus) K.Bremer & Humphries .....VU
eckloniana (DC.) Levyns .... EN
filifolia Thunb.... CR
heterocarpa DC.....LC
hispida (DC.) Harv. LC
laxa DC.....LC
leptalea DC. LC
linearifolia (DC.) Hilliard LC
loganii Hutch.....DDD
macroglossa Bolus ex Schltr.....LC
mariae K.Bremer & Humphries LC
melaleuca Bolus LC
membranifolia Hilliard LC
microglossa (DC.) O.Hoffm. & Kuntze ex Kuntze ..LC
montana Compton....LC
myriophylloides Harv. .... CR
nigellifolia (DC.) K.Bremer & Humphries var. nigellifolia LC
nigellifolia (DC.) K.Bremer & Humphries var. tenuior (DC.) P.P.J.Herman....LC
nudicaulis Thunb. LC
paludosa Hilliard....NT
paradoxa Schinz....DDT
pedicellata Compton....Thr*
pedunculata (Schltr.) E.Phillips ....VU
pterocarpa DC.....Thr*
pusilla Thunb. ....NT
radicalis (Killick & C.Claassen) Hilliard & B.L.BurttLC
sericea L.f.....LC
socialis Hilliard....LC
sororia DC.....LC
tenella E.Mey. ex DC. LC
thunbergii Harv.....LC
turbinata L. LC
villosa DC.....LC
vulgaris Levyns....LC
vulgaris Levyns var. vulgaris.... CR
zeyheri Fenzl....LC

Cotyledon, 306
adscendens R.A.Dyer.... EN
barbeyi Schweinf. ex Baker....LC
campanulata Marloth....LC
cuneata Thunb.....LC
eliseae Van Jaarsv..... Rare
orbiculata L. var. dactylopsis Toelken LC
orbiculata L. var. flanaganii (Schönland & Baker f.) Toelken ....NT
orbiculata L. var. oblonga (Haw.) DC.....LC
orbiculata L. var. orbiculata LC
orbiculata L. var. spuria (L.) Toelken....LC
papillaris L.f.....LC
pendens Van Jaarsv.....Thr*
tomentosa Harv. subsp. ladismithiensis (Poelln.) Toelken ....VU
tomentosa Harv. subsp. tomentosa ....VU
velutina Hook.f. LC
woodii Schönland & Baker f.....LC

Courtoisina
assimilis (Steud.) Maquet....LC
cyperoides (Roxb.) Soják....LC

Crabbea
acaulis N.E.Br.....LC
angustifolia Nees LC
galpinii C.B.Clarke....LC
hirsuta Harv.....LC
nana Nees LC
ovalifolia Ficalho & Hiern....LC
velutina S.Moore....LC

Craibia
zimmermannii (Harms) Dunn....LC

Craspedorhachis
africana Benth.....LC

Crassocephalum
crepidioides (Benth.) S.Moore LC
rubens (Juss. ex Jacq.) S.Moore....LC
sarcobasis (DC.) S.Moore LC

Crassula, 306
acinaciformis Schinz LC
alba Forssk. var. alba....LC
alba Forssk. var. pallida Toelken....LC
alba Forssk. var. parvisepala (Schönland) Toelken LC
alcicornis Schönland....VU
alpestris Thunb. subsp. alpestris LC
alpestris Thunb. subsp. massonii (Britten & Baker f.) Toelken .... Rare
alstonii Marloth LC
ammophila Toelken....NT
aphylla Schönland & Baker f. LC
arborescens (Mill.) Willd. subsp. arborescens.....LC
arborescens (Mill.) Willd. subsp. undulatifolia Toelken ....Critically Rare
atropurpurea (Haw.) D.Dietr. var. anomala (Schönland & Baker f.) Toelken LC
atropurpurea (Haw.) D.Dietr. var. atropurpurea LC
atropurpurea (Haw.) D.Dietr. var. cultriformis (Friedrich) Toelken LC
atropurpurea (Haw.) D.Dietr. var. muirii (Schönland) R.Fern....LC
atropurpurea (Haw.) D.Dietr. var. purcellii (Schönland) Toelken....LC
atropurpurea (Haw.) D.Dietr. var. watermeyeri (Compton) Toelken LC
badspoortense Van Jaarsv..... Rare
barbata Thunb. subsp. barbata LC
barbata Thunb. subsp. broomii (Schönland) Toelken ....DDT
barklyi N.E.Br.....LC
bergioides Harv. ....NT
biplanata Haw. LC
brachystachya Toelken .... Rare
brevifolia Harv. subsp. brevifolia LC
brevifolia Harv. subsp. psammophila Toelken....VU
campestris (Eckl. & Zeyh.) Endl. ex Walp.....LC
capensis (L.) Baill. var. albertiniae (Schönland) Toelken ....Thr*
capensis (L.) Baill. var. capensis....LC
capensis (L.) Baill. var. promontorii (Schönland & Baker f.) Toelken .... Rare
capitella Thunb. subsp. capitella LC
capitella Thunb. subsp. meyeri (Harv.) Toelken LC
capitella Thunb. subsp. nodulosa (Schönland) Toelken LC
capitella Thunb. subsp. sessilicymula (Mogg) Toelken LC
capitella Thunb. subsp. thyrsiflora (Thunb.) Toelken LC
ciliata L.....LC
clavata N.E.Br. LC
coccinea L. LC
columella Marloth & Schönland .... Rare
columnaris Thunb. subsp. columnaris LC
columnaris Thunb. subsp. prolifera Friedrich.....LC
compacta Schönland....LC
congesta N.E.Br. subsp. congesta LC
congesta N.E.Br. subsp. laticephala (Schönland) Toelken ....Thr*
corallina Thunb. subsp. corallina....LC
corallina Thunb. subsp. macrorrhiza Toelken.....LC
cordata Thunb.....LC
cotyledonis Thunb. LC
cremnophila Van Jaarsv. & A.E.van Wyk ..... Rare
crenulata Thunb.....LC
cultrata L.....LC
cymbiformis Toelken.....Critically Rare
cymosa P.J.Bergius....LC
deceptor Schönland & Baker f. LC
decidua Schönland....NT
decumbens Thunb. var. brachyphylla (Adamson) Toelken ....NT
decumbens Thunb. var. decumbens....LC
dejecta Jacq.....LC
deltoidea Thunb. LC
dentata Thunb. LC
dependens Bolus....LC
depressa (Eckl. & Zeyh.) Toelken LC

dichotoma L. LC
dodii Schönland & Baker f. ....DDT
elatinoides (Eckl. & Zeyh.) Friedrich ....DDT
elegans Schönland & Baker f. subsp. elegans LC
elsieae Toelken ....Critically Rare
ericoides Haw. subsp. ericoides....LC
ericoides Haw. subsp. tortuosa Toelken LC
exilis Harv. subsp. cooperi (Regel) Toelken....LC
exilis Harv. subsp. exilis .... Rare
exilis Harv. subsp. picturata (Boom) G.D.Rowley ..LC
exilis Harv. subsp. sedifolia (N.E.Br.) Toelken....LC
expansa Dryand. subsp. expansa LC
expansa Dryand. subsp. filicaulis (Haw.) Toelken..LC
expansa Dryand. subsp. fragilis (Baker) Toelken...LC
expansa Dryand. subsp. pyrifolia (Compton) Toelken LC
fallax Friedrich LC
fascicularis Lam....LC
filiformis (Eckl. & Zeyh.) D.Dietr. LC
flanaganii Schönland & Baker f. LC
flava L....LC
foveata Van Jaarsv.... Rare
fusca Herre .... Rare
garibina Marloth & Schönland subsp. garibina....LC
garibina Marloth & Schönland subsp. glabra Toelken LC
gemmifera Friedrich LC
glomerata P.J.Bergius LC
grammanthoides (Schönland) Toelken....DDT
grisea Schönland....LC
hemisphaerica Thunb. LC
hirsuta Schönland & Baker f....LC
hirtipes Harv. LC
inandensis Schönland & Baker f....LC
inanis Thunb. LC
intermedia Schönland....LC
lactea Sol. LC
lanceolata (Eckl. & Zeyh.) Endl. ex Walp. subsp. denticulata (Brenan) Toelken LC
lanceolata (Eckl. & Zeyh.) Endl. ex Walp. subsp. lanceolata....LC
lanceolata (Eckl. & Zeyh.) Endl. ex Walp. subsp. transvaalensis (Kuntze) Toelken....LC
lanuginosa Harv. var. lanuginosa....LC
lanuginosa Harv. var. pachystemon (Schönland & Baker f.) Toelken LC
lasiantha Drège ex Harv. .... Rare
latibracteata Toelken LC
macowaniana Schönland & Baker f....LC
maputensis R.Fern. LC
mesembrianthemopsis Dinter LC
mesembryanthoides (Haw.) D.Dietr. subsp. hispida (Haw.) Toelken....LC
mesembryanthoides (Haw.) D.Dietr. subsp. mesembryanthoides LC
minuta Toelken LC
mollis Thunb. LC
montana Thunb. subsp. montana LC
montana Thunb. subsp. quadrangularis (Schönland) Toelken LC
multicava Lem. subsp. floribunda Friedrich ex Toelken LC
multicava Lem. subsp. multicava LC
multiceps Harv. .... Rare
multiflora Schönland & Baker f. subsp. leucantha (Schönland & Baker f.) Toelken ....DDT
multiflora Schönland & Baker f. subsp. multiflora LC
muricata Thunb....LC
muscosa L. var. muscosa LC
muscosa L. var. obtusifolia (Harv.) G.D.Rowley LC
muscosa L. var. parvula (Eckl. & Zeyh.) Toelken....LC
muscosa L. var. polpodacea (Eckl. & Zeyh.) G.D.Rowley LC
namaquensis Schönland & Baker f. subsp. comptonii (Hutchinson & Pillans) Toelken .... Rare
namaquensis Schönland & Baker f. subsp. lutea (Schönland) Toelken....LC
namaquensis Schönland & Baker f. subsp. namaquensis....LC
natalensis Schönland LC
natans Thunb. var. minus (Eckl. & Zeyh.) G.D.Rowley LC
natans Thunb. var. natans LC
nemorosa (Eckl. & Zeyh.) Endl. ex Walp. LC
nudicaulis L. var. herrei (Friedrich) Toelken LC
nudicaulis L. var. nudicaulis LC
nudicaulis L. var. platyphylla (Harv.) Toelken LC
oblanceolata Schönland & Baker f. LC
obovata Haw. var. dregeana (Harv.) Toelken .... VU
obovata Haw. var. obovata LC
obtusa Haw. LC
orbicularis L. LC
ovata (Mill.) Druce....LC
pageae Toelken LC
pallens Schönland & Baker f. LC
papillosa Schönland & Baker f. LC
peculiaris (Toelken) Toelken & Wickens.... Rare
pellucida L. subsp. alsinoides (Hook.f.) Toelken ...LC
pellucida L. subsp. brachypetala (Drège ex Harv.) Toelken LC
pellucida L. subsp. marginalis (Dryand. in Aiton) Toelken LC
pellucida L. subsp. pellucida....LC
pellucida L. subsp. spongiosa Toelken.... Rare
peploides Harv. LC
perfoliata L. var. coccinea (Sweet) G.D.Rowley LC
perfoliata L. var. heterotricha (Schinz) Toelken....LC
perfoliata L. var. minor (Haw.) G.D.Rowley LC
perfoliata L. var. perfoliata....LC
perforata Thunb....LC
planifolia Schönland LC
plegmatoides Friedrich .... VU
pruinosa L. LC
pseudohemisphaerica Friedrich....LC
pubescens Thunb. subsp. pubescens....LC
pubescens Thunb. subsp. radicans (Haw.) Toelken LC
pubescens Thunb. subsp. rattrayi (Schönland & Baker f.) Toelken LC
pustulata Toelken....LC
pyramidalis Thunb. LC
rogersii Schönland LC
roggeveldii Schönland .... Rare
rubricaulis Eckl. & Zeyh. LC
rudolfii Schönland & Baker f. LC
rupestris Thunb. subsp. commutata (Friedrich) Toelken .... Rare
rupestris Thunb. subsp. marnierana (H.E.Huber & H.Jacobsen) Toelken .... Rare
rupestris Thunb. subsp. rupestris....LC
sarcocaulis Eckl. & Zeyh. subsp. rupicola Toelken LC
sarcocaulis Eckl. & Zeyh. subsp. sarcocaulis....LC
sarmentosa Harv. var. integrifolia Toelken .... Rare
sarmentosa Harv. var. sarmentosa LC
saxifraga Harv. LC
scabra L. LC
sebaeoides (Eckl. & Zeyh.) Toelken....LC
sediflora (Eckl. & Zeyh.) Endl. & Walp. var. amatolica (Schönland) Toelken....DDD
sediflora (Eckl. & Zeyh.) Endl. & Walp. var. sediflora LC
sericea Schönland var. hottentotta (Marloth & Schönland) Toelken....LC
sericea Schönland var. sericea LC
sericea Schönland var. velutina (Friedrich) Toelken .... Rare
setulosa Harv. var. deminuta (Diels) Toelken .... VU
setulosa Harv. var. jenkinsii Schönland....LC
setulosa Harv. var. longiciliata Toelken....LC
setulosa Harv. var. rubra (N.E.Br.) G.D.Rowley LC
setulosa Harv. var. setulosa....LC
simulans Schönland .... VU
sladenii Schönland .... NT
socialis Schönland.... Rare
southii Schönland subsp. southii....LC
southii Schönland subsp. sphaerocephala Toelken LC
spathulata Thunb. LC
streyi Toelken .... Rare
strigosa L. LC
subacaulis Schönland & Baker f. subsp. erosula (N.E.Br.) Toelken....LC
subacaulis Schönland & Baker f. subsp. subacaulis.... VU
subaphylla (Eckl. & Zeyh.) Harv. var. subaphylla ...LC
subaphylla (Eckl. & Zeyh.) Harv. var. virgata (Harv.) Toelken LC
subulata L. var. fastigiata (Schönland) Toelken LC
subulata L. var. hispida Toelken .... EX
subulata L. var. subulata....LC
susannae Rauh & Friedrich.... VU
swaziensis Schönland LC
tabularis Dinter....LC
tecta Thunb....LC
tenuicaulis Schönland....LC
tenuipedicellata Schönland & Baker f. LC
tetragona L. subsp. acutifolia (Lam.) Toelken LC
tetragona L. subsp. connivens (Schönland) Toelken LC
tetragona L. subsp. lignescens Toelken LC
tetragona L. subsp. robusta (Toelken) Toelken LC
tetragona L. subsp. rudis (Schönland & Baker f.) Toelken LC
tetragona L. subsp. tetragona....LC
thunbergiana Schult. subsp. minutiflora (Schönland & Baker f.) Toelken .... Rare
thunbergiana Schult. subsp. thunbergiana LC
tomentosa Thunb. var. glabrifolia (Harv.) G.D.Rowley LC
tomentosa Thunb. var. tomentosa....LC
tuberella Toelken LC
umbella Jacq....LC
umbellata Thunb....LC
umbraticola N.E.Br. LC
vaginata Eckl. & Zeyh. subsp. vaginata....LC
vestita Thunb. .... Rare
whiteheadii Harv....LC

Craterocapsa
alfredica D.Y.Hong LC
congesta Hilliard & B.L.Burtt LC
insizwae (Zahlbr.) Hilliard & B.L.Burtt....LC
montana (A.DC.) Hilliard & B.L.Burtt....LC
tarsodes Hilliard & B.L.Burtt LC

Craterostigma
plantagineum Hochst....LC
wilmsii Engl. ex Diels....LC

Crepidomanes
borbonicum (Bosch) J.P.Roux LC
inopinatum (Pic.Serm.) J.P.Roux var. inopinatum LC
melanotrichum (Schltdl.) J.P.Roux LC

Crepidorhopalon
debilis (Skan) Eb.Fisch....LC
spicatus (Engl.) Eb.Fisch....LC

Crinum, 65
acaule Baker .... NT
bulbispermum (Burm.f.) Milne-Redh. & Schweick.... Declining
buphanoides Welw. ex Baker LC
campanulatum Herb. .... NT
crassicaule Baker....LC
graminicola I.Verd. LC
lineare L.f. .... VU
lugardiae N.E.Br....LC
macowanii Baker.... Declining
minimum Milne-Redh....LC
moorei Hook.f. .... VU
paludosum I.Verd. LC
stuhlmannii Baker.... Declining
variabile (Jacq.) Herb. LC

Crocosmia, 137
aurea (Pappe ex Hook.) Planch. subsp. aurea....LC
fucata (Herb.) M.P.de Vos.... VU
masoniorum (L.Bolus) N.E.Br.... VU
mathewsiana (L.Bolus) Goldblatt .... VU
paniculata (Klatt) Goldblatt....LC
pearsei Oberm. .... Rare
pottsii (McNab ex Baker) N.E.Br. LC

Cromidon, 541
austerum Hilliard LC
confusum Hilliard....LC
corrigioloides (Rolfe) Compton....LC
decumbens (Thunb.) Hilliard....LC
dregei Hilliard LC
gracile Hilliard.... Rare
hamulosum (E.Mey.) Hilliard.... DDD
microechinos Hilliard....LC
minutum (Rolfe) Hilliard....LC
plantaginis (L.f.) Hilliard....LC
varicalyx Hilliard LC

Crossandra
fruticulosa Lindau LC
greenstockii S.Moore....LC
mucronata Lindau LC
zuluensis W.T.Vos & T.J.Edwards LC

Crossopteryx
febrifuga (Afzel. ex G.Don) Benth. LC

Crossyne
flava (W.F.Barker ex Snijman) D. & U.Müll.-Doblies....LC
guttata (L.) D. & U.Müll.-Doblies....LC
Crotalaria, 371
anthyllopsis Welw. ex Baker....LC
argyraea Welw. ex Baker....LC
barkae Schweinf. subsp. barkae....LC
brachycarpa (Benth.) Burtt Davy ex I.Verd. LC
burkeana Benth....LC
capensis Jacq....LC
colorata Schinz subsp. colorata....LC
damarensis Engl....LC
distans Benth. subsp. distans....LC
distans Benth. subsp. mediocris Polhill LC
doidgeae I.Verd....LC
dura J.M.Wood & M.S.Evans subsp. dura....LC
effusa E.Mey....LC
eremicola Baker f. subsp. eremicola LC
excisa (Thunb.) Baker f. subsp. excisa LC
excisa (Thunb.) Baker f. subsp. namaquensis Polhill....LC
gazensis Baker f. subsp. herbacea Polhill....LC
globifera E.Mey. LC
griquensis L.Bolus....LC
humilis Eckl. & Zeyh. LC
laburnifolia L. subsp. australis (Baker f.) Polhill LC
laburnifolia L. subsp. laburnifolia LC
lanceolata E.Mey. subsp. lanceolata....LC
lebeckioides Bond....Rare
leubnitziana Schinz....LC
longidens Burtt Davy ex I.Verd. LC
lotoides Benth. LC
macrocarpa E.Mey. subsp. macrocarpa LC
meyeriana Steud. LC
mollii Polhill....LC
monophylla Germish....VU
monteiroi Taub. ex Baker f. var. galpinii Burtt Davy ex I.Verd....LC
monteiroi Taub. ex Baker f. var. monteiroi....LC
natalensis Baker f....LC
natalitia Meisn. var. natalitia....LC
obscura DC. LC
orientalis Burtt Davy ex I.Verd. subsp. allenii (I.Verd.) Polhill & A.Schreib. LC
orientalis Burtt Davy ex I.Verd. subsp. orientalis..LC
pallida Aiton var. pallida LC
pearsonii Baker f. ....Rare
pisicarpa Welw. ex Baker LC
podocarpa DC. LC
recta Steud. ex A.Rich....LC
rhodesiae Baker f. LC
schinzii Baker f....LC
schlechteri Baker f. LC
spartea Baker....LC
spartioides DC. LC
sphaerocarpa Perr. ex DC. subsp. sphaerocarpa ...LC
steudneri Schweinf. LC
vasculosa Wall. ex Benth....LC
virgulata Klotzsch subsp. grantiana (Harv.) Polhill....LC
virgultalis Burch. ex DC....LC
Croton
gratissimus Burch. var. gratissimus....LC
gratissimus Burch. var. subgratissimus (Prain) Burtt Davy....LC
madandensis S.Moore....LC
megalobotrys Müll.Arg. LC
menyharthii Pax LC
pseudopulchellus Pax LC
rivularis Müll.Arg. LC
steenkampianus Gerstner LC
sylvaticus Hochst. LC
Cryptocarya, 400
angustifolia E.Mey. ex Meisn....LC
latifolia Sond....Declining
liebertiana Engl....Thr*
myrtifolia Stapf....VU
transvaalensis Burtt Davy ....Declining
woodii Engl....LC
wyliei Stapf....NT
Cryptolepis
capensis Schltr. LC
cryptolepidioides (Schltr.) Bullock LC
decidua (Planch. ex Benth.) N.E.Br. LC
delagoensis Schltr. LC
oblongifolia (Meisn.) Schltr. LC
obtusa N.E.Br....LC
Ctenium
concinnum Nees LC
Ctenolepis
cerasiformis (Stocks) Hook.f. LC
Ctenomeria
capensis (Thunb.) Harv. ex Sond....LC
Cucumella
bryoniifolia (Merxm.) C.Jeffrey....LC
cinerea (Cogn.) C.Jeffrey LC
Cucumis, 312
africanus L.f....LC
anguria L. var. longaculeatus J.H.Kirkbr....LC
heptadactylus Naudin LC
hirsutus Sond....LC
humifructus Stent ....VU
kalahariensis A.Meeuse....LC
meeusei C.Jeffrey LC
melo L. subsp. agrestis (Naudin) Pangalo....LC
melo L. subsp. melo....LC
metuliferus E.Mey. ex Naudin LC
myriocarpus Naudin subsp. leptodermis (Schweick.) C.Jeffrey & P.Halliday....LC
myriocarpus Naudin subsp. myriocarpus....LC
quintanilhae R. & A.Fern. LC
rigidus E.Mey. ex Sond....LC
sagittatus Peyr. LC
zeyheri Sond. LC
Cullen, 371
biflora (Harv.) C.H.Stirt....LC
holubii (Burtt Davy) C.H.Stirt. ....VU
tomentosum (Thunb.) J.W.Grimes....LC
Cullumia, 251
aculeata (Houtt.) Roessler var. aculeata LC
aculeata (Houtt.) Roessler var. sublanata (DC.) Roessler LC
bisulca (Thunb.) Less....LC
carlinoides DC....LC
ciliaris (L.) R.Br. subsp. angustifolia (Hutch.) Roessler LC
ciliaris (L.) R.Br. subsp. ciliaris....LC
cirsioides DC....VU
decurrens Less. LC
floccosa E.Mey. ex DC....CR
micracantha DC. ....EN
patula (Thunb.) Less. subsp. patula....LC
patula (Thunb.) Less. subsp. uncinata Roessler LC
pectinata (Thunb.) Less. ....VU
rigida DC....Rare
selago Roessler....EN
setosa (L.) R.Br. var. adnata (DC.) Harv. LC
setosa (L.) R.Br. var. araneosa Roessler....DDT
setosa (L.) R.Br. var. microcephala Roessler....LC
setosa (L.) R.Br. var. setosa LC
squarrosa (L.) R.Br....EN
sulcata (Thunb.) Less. var. intercedens Roessler ...LC
sulcata (Thunb.) Less. var. sulcata LC
Cunonia
capensis L. LC
Curtisia, 305
dentata (Burm.f.) C.A.Sm....NT
Cuscuta, 300
africana Willd....LC
angulata Engelm. LC
appendiculata Engelm. LC
australis R.Br. LC
bifurcata Yunck. ....DDD
cassytoides Engelm....LC
gerrardii Baker ....DDD
hyalina Roth LC
kilimanjari Oliv. var. kilimanjari....LC
natalensis Baker....LC
nitida Choisy....LC
planiflora Ten. var. madagascarensis (Yunck.) Verdc. LC
planiflora Ten. var. planiflora LC
Cuspidia
cernua (L.f.) B.L.Burtt subsp. annua (Less.) Roessler LC
cernua (L.f.) B.L.Burtt subsp. cernua LC
Cussonia, 243
arenicola Strey LC
gamtoosensis Strey ....Rare
natalensis Sond....LC
nicholsonii Strey LC
paniculata Eckl. & Zeyh. subsp. paniculata....LC
paniculata Eckl. & Zeyh. subsp. sinuata (Reyneke & Kok) De Winter LC
sphaerocephala Strey....LC
spicata Thunb. LC
thyrsiflora Thunb. LC
transvaalensis Reyneke LC
zuluensis Strey....LC
Cyamopsis
dentata (N.E.Br.) Torre....LC
serrata Schinz LC
Cyanella, 215
alba L.f....LC
aquatica Oberm. ex G.Scott ....VU
cygnea G.Scott....Rare
hyacinthoides L. LC
lutea L.f. LC
orchidiformis Jacq. LC
ramosissima (Engl. & K.Krause) Engl. & K.Krause LC
Cyanotis
lanata Benth. LC
lapidosa E.Phillips LC
pachyrrhiza Oberm. LC
robusta Oberm. LC
speciosa (L.f.) Hassk. LC
Cyathea, 53
capensis (L.f.) Sm. var. capensis....Declining
dregei Kunze....LC
Cyathocoma
bachmannii (Kük.) C.Archer LC
ecklonii Nees LC
hexandra (Nees) Browning....LC
Cyathula
cylindrica Moq. var. cylindrica LC
lanceolata Schinz LC
natalensis Sond....LC
orthacantha (Hochst. ex Asch.) Schinz....LC
uncinulata (Schrad.) Schinz....LC
Cyclopia, 371
alopecuroides A.L.Schutte....EN
alpina A.L.Schutte LC
aurescens Kies LC
bolusii Hofmeyr & E.Phillips ....VU
bowieana Harv. LC
burtonii Hofmeyr & E.Phillips....VU
buxifolia (Burm.f.) Kies....LC
falcata (Harv.) Kies....LC
filiformis Kies ....EX
galioides (P.J.Bergius) DC. LC
genistoides (L.) R.Br. LC
glabra (Hofmeyr & E.Phillips) A.L.Schutte LC
intermedia E.Mey. LC
latifolia DC. ....CR
laxiflora Benth....EX
longifolia Vogel ....CR
maculata (Andrews) Kies....NT
meyeriana Walp. LC
plicata Kies....EN
pubescens Eckl. & Zeyh. ....CR
sessiliflora Eckl. & Zeyh. LC
squamosa A.L.Schutte ....CR
subternata Vogel....LC
Cycloptychis, 287
marlothii O.E.Schulz LC
virgata (Thunb.) E.Mey. ex Sond....EN
Cyclosorus
interruptus (Willd.) H.Itô LC
Cycnium
adonense E.Mey. ex Benth. LC
racemosum Benth. LC
tubulosum (L.f.) Engl. subsp. tubulosum....LC
Cylindrophyllum, 417
calamiforme (L.) Schwantes LC
comptonii L.Bolus....LC
hallii L.Bolus....VU
obsubulatum (Haw.) Schwantes LC
tugwelliae L.Bolus....LC
Cymbopappus, 251
adenosolen (Harv.) B.Nord. LC
hilliardiae B.Nord. ....VU
piliferus (Thell.) B.Nord....Thr*
Cymbopogon
dieterlenii Stapf ex E.Phillips....LC

marginatus (Steud.) Stapf ex Burtt Davy LC
nardus (L.) Rendle LC
prolixus (Stapf) E.Phillips LC

Cynanchum
africanum (L.) Hoffmanns. LC
ellipticum (Harv.) R.A.Dyer LC
gerrardii (Harv.) Liede LC
meyeri (Decne.) Schltr. LC
mossambicense K.Schum. LC
natalitium Schltr. LC
obtusifolium L.f. LC
orangeanum (Schltr.) N.E.Br. LC
schistoglossum Schltr. LC
validum N.E.Br. LC
virens (E.Mey.) D.Dietr. LC
zeyheri Schltr. LC

Cynodon
bradleyi Stent LC
dactylon (L.) Pers. LC
decipiens Caro & E.A.Sánchez LC
hirsutus Stent LC
incompletus Nees LC
polevansii Stent ..... DDT
transvaalensis Burtt Davy LC

Cynoglossum
alticola Hilliard & B.L.Burtt LC
austroafricanum Hilliard & B.L.Burtt LC
geometricum Baker & C.H.Wright LC
hispidum Thunb. LC
lanceolatum Forssk. LC
obtusicalyx Retief & A.E.van Wyk LC
spelaeum Hilliard & B.L.Burtt LC

Cynorhiza
typica Eckl. & Zeyh. ..... DDT

Cynorkis, 181
compacta (Rchb.f.) Rolfe ..... VU
kassneriana Kraenzl. LC

Cyperus, 103
albostriatus Schrad. LC
alopecuroides Rottb. LC
amabilis Vahl LC
angolensis Boeck. LC
articulatus L. LC
bellus Kunth LC
brevis Boeck. LC
capensis (Steud.) Endl. LC
chersinus (N.E.Br.) Kük. LC
compressus L. LC
congestus Vahl LC
crassipes Vahl LC
cuspidatus Kunth LC
cyperoides (L.) Kuntze subsp. cyperoides LC
cyperoides (L.) Kuntze subsp. flavus Lye LC
cyperoides (L.) Kuntze subsp. pseudoflavus (Kük.) Lye LC
deciduus Boeck. LC
denudatus L.f. var. denudatus LC
dichroostachyus Hochst. ex A.Rich. LC
difformis L. LC
digitatus Roxb. subsp. auricomus (Sieber ex Spreng.) Kük. LC
distans L.f. LC
dives Delile LC
durus Kunth LC
elephantinus (C.B.Clarke) Kük. LC
esculentus L. var. esculentus LC
fastigiatus Rottb. LC
fulgens C.B.Clarke var. contractus Kük. LC
fulgens C.B.Clarke var. fulgens LC
haematocephalus C.B.Clarke LC
imbricatus Retz. LC
indecorus Kunth var. decurvatus (C.B.Clarke) Kük. LC
indecorus Kunth var. indecorus LC
indecorus Kunth var. inflatus (C.B.Clarke) Kük. LC
indecorus Kunth var. namaquensis Kük. LC
involucratus Rottb. LC
iria L. LC
keniensis Kük. LC
kirkii C.B.Clarke LC
laevigatus L. LC
latifolius Poir. LC
leptocladus Kunth LC
longus L. var. longus LC
longus L. var. tenuiflorus (Rottb.) Boeck. LC
macrocarpus (Kunth) Boeck. LC
maculatus Boeck. LC
margaritaceus Vahl var. margaritaceus LC
marginatus Thunb. LC
marlothii Boeck. LC
meyerianus Kunth LC
natalensis Hochst. LC
obtusiflorus Vahl var. flavissimus (Schrad.) Boeck. LC
obtusiflorus Vahl var. obtusiflorus LC
owanii Boeck. LC
papyrus L. LC
pectinatus Vahl LC
procerus Rottb. LC
prolifer Lam. LC
pseudoleptocladus Kük. LC
pseudovestitus (C.B.Clarke) Kük. LC
pulcher Thunb. LC
pygmaeus Rottb. LC
rigidifolius Steud. LC
rotundus L. subsp. rotundus LC
rotundus L. subsp. tuberosus (Rottb.) Kük. LC
rubicundus Vahl LC
rupestris Kunth var. amnicola (Kunth) Kük. LC
rupestris Kunth var. parvinux (C.B.Clarke) Kük. LC
rupestris Kunth var. rupestris LC
schinzii Boeck. LC
schlechteri C.B.Clarke LC
semitrifidus Schrad. LC
sensilis Baijnath ..... NT
sexangularis Nees LC
solidus Kunth LC
sphaerospermus Schrad. LC
squarrosus L. LC
tabularis Schrad. LC
tenax Boeck. LC
tenuispica Steud. LC
textilis Thunb. LC
thunbergii Vahl LC
turrillii Kük. LC
usitatus Burch. LC
vestitus Hochst. LC
vorsteri K.L.Wilson LC
zollingeri Steud. LC

Cyphia, 403
alba N.E.Br. LC
alicedalensis E.Wimm. ..... DDT
angustifolia C.Presl ex Eckl. & Zeyh. ..... DDT
angustiloba C.Presl ex Eckl. & Zeyh. LC
aspergilloides E.Wimm. var. aspergilloides LC
aspergilloides E.Wimm. var. brevipes E.Wimm. LC
assimilis Sond. LC
basiloba E.Wimm. LC
belfastica E.Wimm. ..... DDT
bolusii E.Phillips ..... VU
bulbosa (L.) P.J.Bergius var. acocksii E.Wimm. ..... DDT
bulbosa (L.) P.J.Bergius var. bulbosa LC
bulbosa (L.) P.J.Bergius var. hafstroemii E.Wimm. LC
bulbosa (L.) P.J.Bergius var. leiandra E.Wimm. LC
campestris C.Presl var. campestris ..... DDT
campestris C.Presl var. nudiuscula E.Wimm. LC
comptonii Bond LC
corylifolia Harv. ..... DDD
crenata (Thunb.) C.Presl var. angustifolia E.Wimm. LC
crenata (Thunb.) C.Presl var. crenata LC
deltoidea E.Wimm. ..... DDT
dentariifolia C.Presl var. dentariifolia ..... DDT
dentariifolia C.Presl var. luttigii E.Wimm. ..... DDT
dentariifolia C.Presl var. psilandra E.Wimm. ..... DDT
dentata E.Wimm. ..... DDT
digitata (Thunb.) Willd. subsp. digitata LC
digitata (Thunb.) Willd. subsp. gracilis E.Wimm. LC
eckloniana C.Presl ex Eckl. & Zeyh. LC
elata Harv. var. elata LC
elata Harv. var. gerrardii (Harv.) E.Wimm. LC
elata Harv. var. glabra Harv. LC
elata Harv. var. globularis E.Wimm. LC
galpinii E.Wimm. LC
georgica E.Wimm. ..... DDT
glabra E.Wimm. ..... DDT
heterophylla C.Presl ex Eckl. & Zeyh. LC
incisa (Thunb.) Willd. var. bracteata E.Phillips LC
incisa (Thunb.) Willd. var. cardamines (Thunb.) E.Phillips LC
incisa (Thunb.) Willd. var. incisa LC
incisa (Thunb.) Willd. var. lyrata E.Wimm. LC
incisa (Thunb.) Willd. var. sinuata E.Wimm. LC
latipetala C.Presl in Eckl. & Zeyh. ..... DDD
linarioides C.Presl ex Eckl. & Zeyh. LC
longiflora Schltr. ..... NT
longifolia N.E.Br. LC
longilobata E.Phillips ..... DDD
longipedicellata E.Wimm. ..... DDT
longipetala C.Presl LC
maculosa E.Phillips ..... DDT
natalensis E.Phillips LC
oblongifolia Sond. & Harv. LC
oligotricha Schltr. ..... VU
persicifolia C.Presl in E.Mey. LC
phillipsii E.Wimm. LC
phyteuma (L.) Willd. var. ciliata E.Wimm. LC
phyteuma (L.) Willd. var. grandidentata E.Wimm. LC
phyteuma (L.) Willd. var. phyteuma LC
psilostemon E.Wimm. LC
ramosa E.Wimm. LC
ranunculifolia E.Wimm. ..... Critically Rare
revoluta E.Wimm. ..... DDT
rogersii S.Moore subsp. rogersii LC
rogersii S.Moore subsp. winteri E.Wimm. LC
salteri E.Wimm. ..... DDD
schlechteri E.Phillips LC
smutsii E.Wimm. LC
stenodonta E.Wimm. ..... DDT
stenopetala Diels LC
stenophylla E.Wimm. ..... DDT
subtubulata E.Wimm. LC
sylvatica Eckl. var. graminea E.Wimm. LC
sylvatica Eckl. var. salicifolia (C.Presl ex Eckl. & Zeyh.) E.Wimm. LC
sylvatica Eckl. var. sylvatica LC
tenera Diels ..... DDT
tortilis N.E.Br. ..... DDT
transvaalensis E.Phillips LC
tricuspis E.Wimm. ..... DDT
triphylla E.Phillips LC
tysonii E.Phillips LC
undulata Eckl. LC
volubilis (Burm.f.) Willd. var. banksiana E.Wimm. LC
volubilis (Burm.f.) Willd. var. volubilis LC
zeyheriana C.Presl ex Eckl. & Zeyh. LC

Cyphostemma, 559
anatomicum (C.A.Sm.) Wild & R.B.Drumm. LC
barbosae Wild & R.B.Drumm. LC
buchananii (Planch.) Desc. ex Wild & R.B.Drumm LC
cirrhosum (Thunb.) Desc. ex Wild & R.B.Drumm. subsp. cirrhosum LC
cirrhosum (Thunb.) Desc. ex Wild & R.B.Drumm. subsp. transvaalense (Szyszyl.) Wild & R.B.Drumm LC
dasypleurum (C.A.Sm.) J.J.M.van der Merwe LC
flaviflorum (Sprague) Desc. ..... NT
hardyi Retief ..... VU
hereroense (Schinz) Desc. ex Wild & R.B.Drumm LC
hispidiflorum (C.A.Sm.) J.J.M.van der Merwe LC
humile (N.E.Br.) Desc. ex Wild & R.B.Drumm. subsp. dolichopus (C.A.Sm.) Wild & R.B.Drumm. LC
humile (N.E.Br.) Desc. ex Wild & R.B.Drumm. subsp. humile LC
hypoleucum (Harv.) Desc. ex Wild & R.B.Drumm LC
lanigerum (Harv.) Desc. ex Wild & R.B.Drumm. LC
natalitium (Szyszyl.) J.J.M.van der Merwe LC
oleraceum (Bolus) J.J.M.van der Merwe LC
paucidentatum (Klatt) Desc. ex Wild & R.B.Drumm LC
puberulum (C.A.Sm.) Wild & R.B.Drumm. LC
quinatum (Dryand.) Desc. ex Wild & R.B.Drumm. LC
rubroglandulosum Retief & A.E.van Wyk ..... Rare
sandersonii (Harv.) Desc. LC
schlechteri (Gilg & M.Brandt) Desc. ex Wild & R.B.Drumm LC
segmentatum (C.A.Sm.) J.J.M.van der Merwe LC
simulans (C.A.Sm.) Wild & R.B.Drumm. LC
spinosopilosum (Gilg & M.Brandt) Desc. LC
subciliatum (Baker) Desc. ex Wild & R.B.Drumm LC
sulcatum (C.A.Sm.) J.J.M.van der Merwe LC

woodii (Gilg & M.Brandt) Desc. LC
Cyrtanthus, 66
angustifolius (L.f.) Aiton LC
attenuatus R.A.Dyer LC
aureolinus Snijman ....Critically Rare
bicolor R.A.Dyer LC
brachyscyphus Baker LC
brachysiphon Hilliard & B.L.Burtt ....EN
breviflorus Harv. LC
carneus Lindl. ....VU
clavatus (L'Hér.) R.A.Dyer ....DDT
collinus Ker Gawl. LC
contractus N.E.Br. LC
debilis Snijman ....Rare
elatus (Jacq.) Traub LC
epiphyticus J.M.Wood LC
erubescens Killick ....Rare
eucallus R.A.Dyer ....VU
falcatus R.A.Dyer ....Rare
fergusoniae L.Bolus LC
flammosus Snijman & Van Jaarsv. ....Critically Rare
flanaganii Baker LC
flavus P.E.Barnes ....VU
galpinii Baker LC
guthrieae L.Bolus ....CR
helictus Lehm. ....DDT
herrei (F.M.Leight.) R.A.Dyer ....NT
huttonii Baker LC
inaequalis O'Brien LC
junodii P.Beauv. ....VU
labiatus R.A.Dyer LC
leptosiphon Snijman ....CR
leucanthus Schltr. ....EN
loddigesianus (Herb.) R.A.Dyer LC
mackenii Hook.f. subsp. cooperi (Baker) Snijman ....NT
mackenii Hook.f. subsp. mackenii LC
macmasteri Snijman ....VU
macowanii Baker LC
montanus R.A.Dyer LC
nutans R.A.Dyer ....VU
obliquus (L.f.) Aiton ....Declining
obrienii Baker LC
ochroleucus (Herb.) Burch. ex Steud ....VU
odorus Ker Gawl. ....EN
rhododactylus Stapf LC
rotundilobus N.E.Br. LC
sanguineus (Lindl.) Walp. subsp. sanguineus LC
smithiae Watt ex Harv. LC
spiralis Burch. ex Ker Gawl. ....EN
staadensis Schönland ....NT
stenanthus Baker var. major R.A.Dyer LC
stenanthus Baker var. stenanthus LC
suaveolens Schönland ....EN
thorncroftii C.H.Wright LC
tuckii Baker var. transvaalensis I.Verd. LC
tuckii Baker var. tuckii LC
tuckii Baker var. viridilobus I.Verd. LC
ventricosus Willd. LC
wellandii Snijman ....VU
Cyrtomium
micropterum (Kunze) Ching LC
Cyrtorchis
arcuata (Lindl.) Schltr. subsp. arcuata LC
praetermissa Summerh. subsp. praetermissa LC
praetermissa Summerh. subsp. zuluensis (E.R.Harrison) H.P.Linder LC
Cysticapnos
cracca (Cham. & Schltdl.) Lidén LC
parviflora Lidén LC
pruinosa (Bernh.) Lidén LC
vesicaria (L.) Fedde LC
Cystopteris
fragilis (L.) Bernh. LC
Cytinus, 312
capensis Marloth ....CR PE
sanguineus (Thunb.) Fourc. LC
visseri Burgoyne LC

D

Dactyloctenium
aegyptium (L.) Willd. LC
australe Steud. LC
geminatum Hack. LC
giganteum Fisher & Schweick. LC
Dactylopsis
digitata (Aiton) N.E.Br. subsp. digitata LC
digitata (Aiton) N.E.Br. subsp. littlewoodii (L.Bolus) Klak LC
Dahlgrenodendron, 403
natalense (J.H.Ross) J.J.M.van der Merwe & A.E.van Wyk ....EN
Dais
cotinifolia L. LC
Dalbergia
armata E.Mey. LC
melanoxylon Guill. & Perr. LC
multijuga E.Mey. LC
nitidula Baker LC
obovata E.Mey. LC
Dalechampia
capensis A.Spreng. LC
galpinii Pax LC
scandens L. var. natalensis (Müll.Arg.) Pax & K.Hoffm. LC
Danthoniopsis
dinteri (Pilg.) C.E.Hubb. LC
parva (J.B.Phipps) Clayton LC
pruinosa C.E.Hubb. LC
ramosa (Stapf) Clayton LC
scopulorum (J.B.Phipps) J.B.Phipps ....DDT
Dasispermum
suffruticosum (P.J.Bergius) B.L.Burtt LC
Daubenya, 113
alba A.M.van der Merwe ....Rare
aurea Lindl. ....VU
capensis (Schltr.) A.M.van der Merwe & J.C.Manning ....NT
comata (Burch. ex Baker) J.C.Manning & A.M.van der Merwe LC
marginata (Willd. ex Kunth) J.C.Manning & A.M.van der Merwe LC
namaquensis (Schltr.) J.C.Manning & Goldblatt ....Thr*
stylosa (Barker) A.M.van der Merwe & J.C.Manning ....VU
zeyheri (Kunth) J.C.Manning & A.M.van der Merwe ....EN
Davallia
denticulata (Burm.f.) Mett. ex Kuhn var. denticulata LC
Decorsea
galpinii (Burtt Davy) Verdc. LC
schlechteri (Harms) Verdc. LC
Deilanthe
hilmarii (L.Bolus) H.E.K.Hartmann LC
peersii (L.Bolus) N.E.Br. LC
thudichumii (L.Bolus) S.A.Hammer LC
Deinbollia
oblongifolia (E.Mey. ex Arn.) Radlk. LC
xanthocarpa (Klotzsch) Radlk. LC
Delairea
odorata Lem. LC
Delosperma, 417
aberdeenense (L.Bolus) L.Bolus LC
acocksii L.Bolus LC
acuminatum L.Bolus LC
adelaidense Lavis LC
aereum (L.Bolus) L.Bolus LC
affine Lavis LC
algoense L.Bolus ....DDT
aliwalense L.Bolus LC
alpinum (N.E.Br.) S.A.Hammer & A.P.Dold ....Rare
alticola L.Bolus LC
annulare L.Bolus ....DDD
ashtonii L.Bolus LC
brevipetalum L.Bolus LC
brevisepalum L.Bolus LC
brunnthaleri (A.Berger) Schwantes ....DDT
burtoniae L.Bolus ....DDT
caespitosum L.Bolus LC
calitzdorpense L.Bolus ....EN
calycinum L.Bolus LC
carolinense N.E.Br. LC
carterae L.Bolus LC
clavipes Lavis ....DDD
cloeteae Lavis LC
concavum L.Bolus LC
congestum L.Bolus LC
cooperi (Hook.f.) L.Bolus LC
crassuloides (Haw.) L.Bolus LC
crassum L.Bolus LC
cronemeyerianum (A.Berger) H.Jacobsen LC
davyi N.E.Br. ....DDT
deilanthoides S.A.Hammer ....VU
deleeuwiae Lavis LC
denticulatum L.Bolus ....DDT
dunense L.Bolus LC
dyeri L.Bolus LC
echinatum (Lam.) Schwantes LC
ecklonis (Salm-Dyck) Schwantes LC
erectum L.Bolus LC
esterhuyseniae L.Bolus LC
ficksburgense Lavis LC
floribundum L.Bolus LC
framesii L.Bolus ....DDT
fredericii Lavis LC
frutescens L.Bolus LC
galpinii L.Bolus LC
gautengense H.E.K.Hartmann ....VU
giffenii Lavis LC
gracile L.Bolus LC
gramineum L.Bolus LC
grantiae L.Bolus LC
gratiae L.Bolus LC
guthriei Lavis ....VU
herbeum (N.E.Br.) N.E.Br. LC
hirtum (N.E.Br.) Schwantes LC
hollandii L.Bolus LC
imbricatum L.Bolus LC
inaequale L.Bolus ....DDD
incomptum (Haw.) L.Bolus LC
inconspicuum L.Bolus LC
intonsum L.Bolus LC
invalidum (N.E.Br.) H.E.K.Hartmann LC
jansei N.E.Br. LC
karrooicum L.Bolus LC
katbergense L.Bolus ....Rare
klinghardtianum (Dinter) Schwantes LC
knox-daviesii Lavis ....DDT
kofleri Lavis LC
lavisiae L.Bolus LC
laxipetalum L.Bolus LC
lebomboense (L.Bolus) Lavis LC
leendertziae N.E.Br. ....NT
leightoniae Lavis LC
liebenbergii L.Bolus LC
lineare L.Bolus LC
litorale (Kensit) L.Bolus LC
lootsbergense Lavis LC
luckhoffii L.Bolus LC
luteum L.Bolus LC
lydenburgense L.Bolus LC
macellum (N.E.Br.) N.E.Br. ....EN
macrostigma L.Bolus ....DDT
mahonii (N.E.Br.) N.E.Br. LC
mariae L.Bolus ....VU
maxwelliae L.Bolus LC
monanthemum Lavis ....DDT
muiri L.Bolus LC
multiflorum L.Bolus LC
neethlingiae (L.Bolus) Schwantes ....DDT
nubigenum (Schltr.) L.Bolus LC
obtusum L.Bolus LC
ornatulum N.E.Br. LC
pachyrhizum L.Bolus LC
pageanum (L.Bolus) L.Bolus LC
pallidum L.Bolus LC
parviflorum L.Bolus LC
patersoniae (L.Bolus) L.Bolus LC
peersii Lavis LC
peglerae L.Bolus ....DDT
platysepalum L.Bolus LC
pondoense L.Bolus ....DDT
pottsii (L.Bolus) L.Bolus LC
prasinum L.Bolus LC
purpureum H.E.K.Hartmann ....EN
repens L.Bolus LC
reynoldsii Lavis ....DDT
rileyi L.Bolus ....DDD
robustum L.Bolus LC
rogersii (Schönland & A.Berger) L.Bolus LC
roseopurpureum Lavis LC
saturatum L.Bolus LC
saxicola Lavis ....Rare
scabripes L.Bolus LC

smythae L.Bolus LC
sphalmanthoides S.A.Hammer ..... DDT
stenandrum L.Bolus LC
subclavatum L.Bolus LC
subincanum (Haw.) Schwantes LC
subpetiolatum L.Bolus LC
sulcatum L.Bolus LC
sutherlandii (Hook.f.) N.E.Br. LC
suttoniae Lavis ..... DDT
testaceum (Haw.) Schwantes LC
tradescantioides (A.Berger) L.Bolus LC
truteri Lavis LC
uitenhagense L.Bolus LC
uncinatum L.Bolus LC
uniflorum L.Bolus LC
vandermerwei L.Bolus ..... DDT
velutinum L.Bolus ..... DDT
verecundum L.Bolus LC
vernicolor L.Bolus LC
versicolor L.Bolus LC
vinaceum (L.Bolus) L.Bolus LC
virens L.Bolus LC
vogtsii L.Bolus ..... DDT
waterbergense L.Bolus LC
wethamae L.Bolus LC
wilmaniae Lavis LC
wiumii Lavis LC
zeederbergii L.Bolus ..... DDD
zoeae L.Bolus LC
zoutpansbergense L.Bolus LC

Denekia
capensis Thunb. LC

Dermatobotrys
saundersii Bolus ex Oliv. LC

Derris
trifoliata Lour. LC

Desmazeria
composita Hack. LC

Desmodium
adscendens (Sw.) DC. var. robustum B.G.Schub. LC
barbatum (L.) Benth. var. dimorphum (Welw. ex Baker) B.G.Schub. LC
dregeanum Benth. LC
gangeticum (L.) DC. LC
repandum (Vahl) DC. LC
salicifolium (Poir.) DC. var. salicifolium LC
setigerum (E.Mey.) Benth. ex Harv. LC
velutinum (Willd.) DC. LC

Deverra
burchellii (DC.) Eckl. & Zeyh. LC
denudata (Viv.) Pfisterer & Podlech subsp. aphylla (Cham. & Schltdl.) Pfisterer & Podlech LC

Devia, 138
xeromorpha Goldblatt & J.C.Manning ..... Rare

Dialium
schlechteri Harms LC

Diandrochloa
namaquensis (Nees) De Winter LC
pusilla (Hack.) De Winter LC

Dianthus
albens Aiton LC
basuticus Burtt Davy subsp. basuticus var. basuticus LC
basuticus Burtt Davy subsp. basuticus var. grandiflorus S.S.Hooper LC
basuticus Burtt Davy subsp. fourcadei S.S.Hooper LC
bolusii Burtt Davy LC
burchellii Ser. LC
caespitosus Thunb. subsp. caespitosus LC
caespitosus Thunb. subsp. pectinatus (E.Mey. ex Sond.) S.S.Hooper LC
crenatus Thunb. LC
holopetalus Turcz. LC
kamisbergensis Sond. LC
laingsburgensis S.S.Hooper LC
micropetalus Ser. LC
mooiensis F.N.Williams LC
namaensis Schinz var. dinteri (Schinz) S.S.Hooper LC
namaensis Schinz var. junceus (Burtt Davy) S.S.Hooper LC
namaensis Schinz var. namaensis LC
thunbergii S.S.Hooper LC
transvaalensis Burtt Davy LC
zeyheri Sond. LC

Diaphananthe, 182
caffra (Bolus) H.P.Linder LC
fragrantissima (Rchb.f.) Schltr. LC
millarii (Bolus) H.P.Linder ..... VU
xanthopollinia (Rchb.f.) Summerh LC

Diascia, 541
aliciae Hiern ..... EN
alonsooides Benth. LC
anastrepta Hilliard & B.L.Burtt LC
austromontana K.E.Steiner LC
barberae Hook.f. LC
batteniana K.E.Steiner LC
bergiana Link & Otto LC
bicolor K.E.Steiner LC
capensis (L.) Britten LC
capsularis Benth. LC
cardiosepala Hiern LC
cordata N.E.Br. LC
cuneata E.Mey. ex Benth. LC
decipiens K.E.Steiner LC
dielsiana Schltr. ex Hiern ..... DDT
diffusa Benth. LC
dissimulans Hilliard & B.L.Burtt LC
ellaphieae K.E.Steiner ..... Thr*
elongata Benth. LC
engleri Diels LC
esterhuyseniae K.E.Steiner LC
fetcaniensis Hilliard & B.L.Burtt LC
fragrans K.E.Steiner LC
glandulosa E.Phillips var. glandulosa ..... DDD
glandulosa E.Phillips var. ß albiflora E.Phillips ..... DDT
gracilis Schltr. ..... Thr*
hexensis K.E.Steiner LC
humilis K.E.Steiner LC
insignis K.E.Steiner ..... VU
integerrima E.Mey. ex Benth. LC
lewisiae K.E.Steiner ..... VU
lilacina Hilliard & B.L.Burtt LC
longicornis (Thunb.) Druce LC
macrophylla (Thunb.) Spreng. LC
maculata K.E.Steiner LC
megathura Hilliard & B.L.Burtt LC
minutiflora Hiern LC
mollis Hilliard & B.L.Burtt LC
namaquensis Hiern LC
nana Diels LC
nodosa K.E.Steiner LC
pachyceras E.Mey. ex Benth. LC
parviflora Benth. LC
patens (Thunb.) Grant ex Fourc. LC
pentheri Schltr. ..... DDD
personata Hilliard & B.L.Burtt LC
purpurea N.E.Br. LC
racemulosa Benth. LC
ramosa Scott-Elliot ..... VU
rigescens E.Mey. ex Benth. LC
rudolphii Hiern LC
runcinata E.Mey. ex Benth. LC
sacculata Benth. LC
stachyoides Schltr. ex Hiern LC
stricta Hilliard & B.L.Burtt LC
tanyceras E.Mey. ex Benth. LC
tugelensis Hilliard & B.L.Burtt ..... Rare
veronicoides Schltr. LC
vigilis Hilliard & B.L.Burtt LC

Diastella, 465
buekii (Gand.) Rourke ..... CR
divaricata (P.J.Bergius) Rourke subsp. divaricata ..... Rare
divaricata (P.J.Bergius) Rourke subsp. montana Rourke ..... VU
fraterna Rourke ..... Rare
myrtifolia (Thunb.) Salisb. ex Knight ..... CR
parilis Salisb. ex Knight ..... CR
proteoides (L.) Druce ..... CR
thymelaeoides (P.J.Bergius) Rourke subsp. meridiana Rourke ..... VU
thymelaeoides (P.J.Bergius) Rourke subsp. thymelaeoides ..... NT

Dicerocaryum
eriocarpum (Decne.) Abels LC
forbesii (Decne.) A.E.van Wyk LC
senecioides (Klotzsch) Abels LC

Dicerothamnus
adpressus (Harv.) Koekemoer LC
rhinocerotis (L.f.) Koekemoer LC

Dichanthium
annulatum (Forssk.) Stapf var. papillosum (A.Rich.) de Wet & Harlan LC

Dichapetalum
cymosum (Hook.) Engl. LC

Dichilus
gracilis Eckl. & Zeyh. LC
lebeckioides DC. LC
pilosus Conrath ex Schinz LC
reflexus (N.E.Br.) A.L.Schutte LC
strictus E.Mey. LC

Dichrocephala
integrifolia (L.f.) Kuntze subsp. integrifolia LC

Dichrostachys
cinerea (L.) Wight & Arn. subsp. africana Brenan & Brummitt var. africana LC
cinerea (L.) Wight & Arn. subsp. africana Brenan & Brummitt var. pubescens Brenan & Brummitt LC
cinerea (L.) Wight & Arn. subsp. africana Brenan & Brummitt var. setulosa (Welw. ex Oliv.) Brenan & Brummitt LC
cinerea (L.) Wight & Arn. subsp. nyassana (Taub.) Brenan LC

Dicliptera, 217
capensis Nees LC
clinopodia Nees LC
divaricata Compton LC
eenii S.Moore LC
extenta S.Moore LC
fionae K.Balkwill ..... Critically Rare
fruticosa K.Balkwill LC
heterostegia Nees LC
leistneri K.Balkwill LC
magaliesbergensis K.Balkwill ..... Thr*
minor C.B.Clarke subsp. minor LC
minor C.B.Clarke subsp. pratis-manna K.Balkwill LC
quintasii Lindau LC
spinulosa Hochst. ex K.Balkwill LC
swynnertonii S.Moore LC

Diclis
petiolaris Benth. LC
reptans Benth. LC
rotundifolia (Hiern) Hilliard & B.L.Burtt LC
stellarioides Hiern ..... DDT

Dicoma, 251
anomala Sond. subsp. anomala LC
anomala Sond. subsp. gerrardii (Harv. ex F.C.Wilson) S.Ortíz & Rodr.Oubiña LC
arenaria Bremek. LC
capensis Less. LC
fruticosa Compton LC
galpinii F.C.Wilson LC
kurumanii S.Ortíz & Netnou LC
macrocephala DC. LC
montana Schweick. ..... Rare
picta (Thunb.) Druce LC
prostrata Schweick. ..... DDD
schinzii O.Hoffm. LC
swazilandica S.Ortíz, Rodr.Oubiña & Pulgar. ..... Rare
tomentosa Cass. LC

Dicranopteris
linearis (Burm.f.) Underw. var. linearis LC

Dicrocaulon
brevifolium N.E.Br. LC
grandiflorum Ihlenf. LC
humile N.E.Br. LC
microstigma (L.Bolus) Ihlenf. LC
nodosum (A.Berger) N.E.Br. LC
ramulosum (L.Bolus) Ihlenf. LC
spissum N.E.Br. LC

Didelta
carnosa (L.f.) Aiton var. carnosa LC
carnosa (L.f.) Aiton var. tomentosa (Less.) Roessler LC
spinosa (L.f.) Aiton LC

Didymaotus, 418
lapidiformis (Marloth) N.E.Br. ..... VU

Didymochlaena
truncatula (Sw.) J.Sm. LC

Didymodoxa
caffra (Thunb.) Friis & Wilmot-Dear LC
capensis (L.f.) Friis & Wilmot-Dear var. capensis LC

capensis (L.f.) Friis & Wilmot-Dear var. integrifolia (Wedd.) Friis & Wilmot-Dear LC

Didymoplexis, 182
verrucosa J.Stewart & Hennessy ..... VU

Dierama, 138
adelphicum Hilliard LC
ambiguum Hilliard ..... Thr*
argyreum L.Bolus LC
atrum N.E.Br. LC
cooperi N.E.Br. LC
dissimile Hilliard LC
dracomontanum Hilliard LC
dubium N.E.Br. ..... VU
erectum Hilliard ..... EN
floriferum Hilliard LC
formosum Hilliard LC
galpinii N.E.Br. LC
gracile N.E.Br. LC
grandiflorum G.J.Lewis ..... Rare
igneum Klatt LC
insigne N.E.Br. LC
jucundum Hilliard LC
latifolium N.E.Br. LC
luteoalbidum I.Verd. ..... VU
medium N.E.Br. LC
mobile Hilliard LC
mossii (N.E.Br.) Hilliard LC
nebrownii Hilliard LC
nixonianum Hilliard ..... EN
pallidum Hilliard ..... VU
pauciflorum N.E.Br. LC
pendulum (L.f.) Baker LC
pictum N.E.Br. LC
pulcherrimum (Hook.f.) Baker LC
pumilum N.E.Br. ..... VU
reynoldsii I.Verd. LC
robustum N.E.Br. LC
sertum Hilliard ..... NT
trichorhizum (Baker) N.E.Br. LC
tyrium Hilliard LC
tysonii N.E.Br. ..... VU

Dietes, 139
bicolor (Steud.) Sweet ex Klatt ..... Rare
butcheriana Gerstner LC
flavida Oberm. LC
grandiflora N.E.Br. LC
iridioides (L.) Sweet ex Klatt LC

Digitaria
argyrograpta (Nees) Stapf LC
argyrotricha (Andersson) Chiov. LC
brazzae (Franch.) Stapf LC
debilis (Desf.) Willd. LC
diagonalis (Nees) Stapf var. diagonalis LC
diversinervis (Nees) Stapf LC
eriantha Steud. LC
eylesii C.E.Hubb. LC
flaccida Stapf. LC
gymnostachys Pilg. LC
longiflora (Retz.) Pers. LC
maitlandii Stapf & C.E.Hubb. LC
milanjiana (Rendle) Stapf LC
monodactyla (Nees) Stapf LC
natalensis Stent LC
perrottetii (Kunth) Stapf LC
polyphylla Henrard LC
rukwae Clayton LC
scalarum (Schweinf.) Chiov. LC
seriata Stapf LC
setifolia Stapf LC
ternata (A.Rich.) Stapf LC
thouarsiana (Flüggé) A.Camus LC
tricholaenoides Stapf LC
velutina (Forssk.) P.Beauv. LC

Diheteropogon
amplectens (Nees) Clayton var. amplectens LC
filifolius (Nees) Clayton LC

Dilatris
corymbosa P.J.Bergius LC
ixioides Lam. LC
pillansii W.F.Barker LC
viscosa L.f. LC

Dimorphotheca, 252
acutifolia Hutch. LC
barberae Harv. LC
caulescens Harv. LC
chrysanthemifolia (Vent.) DC. LC
cuneata (Thunb.) Less. LC
dregei DC. var. dregei LC
dregei DC. var. reticulata (Norl.) B.Nord. LC
ecklonis DC. LC
fruticosa (L.) Less. LC
jucunda E.Phillips LC
montana Norl. LC
nudicaulis (L.) DC. var. graminifolia (DC.) Harv. LC
nudicaulis (L.) DC. var. nudicaulis LC
pluvialis (L.) Moench LC
polyptera DC. LC
sinuata DC. LC
spectabilis Schltr. LC
tragus (Aiton) B.Nord. LC
venusta (Norl.) Norl. var. amoena (Norl.) Norl. LC
venusta (Norl.) Norl. var. venusta ..... Rare
walliana (Norl.) B.Nord ..... VU
zeyheri Sond. LC

Dinebra
retroflexa (Vahl) Panz. var. condensata S.M.Phillips LC

Dinteranthus, 419
pole-evansii (N.E.Br.) Schwantes ..... VU
puberulus N.E.Br. LC
vanzylii (L.Bolus) Schwantes ..... DDT
wilmotianus L.Bolus ..... NT

Dioscorea, 106
brownii Schinz ..... VU
burchellii Baker LC
cotinifolia Kunth LC
diversifolia Griseb. LC
dregeana (Kunth) T.Durand & Schinz LC
elephantipes (L'Hér.) Engl. ..... Declining
hemicrypta Burkill LC
mundii Baker ..... NT
quartiniana A.Rich. LC
retusa Mast. LC
rupicola Kunth LC
sp. nov. (*Hurter 106* GLOW, PRU) ..... CR
stipulosa Uline ex R.Knuth ..... DDT
sylvatica Eckl. ..... VU
undatiloba Baker ..... DDT

Diosma, 531
acmaeophylla Eckl. & Zeyh. LC
apetala (Dummer) I.Williams LC
arenicola I.Williams ..... EN
aristata I.Williams ..... CR
aspalathoides Lam. ..... NT
awilana I.Williams ..... VU
demissa I.Williams ..... VU
dichotoma P.J.Bergius ..... VU
echinulata I.Williams LC
fallax I.Williams ..... EN
guthriei P.E.Glover ..... VU
haelkraalensis I.Williams ..... EN
hirsuta L. LC
meyeriana Spreng. LC
oppositifolia L. LC
parvula I.Williams ..... EN
passerinoides Steud. ..... VU
pedicellata I.Williams ..... NT
pilosa I.Williams ..... Thr*
prama I.Williams LC
ramosissima Bartl. & H.L.Wendl. LC
recurva Cham. LC
rourkei I.Williams LC
sabulosa I.Williams LC
strumosa I.Williams ..... EN
subulata J.C.Wendl. LC
tenella I.Williams ..... VU
thyrsophora Eckl. & Zeyh. ..... VU

Diospyros
acocksii (De Winter) De Winter LC
austro-africana De Winter var. austro-africana LC
austro-africana De Winter var. microphylla (Burch.) De Winter LC
austro-africana De Winter var. rubriflora (De Winter) De Winter LC
austro-africana De Winter var. rugosa (E.Mey. ex A.DC.) De Winter LC
dichrophylla (Gand.) De Winter LC
galpinii (Hiern) De Winter LC
glabra (L.) De Winter LC
glandulifera De Winter LC
inhacaensis F.White LC
loureiriana G.Don subsp. loureiriana LC
lycioides Desf. subsp. guerkei (Kuntze) De Winter LC
lycioides Desf. subsp. lycioides LC
lycioides Desf. subsp. nitens (Harv. ex Hiern) De Winter LC
lycioides Desf. subsp. sericea (Bernh.) De Winter LC
mespiliformis Hochst. ex A.DC. LC
natalensis (Harv.) Brenan LC
nummularia Brenan LC
pallens (Thunb.) F.White LC
ramulosa (E.Mey. ex A.DC.) De Winter LC
rotundifolia Hiern LC
scabrida (Harv. ex Hiern) De Winter var. cordata (E.Mey. ex A.DC.) De Winter LC
scabrida (Harv. ex Hiern) De Winter var. scabrida LC
simii (Kuntze) De Winter LC
villosa (L.) De Winter var. parvifolia (De Winter) De Winter LC
villosa (L.) De Winter var. villosa LC
whyteana (Hiern) F.White LC

Dipcadi
bakerianum Bolus LC
brevifolium (Thunb.) Fourc. LC
ciliare (Zeyh. ex Harv.) Baker LC
crispum Baker LC
glaucum (Burch. ex Ker Gawl.) Baker LC
gracillimum Baker LC
longifolium (Lindl.) Baker LC
marlothii Engl. LC
papillatum Oberm. LC
platyphyllum Baker LC
rigidifolium Baker LC
vaginatum Baker LC
viride (L.) Moench LC

Diplachne
capensis Nees var. concinna Nees LC
capensis Nees var. minor Nees LC
capensis Nees var. obscura Nees LC
capensis Nees var. prolifera Nees LC

Diplazium
zanzibaricum (Baker) C.Chr. LC

Diplolophium, 223
buchananii (Benth. ex Oliv.) C.Norman subsp. swynnertonii (Baker f.) Cannon ..... VU

Diplorhynchus
condylocarpon (Müll.Arg.) Pichon LC

Diplosoma, 419
luckhoffii (L.Bolus) Schwantes ex Ihlenf. ..... VU
retroversum (Kensit) Schwantes ..... EN

Dipogon
lignosus (L.) Verdc. LC

Disa, 182
aconitoides Sond. subsp. aconitoides LC
alticola H.P.Linder ..... VU
amoena H.P.Linder ..... VU
arida Vlok ..... EN
aristata H.P.Linder ..... VU
atricapilla (Harv. ex Lindl.) Bolus LC
atrorubens Schltr. ..... VU
aurata (Bolus) L.Parker & Koop. ..... Rare
barbata (L.f.) Sw. ..... CR
basutorum Schltr. LC
baurii Bolus LC
begleyi L.Bolus ..... Rare
bivalvata (L.f.) T.Durand & Schinz LC
bodkinii Bolus ..... Rare
bolusiana Schltr. LC
brachyceras Lindl. ..... EN
bracteata Sw. LC
brevicornis (Lindl.) Bolus LC
brevipetala H.P.Linder ..... DDT
caffra Bolus LC
cardinalis H.P.Linder ..... Rare
caulescens Lindl. LC
cedarbergensis H.P.Linder ..... Critically Rare
cephalotes Rchb.f. subsp. cephalotes LC
cephalotes Rchb.f. subsp. frigida (Schltr.) H.P.Linder ..... Rare
cernua (Thunb.) Sw. ..... VU
chrysostachya Sw. LC
clavicornis H.P.Linder ..... EN
cochlearis S.D.Johnson & Liltved ..... Critically Rare
comosa (Rchb.f.) Schltr. LC
conferta Bolus LC

cooperi Rchb.f. LC
cornuta (L.) Sw. LC
crassicornis Lindl. LC
cylindrica (Thunb.) Sw. LC
densiflora (Lindl.) Bolus LC
dracomontana Schelpe ex H.P.Linder LC
draconis (L.f.) Sw. ..... **EN**
ecalcarata (G.J.Lewis) H.P.Linder ..... **DDD**
elegans Sond. ex Rchb.f. LC
esterhuyseniae Schelpe ex H.P.Linder ..... **Rare**
extinctoria Rchb.f. ..... **NT**
fasciata Lindl. LC
ferruginea (Thunb.) Sw. LC
filicornis (L.f.) Thunb. LC
forcipata Schltr. ..... **EX**
forficaria Bolus ..... **DDD**
fragrans Schltr. subsp. fragrans LC
galpinii Rolfe ..... **Rare**
gladioliflora Burch. ex Lindl. subsp. capricornis (Rchb.f.) H.P.Linder LC
gladioliflora Burch. ex Lindl. subsp. gladioliflora LC
glandulosa Burch. ex Lindl. LC
graminifolia Ker Gawl. ex Spreng. LC
hallackii Rolfe ..... **EN**
harveiana Lindl. subsp. harveiana LC
harveiana Lindl. subsp. longicalcarata S.D.Johnson & H.P.Linder LC
hians (L.f.) Spreng. LC
hircicornis Rchb.f. LC
introrsa Kurzweil, Liltved & H.P.Linder ..... **Rare**
karooica S.D.Johnson & H.P.Linder ..... **VU**
linderiana Bytebier & E.G.H.Oliv. LC
lineata Bolus ..... **Rare**
longicornu L.f. ..... **VU**
longifolia Lindl. ..... **VU**
lugens Bolus var. lugens ..... **EN**
lugens Bolus var. nigrescens (H.P.Linder) H.P.Linder ..... **CR**
macrostachya (Lindl.) Bolus ..... **CR**
maculata L.f. LC
maculomarronina McMurtry ..... **NT**
marlothii Bolus ..... **Rare**
micropetala Schltr. LC
minor (Sond.) Rchb.f. ..... **Rare**
montana Sond. ..... **VU**
multifida Lindl. LC
neglecta Sond. LC
nervosa Lindl. LC
newdigateae L.Bolus ..... **CR PE**
nivea H.P.Linder LC
nubigena H.P.Linder ..... **CR**
obtusa Lindl. subsp. hottentotica H.P.Linder LC
obtusa Lindl. subsp. obtusa LC
obtusa Lindl. subsp. picta (Sond.) H.P.Linder LC
ocellata Bolus ..... **Rare**
oligantha Rchb.f. ..... **Rare**
ophrydea (Lindl.) Bolus LC
oreophila Bolus subsp. erecta H.P.Linder ..... **Rare**
oreophila Bolus subsp. oreophila LC
ovalifolia Sond. ..... **NT**
patula Sond. var. patula LC
patula Sond. var. transvaalensis Summerh. LC
physodes Sw. ..... **CR**
pillansii L.Bolus LC
polygonoides Lindl. LC
porrecta Sw. LC
procera H.P.Linder ..... **CR**
pulchra Sond. LC
purpurascens Bolus ..... **NT**
pygmaea Bolus ..... **Rare**
racemosa L.f. LC
remota H.P.Linder LC
reticulata Bolus LC
rhodantha Schltr. LC
richardiana Lehm. ex Bolus LC
rosea Lindl. LC
rufescens (Thunb.) Sw. LC
sabulosa Bolus ..... **CR**
sagittalis (L.f.) Sw. LC
salteri G.J.Lewis LC
sanguinea Sond. ..... **Rare**
sankeyi Rolfe ..... **Rare**
saxicola Schltr. LC
schizodioides Sond. ..... **Rare**
schlechteriana Bolus ..... **VU**
scullyi Bolus ..... **EN**
similis Summerh. LC
spathulata (L.f.) Sw. subsp. spathulata ..... **DDD**
spathulata (L.f.) Sw. subsp. tripartita (Lindl.) H.P.Linder ..... **EN**
stachyoides Rchb.f. LC
stricta Sond. LC
subtenuicornis H.P.Linder ..... **Rare**
telipogonis Rchb.f. LC
tenella (L.f.) Sw. subsp. pusilla H.P.Linder ..... **Rare**
tenella (L.f.) Sw. subsp. tenella ..... **EN**
tenuicornis Bolus LC
tenuifolia Sw. LC
tenuis Lindl. ..... **Rare**
thodei Schltr. ex Kraenzl. LC
triloba Lindl. LC
tripetaloides (L.f.) N.E.Br. LC
tysonii Bolus ..... **Rare**
uncinata Bolus LC
uniflora P.J.Bergius LC
vaginata Harv. ex Lindl. LC
vasselotii Bolus ex Schltr. LC
venosa Sw. LC
venusta Bolus ..... **EN**
versicolor Rchb.f. LC
vigilans McMurtry, T.J.Edwards & Bytebier ..... **EN**
virginalis H.P.Linder ..... **Rare**
welwitschii Rchb.f. subsp. welwitschii LC
woodii Schltr. LC
zimbabweensis H.P.Linder LC
zuluensis Rolfe ..... **EN**

Dischisma, 542
arenarium E.Mey. LC
capitatum (Thunb.) Choisy LC
ciliatum (P.J.Bergius) Choisy subsp. ciliatum LC
ciliatum (P.J.Bergius) Choisy subsp. erinoides (L.f.) Roessler LC
ciliatum (P.J.Bergius) Choisy subsp. flaccum (E.Mey.) Roessler LC
clandestinum E.Mey. LC
crassum Rolfe ..... **VU**
fruticosum (L.f.) Rolfe ..... **DDD**
leptostachyum E.Mey. ..... **NT**
spicatum (Thunb.) Choisy LC
squarrosum Schltr. ..... **EN**
struthioloides Killick LC
tomentosum Schltr. LC

Discocapnos
mundtii Cham. & Schltdl. LC

Disparago
anomala Schltr. ex Levyns LC
ericoides (P.J.Bergius) Gaertn. LC
kraussii Sch.Bip. LC
laxifolia DC. LC

Disperis, 188
anthoceros Rchb.f. var. anthoceros LC
bodkinii Bolus LC
bolusiana Schltr. ex Bolus subsp. bolusiana LC
bolusiana Schltr. ex Bolus subsp. macrocorys (Rolfe) J.C.Manning ..... **Rare**
capensis (L.f.) Sw. var. brevicaudata Rolfe LC
capensis (L.f.) Sw. var. capensis LC
cardiophora Harv. LC
circumflexa (L.) T.Durand & Schinz subsp. aemula (Schltr.) J.C.Manning LC
circumflexa (L.) T.Durand & Schinz subsp. circumflexa LC
concinna Schltr. LC
cooperi Harv. LC
cucullata Sw. ..... **NT**
disaeformis Schltr. LC
fanniniae Harv. LC
johnstonii Rchb.f. ex Rolfe ..... **NT***
lindleyana Rchb.f. LC
macowanii Bolus LC
micrantha Lindl. LC
oxyglossa Bolus LC
paludosa Harv. ex Lindl. LC
purpurata Rchb.f. subsp. pallescens Bruyns ..... **VU**
purpurata Rchb.f. subsp. purpurata LC
renibractea Schltr. LC
stenoplectron Rchb.f. LC
thorncroftii Schltr. LC
tysonii Bolus LC
villosa (L.f.) Sw. LC
virginalis Schltr. LC
wealei Rchb.f. LC
woodii Bolus ..... **Declining**

Disphyma, 419
crassifolium (L.) L.Bolus LC
dunsdonii L.Bolus ..... **VU**

Dissotis
canescens (E.Mey. ex R.A.Graham) Hook.f. LC
princeps (Kunth) Triana var. candolleana (Cogn.) A. & R.Fern. LC
princeps (Kunth) Triana var. princeps LC

Distephanus
angulifolius (DC.) H.Rob. & B.Kahn LC
anisochaetoides (Sond.) H.Rob. & B.Kahn LC
divaricatus (Steetz) H.Rob. & B.Kahn LC

Dodonaea
viscosa Jacq. var. angustifolia (L.f.) Benth. LC
viscosa Jacq. var. viscosa LC

Doellia
cafra (DC.) Anderb. LC

Dolichos
angustifolius Eckl. & Zeyh. LC
angustissimus E.Mey. LC
decumbens Thunb. LC
falciformis E.Mey. LC
hastaeformis E.Mey. LC
junodii (Harms) Verdc. LC
linearis E.Mey. LC
peglerae L.Bolus LC
pratensis (E.Mey.) Taub. LC
sericeus E.Mey. subsp. sericeus LC
trilobus L. subsp. transvaalicus Verdc. LC
trilobus L. subsp. trilobus var. trilobus LC

Dolichothrix
ericoides (Lam.) Hilliard & B.L.Burtt LC

Dombeya
autumnalis I.Verd. LC
burgessiae Gerrard ex Harv. LC
cymosa Harv. LC
kirkii Mast. LC
pulchra N.E.Br. LC
rotundifolia (Hochst.) Planch. var. rotundifolia LC
tiliacea (Endl.) Planch. LC

Dopatrium
junceum (Roxb.) Buch.-Ham. ex Benth. LC

Dorotheanthus, 419
apetalus (L.f.) N.E.Br. ..... **VU**
bellidiformis (Burm.f.) N.E.Br. subsp. bellidiformis LC
bellidiformis (Burm.f.) N.E.Br. subsp. hestermalensis Ihlenf. & Struck LC
booysenii L.Bolus ..... **Rare**
clavatus (Haw.) Struck ..... **EN**
maughanii (N.E.Br.) Ihlenf. & Struck ..... **Rare**
rourkei L.Bolus LC
ulularis Brusse LC

Doryopteris
concolor (Langsd. & Fisch.) Kuhn LC
pilosa (Poir.) Kuhn var. gemmifera J.E.Burrows & S.E.Strauss LC

Dovea see **Elegia**

Dovyalis
caffra (Hook.f. & Harv.) Hook.f. LC
longispina (Harv.) Warb. LC
lucida Sim LC
rhamnoides (Burch. ex DC.) Burch. & Harv. LC
rotundifolia (Thunb.) Thunb. & Harv. LC
zeyheri (Sond.) Warb. LC

Dracaena, 106
aletriformis (Haw.) Bos LC
mannii Baker LC
transvaalensis Baker ..... **Rare**

Dracomonticola
virginea (Bolus) H.P.Linder & Kurzweil LC

Dracophilus
dealbatus (N.E.Br.) Walgate LC

Dracosciadium, 223
italae Hilliard & B.L.Burtt ..... **VU**
saniculifolium Hilliard & B.L.Burtt ..... **Rare**

Dregeochloa, 200
calviniensis Conert ..... **Rare**
pumila (Nees) Conert LC

Drimia, 113
acarophylla E.Brink & A.P.Dold LC
albiflora (B.Nord.) J.C.Manning & Goldblatt ..... **VU**
altissima (L.f.) Ker Gawl. ..... **Declining**
angustifolia Baker LC

anomala (Baker) Baker LC
arenicola (B.Nord.) J.C.Manning & Goldblatt....**VU**
barkerae Oberm. ex J.C.Manning & Goldblatt....**EN**
calcarata (Baker) Stedje....LC
capensis (Burm.f.) Wijnands....LC
chalumnensis A.P.Dold & E.Brink....**VU**
ciliata (L.f.) J.C.Manning & Goldblatt....LC
convallarioides (L.f.) J.C.Manning & Goldblatt....LC
cooperi (Baker) Baker....**VU**
cremnophila Van Jaarsv. LC
cuscutoides (Burch. ex Baker) J.C.Manning & Goldblatt....LC
cyanelloides (Baker) J.C.Manning & Goldblatt....**DDD**
delagoensis (Baker) Jessop....LC
depressa (Baker) Jessop LC
dregei (Baker) J.C.Manning & Goldblatt....LC
elata Jacq....DDT
exuviata (Jacq.) Jessop....LC
fasciata (B.Nord.) J.C.Manning & Goldblatt....LC
filifolia (Jacq.) J.C.Manning & Goldblatt LC
flagellaris T.J.Edwards, D.Styles & N.R.Crouch ....**Rare**
fragrans (Jacq.) J.C.Manning & Goldblatt LC
haworthioides Baker....LC
hesperantha J.C.Manning & Goldblatt LC
hyacinthoides Baker....**Rare**
indica (Roxb.) Jessop LC
intricata (Baker) J.C.Manning & Goldblatt....LC
involuta (J.C.Manning & Snijman) J.C.Manning & Goldblatt ....**VU**
karooica (Oberm.) J.C.Manning & Goldblatt LC
kniphofioides (Baker) J.C.Manning & Goldblatt....LC
ligulata J.C.Manning & Goldblatt LC
loedolffiae Van Jaarsv. LC
macrantha (Baker) Baker....LC
macrocentra (Baker) Jessop....LC
marginata (Thunb.) Jessop LC
media Jacq. LC
minor (A.V.Duthie) Jessop ....DDT
montana A.P.Dold & E.Brink ....**Rare**
multifolia (G.J.Lewis) Jessop....LC
multisetosa (Baker) Jessop....LC
mzimvubuensis Van Jaarsv. LC
nana (Snijman) J.C.Manning & Goldblatt....**VU**
physodes (Jacq.) Jessop....LC
platyphylla (B.Nord.) J.C.Manning & Goldblatt....LC
pulchromarginata J.C.Manning & Goldblatt....LC
pusilla Jacq. LC
robusta Baker....DDT
salteri (Compton) J.C.Manning & Goldblatt LC
sanguinea (Schinz) Jessop ....**NT**
sclerophylla J.C.Manning & Goldblatt LC
sphaerocephala Baker....LC
uniflora J.C.Manning & Goldblatt....LC
uranthera (R.A.Dyer) J.C.Manning & Goldblatt....**VU**
vermiformis J.C.Manning & Goldblatt....LC
virens (Schltr.) J.C.Manning & Goldblatt....LC

Drimiopsis, 115

atropurpurea N.E.Br. LC
burkei Baker subsp. burkei LC
burkei Baker subsp. stolonissima U. & D.Müll.-Doblies....**Critically Rare**
comptonii U. & D.Müll.-Doblies....LC
davidsoniae U. & D.Müll.-Doblies ....**VU**
maculata Lindl. & Paxton LC
woodii Baker....LC

Droguetia

ambigua Wedd. LC
iners (Forssk.) Schweinf. subsp. burchellii (N.E.Br.) Friis & Wilmot-Dear LC
iners (Forssk.) Schweinf. subsp. iners LC

Drosanthemum, 419

acuminatum L.Bolus....DDT
acutifolium (L.Bolus) L.Bolus....LC
albens L.Bolus LC
albiflorum (L.Bolus) Schwantes....DDT
ambiguum L.Bolus LC
anomalum L.Bolus....**VU**
archeri L.Bolus LC
attenuatum (Haw.) Schwantes....DDT
aureopurpureum L.Bolus ....DDT
austricola L.Bolus....**VU**
autumnale L.Bolus ....Thr*
barkerae L.Bolus ....DDT
bellum L.Bolus....**EN**
bicolor L.Bolus ....DDT
breve L.Bolus....DDT
brevifolium (Aiton) Schwantes....LC
calycinum (Haw.) Schwantes ....**NT**
candens (Haw.) Schwantes LC
capillare (Thunb.) Schwantes ....**DDD**
cereale L.Bolus ....DDT
chrysum L.Bolus ....**Rare**
collinum (Sond.) Schwantes....DDT
comptonii L.Bolus....DDT
concavum L.Bolus ....DDT
crassum L.Bolus ....Thr*
croceum L.Bolus....DDT
curtophyllum L.Bolus....LC
cymiferum L.Bolus LC
deciduum H.E.K.Hartmann & Bruckman....LC
dejagerae L.Bolus....DDT
delicatulum (L.Bolus) Schwantes....LC
dipageae H.E.K.Hartmann....Thr*
diversifolium L.Bolus LC
duplessiae L.Bolus....DDT
eburneum L.Bolus....DDT
edwardsiae L.Bolus....**DDD**
erigeriflorum (Jacq.) Stearn....DDT
expersum (N.E.Br.) Schwantes....DDT
filiforme L.Bolus....DDT
flammeum L.Bolus ....DDT
flavum (Haw.) Schwantes....**EN**
floribundum (Haw.) Schwantes LC
fourcadei (L.Bolus) Schwantes LC
framesii L.Bolus....LC
fulleri L.Bolus....DDT
giffenii (L.Bolus) Schwantes ....Thr*
glabrescens L.Bolus....LC
globosum L.Bolus....DDT
godmaniae L.Bolus....DDT
gracillimum L.Bolus LC
hallii L.Bolus....**EN**
hirtellum (Haw.) Schwantes ....DDT
hispidum (L.) Schwantes LC
hispifolium (Haw.) Schwantes ....**VU**
inornatum (L.Bolus) L.Bolus LC
insolitum L.Bolus ....**CR PE**
intermedium (L.Bolus) L.Bolus LC
jamesii L.Bolus ....DDT
karrooense L.Bolus LC
latipetalum L.Bolus LC
lavisii L.Bolus....**EN**
laxum L.Bolus....LC
leipoldtii L.Bolus....LC
leptum L.Bolus ....**Rare**
lignosum L.Bolus....DDT
lique (N.E.Br.) Schwantes LC
longipes (L.Bolus) H.E.K.Hartmann ....DDT
luederitzii (Engl.) Schwantes LC
macrocalyx L.Bolus LC
maculatum (Haw.) Schwantes ....DDT
marinum L.Bolus....**NT**
mathewsii L.Bolus....DDT
micans (L.) Schwantes ....**EN**
muiri L.Bolus....DDT
oculatum L.Bolus LC
opacum L.Bolus....LC
pallens (Haw.) Schwantes....DDT
papillatum L.Bolus ....DDT
parvifolium (Haw.) Schwantes....LC
pickhardii L.Bolus....**VU**
praecultum (N.E.Br.) Schwantes LC
prostratum L.Bolus ....**DDD**
pulchellum L.Bolus....**VU**
pulchrum L.Bolus ....DDT
pulverulentum (Haw.) Schwantes....Thr*
quadratum Klak....**EN**
ramosissimum (Schltr.) L.Bolus ....**Rare**
salicola L.Bolus....LC
schoenlandianum (Schltr.) L.Bolus LC
semiglobosum L.Bolus....DDT
speciosum (Haw.) Schwantes LC
splendens L.Bolus LC
stokoei L.Bolus....LC
striatum (Haw.) Schwantes....**VU**
strictifolium L.Bolus....DDT
subclausum L.Bolus....LC
subcompressum (Haw.) Schwantes LC
subplanum L.Bolus....DDT
subspinosum (Kuntze) H.E.K.Hartmann ....DDT
tardum L.Bolus....LC
thudichumii L.Bolus....**EN**
tuberculiferum L.Bolus....Thr*
vandermerwei L.Bolus ....DDT
vespertinum L.Bolus LC
wittebergense L.Bolus ....DDT
worcesterense L.Bolus ....Thr*
zygophylloides (L.Bolus) L.Bolus....**EN**

Drosera

acaulis L.f. LC
admirabilis Debbert LC
alba E.Phillips....LC
aliciae Raym.-Hamet LC
burkeana Planch....LC
capensis L. LC
cistiflora L. LC
collinsiae N.E.Br. ex Burtt Davy....LC
cuneifolia L.f. LC
dielsiana Exell & J.R.Laundon....LC
glabripes (Harv.) Stein....LC
hilaris Cham. & Schltdl....LC
indica L. LC
madagascariensis DC. LC
natalensis Diels....LC
pauciflora Banks ex DC. LC
ramentacea Burch. ex DC....LC
regia Stephens LC
slackii Cheek....LC
trinervia Spreng. LC

Drymaria

cordata (L.) Willd. ex Roem. & Schult. subsp. diandra (Blume) J.A.Duke LC

Dryopteris

antarctica (Baker) C.Chr. LC
athamantica (Kunze) Kuntze LC
dracomontana Schelpe & N.C.Anthony....LC
inaequalis (Schltdl.) Kuntze....LC
lewalleana Pic.Serm. LC
pentheri (Krasser) C.Chr. LC

Drypetes

arguta (Müll.Arg.) Hutch. LC
gerrardii Hutch. var. gerrardii LC
gerrardii Hutch. var. tomentosa Radcl.-Sm. LC
mossambicensis Hutch. LC
natalensis (Harv.) Hutch. var. natalensis....LC
reticulata Pax LC

Dumasia

villosa DC. var. villosa....LC

Duosperma

crenatum (Lindau) P.G.Mey. LC

Duthiastrum

linifolium (E.Phillips) M.P.de Vos LC

Duvalia, 235

angustiloba N.E.Br.....**DDD**
caespitosa (Masson) Haw. var. caespitosa....LC
caespitosa (Masson) Haw. var. compacta (Haw.) Meve LC
caespitosa (Masson) Haw. subsp. pubescens (N.E.Br.) Bruyns LC
caespitosa (Masson) Haw. subsp. vestita (Meve) Bruyns LC
corderoyi (Hook.f.) N.E.Br. LC
elegans (Masson) Haw. ....**VU**
gracilis Meve....LC
immaculata (C.A.Lückh.) Bayer ex L.C.Leach ....**EN**
maculata N.E.Br. LC
modesta N.E.Br....LC
parviflora N.E.Br. ....**VU**
pillansii N.E.Br. ....**Rare**
polita N.E.Br. LC

Duvernoia

aconitiflora A.Meeuse LC
adhatodoides E.Mey. ex Nees LC

Dyerophytum

africanum (Lam.) Kuntze LC

Dymondia, 252

margaretae Compton....**EN**

Dyschoriste, 217

depressa (L.) Nees LC
erecta C.B.Clarke....LC
fischeri Lindau LC
monroi S.Moore....LC
mutica (S.Moore) C.B.Clarke LC
perrottetii (Nees) Kuntze ....**VU**
pseuderecta Mildbr. LC
rogersii S.Moore LC
transvaalensis C.B.Clarke LC

E

Eberlanzia
cyathiformis (L.Bolus) H.E.K.Hartmann LC
dichotoma (L.Bolus) H.E.K.Hartmann LC
ebracteata (L.Bolus) H.E.K.Hartmann LC
gravida (L.Bolus) H.E.K.Hartmann LC
parvibracteata (L.Bolus) H.E.K.Hartmann LC
schneideriana (A.Berger) H.E.K.Hartmann LC
sedoides (Dinter & A.Berger) Schwantes LC

Ebracteola
derenbergiana (Dinter) Dinter & Schwantes LC
fulleri (L.Bolus) Glen LC
wilmaniae (L.Bolus) Glen LC

Ecbolium
flanaganii C.B.Clarke LC
glabratum Vollesen LC

Echinochloa
colona (L.) Link LC
crus-galli (L.) P.Beauv. LC
crus-pavonis (Kunth) Schult. LC
haploclada (Stapf) Stapf LC
holubii (Stapf) Stapf LC
jubata Stapf LC
pyramidalis (Lam.) Hitchc. & Chase LC
stagnina (Retz.) P.Beauv. LC
ugandensis Snowden & C.E.Hubb. LC

Echiostachys, 286
ecklonianus (H.Buek) Levyns ..... EN
incanus (Thunb.) Levyns ..... VU
spicatus (Burm.f.) Levyns ..... EN

Ectadium, 236
virgatum E.Mey. ..... NT

Edmondia
fasciculata (Andrews) Hilliard LC
pinifolia (Lam.) Hilliard LC
sesamoides (L.) Hilliard LC

Ehretia
alba Retief & A.E.van Wyk LC
amoena Klotzsch LC
obtusifolia Hochst. ex A.DC. LC
rigida (Thunb.) Druce subsp. nervifolia Retief & A.E.van Wyk LC
rigida (Thunb.) Druce subsp. rigida LC
rigida (Thunb.) Druce subsp. silvatica Retief & A.E.van Wyk LC

Ehrharta, 200
barbinodis Nees ex Trin. LC
brachylemma Pilg. LC
brevifolia Schrad. var. brevifolia LC
brevifolia Schrad. var. cuspidata Nees LC
bulbosa Sm. LC
calycina Sm. LC
capensis Thunb. LC
delicatula (Nees) Stapf LC
dura Nees ex Trin. LC
eburnea Gibbs-Russ. ..... NT
erecta Lam. var. erecta LC
erecta Lam. var. natalensis Stapf LC
longiflora Sm. LC
longifolia Schrad. LC
longigluma C.E.Hubb. LC
melicoides Thunb. LC
microlaena Nees ex Trin. LC
ottonis Kunth ex Nees LC
pusilla Nees ex Trin. LC
ramosa (Thunb.) Thunb. subsp. aphylla (Schrad.) Gibbs-Russ. LC
ramosa (Thunb.) Thunb. subsp. ramosa LC
rehmannii Stapf subsp. filiformis (Stapf) Gibbs-Russ. LC
rehmannii Stapf subsp. rehmannii LC
rehmannii Stapf subsp. subspicata (Stapf) Gibbs-Russ. LC
rupestris Nees ex Trin. subsp. dodii (Stapf) Gibbs-Russ. LC
rupestris Nees ex Trin. subsp. rupestris LC
rupestris Nees ex Trin. subsp. tricostata (Stapf) Gibbs-Russ. LC
setacea Nees subsp. disticha (Stapf) Gibbs-Russ. LC
setacea Nees subsp. scabra (Stapf) Gibbs-Russ. LC
setacea Nees subsp. setacea LC
setacea Nees subsp. uniflora (Burch. ex Stapf) Gibbs-Russ. ..... VU
thunbergii Gibbs-Russ. LC
triandra Nees ex Trin. LC
villosa J.H.Schult. var. maxima Stapf LC
villosa J.H.Schult. var. villosa LC

Ekebergia
capensis Sparrm. LC
pterophylla (C.DC.) Hofmeyr LC

Elachyptera
parvifolia (Oliv.) N.Hallé LC

Elaeodendron, 298
croceum (Thunb.) DC. ..... Declining
transvaalense (Burtt Davy) R.H.Archer ..... NT
zeyheri Spreng. ex Turcz. LC

Elaphoglossum, 53
acrostichoides (Hook. & Grev.) Schelpe LC
angustatum (Schrad.) Hieron. LC
aubertii (Desv.) T.Moore LC
conforme (Sw.) J.Sm. LC
drakensbergense Schelpe ..... Rare
hybridum (Bory) Brack. LC
macropodium (Fée) T.Moore LC
spathulatum (Bory) T.Moore LC

Elatine
ambigua Wight LC
triandra Schkuhr LC

Elegia, 206
acockii (Pillans) Moline & H.P.Linder ..... EN
aggregata (Mast.) Moline & H.P.Linder LC
altigena Pillans ..... VU
amoena Pillans ..... Rare
asperiflora (Nees) Kunth LC
atratiflora Esterh. LC
caespitosa Esterh. LC
capensis (Burm.f.) Schelpe LC
coleura Mast. LC
cuspidata Mast. LC
equisetacea (Mast.) Mast. LC
esterhuyseniae Pillans LC
extensa Pillans ..... EN
fastigiata Mast. ..... DDT
fenestrata Pillans ..... VU
filacea Mast. LC
fistulosa Kunth LC
fucata Esterh. ..... Rare
galpinii N.E.Br. LC
grandis (Nees) Kunth LC
grandispicata H.P.Linder LC
hutchinsonii Pillans LC
intermedia (Steud.) Pillans ..... DDT
juncea L. LC
muirii Pillans LC
neesii Mast. LC
persistens Mast. LC
prominens Pillans ..... VU
racemosa (Poir.) Pers. LC
recta (Mast.) Moline & H.P.Linder ..... NT
rigida Mast. LC
spathacea Mast. LC
squamosa Mast. LC
stipularis Mast. LC
stokoei Pillans LC
thyrsifera (Rottb.) Pers. LC
thyrsoidea (Mast.) Pillans LC
vaginulata Mast. LC
verreauxii Mast. ..... VU

Eleocharis
acutangula (Roxb.) Schult. LC
atropurpurea (Retz.) C.Presl LC
caduca (Delile) Schult. LC
dregeana Steud. LC
dulcis (Burm.f.) Trin. ex Hensch. LC
geniculata (L.) Roem. & Schult. LC
limosa (Schrad.) Schult. LC
mutata (L.) Roem. & Schult. ..... DDT
schlechteri C.B.Clarke ..... DDT
variegata (Poir.) C.Presl LC

Elephantorrhiza
burkei Benth. LC
elephantina (Burch.) Skeels LC
goetzei (Harms) Harms subsp. goetzei LC
obliqua Burtt Davy var. glabra E.Phillips LC
obliqua Burtt Davy var. obliqua ..... DDT
praetermissa J.H.Ross LC
woodii E.Phillips var. pubescens E.Phillips ..... DDT
woodii E.Phillips var. woodii ..... DDT

Eleusine
coracana (L.) Gaertn. subsp. africana (Kenn.-O'Byrne) Hilu & de Wet LC
indica (L.) Gaertn. LC

Elionurus
muticus (Spreng.) Kunth LC

Elymandra
grallata (Stapf) Clayton LC

Elytraria
lyrata Vahl LC

Elytropappus, 252
hispidus (L.f.) Druce LC
sp. nov. (*Koekemoer 1135* PRE) ..... Rare

Elytrophorus, 200
globularis Hack. ..... VU

Embelia
ruminata (E.Mey. ex A.DC.) Mez LC

Emilia, 252
ambifaria (S.Moore) C.Jeffrey LC
hantamensis J.C.Manning & Goldblatt ..... NT
limosa (O.Hoffm.) C.Jeffrey LC
transvaalensis (Bolus) C.Jeffrey LC

Emplectanthus, 236
cordatus N.E.Br. ..... Rare
gerrardii N.E.Br. ..... Rare

Empleuridium, 299
juniperinum Sond. ..... VU

Empleurum, 533
fragrans P.E.Glover ..... Rare
unicapsulare (L.f.) Skeels LC

Empodium, 124
elongatum (Nel) B.L.Burtt LC
flexile (Nel) M.F.Thomps. ex Snijman LC
gloriosum (Nel) B.L.Burtt LC
monophyllum (Nel) B.L.Burtt LC
namaquensis (Baker) M.F.Thomps. LC
plicatum (Thunb.) Garside LC
veratrifolium (Willd.) M.F.Thomps. ..... EN

Enarganthe
octonaria (L.Bolus) N.E.Br. LC

Encephalartos, 57
aemulans Vorster ..... CR
altensteinii Lehm. ..... VU
arenarius R.A.Dyer ..... EN
brevifoliolatus Vorster ..... EW
caffer (Thunb.) Lehm. ..... NT
cerinus Lavranos & D.L.Goode ..... CR
cupidus R.A.Dyer ..... CR
cycadifolius (Jacq.) Lehm. LC
dolomiticus Lavranos & D.L.Goode ..... CR
dyerianus Lavranos & D.L.Goode ..... CR
eugene-maraisii I.Verd. ..... EN
ferox G.Bertol. LC
friderici-guilielmi Lehm. ..... VU
ghellinckii Lem. ..... VU
heenanii R.A.Dyer ..... CR
hirsutus P.J.H.Hurter ..... CR
horridus (Jacq.) Lehm. ..... EN
humilis I.Verd. ..... VU
inopinus R.A.Dyer ..... CR
laevifolius Stapf & Burtt Davy ..... CR
lanatus Stapf & Burtt Davy ..... VU
latifrons Lehm. ..... CR
lebomboensis I.Verd. ..... EN
lehmannii Lehm. ..... NT
longifolius (Jacq.) Lehm. ..... NT
middelburgensis Vorster, Robbertse & S.van der Westh ..... CR
msinganus Vorster ..... CR
natalensis R.A.Dyer & I.Verd. ..... NT
ngoyanus I.Verd. ..... VU
nubimontanus P.J.H.Hurter ..... EW
paucidentatus Stapf & Burtt Davy ..... VU
princeps R.A.Dyer ..... VU
senticosus Vorster ..... VU
transvenosus Stapf & Burtt Davy LC
trispinosus (Hook.) R.A.Dyer ..... VU
villosus Lem. LC
woodii Sander ..... EW

Endonema, 455
lateriflora (L.f.) Gilg ..... EN
retzioides Sond. ..... VU

Endostemon
obtusifolius (E.Mey. ex Benth.) N.E.Br. LC
tenuiflorus (Benth.) M.Ashby LC
tereticaulis (Poir.) M.Ashby LC
Englerodaphne
ovalifolia (Meisn.) E.Phillips LC
pilosa Burtt Davy LC
Englerophytum
magalismontanum (Sond.) T.D.Penn. LC
natalense (Sond.) T.D.Penn....LC
Enicostema
axillare (Lam.) A.Raynal subsp. axillare LC
Enneapogon
cenchroides (Licht. ex Roem. & Schult.) C.E.Hubb. LC
desvauxii P.Beauv. LC
pretoriensis Stent LC
scaber Lehm....LC
scoparius Stapf LC
spathaceus Gooss. ....DDT
Ensete
ventricosum (Welw.) Cheesman LC
Entada
rheedii Spreng. LC
wahlbergii Harv.....LC
Entandrophragma
caudatum (Sprague) Sprague LC
Enteropogon
macrostachyus (Hochst. ex A.Rich.) Munro ex Benth. LC
Entolasia
olivacea Stapf....LC
Enydra
fluctuans Lour. LC
Epilobium
capense Buchinger ex Hochst. LC
hirsutum L....LC
salignum Hausskn. LC
tetragonum L. subsp. tetragonum LC
Epischoenus
adnatus Levyns....LC
cernuus Levyns LC
complanatus Levyns....LC
dregeanus (Boeck.) Levyns....LC
gracilis Levyns....LC
lucidus (C.B.Clarke) Levyns LC
quadrangularis (Boeck.) C.B.Clarke....LC
villosus Levyns LC
Equisetum
ramosissimum Desf. subsp. ramosissimum LC
Eragrostis
acraea De Winter....LC
aethiopica Chiov. LC
amabilis (L.) Hook. & Arn. LC
annulata Rendle ex Scott-Elliot....LC
arenicola C.E.Hubb. LC
aspera (Jacq.) Nees....LC
barbinodis Hack....LC
bergiana (Kunth) Trin. LC
bicolor Nees....LC
biflora Hack. ex Schinz LC
brizantha Nees....LC
caesia Stapf....LC
capensis (Thunb.) Trin....LC
capillifolia Nees....LC
chapelieri (Kunth) Nees....LC
chloromelas Steud. LC
cilianensis (All.) Vignolo ex Janch. LC
ciliaris (L.) R.Br. LC
congesta Oliv....LC
crassinervis Hack. LC
curvula (Schrad.) Nees LC
cylindriflora Hochst. LC
desolata Launert LC
echinochloidea Stapf LC
elatior Stapf....LC
glabrata Nees....LC
glandulosipedata De Winter....LC
gummiflua Nees LC
habrantha Rendle....LC
heteromera Stapf....LC
hierniana Rendle....LC
homomalla Nees LC
inamoena K.Schum. LC
kingesii De Winter....LC
lappula Nees LC
lehmanniana Nees var. chaunantha (Pilg.) De Winter LC
lehmanniana Nees var. lehmanniana....LC
macrochlamys Pilg. var. macrochlamys LC
macrochlamys Pilg. var. wilmaniae (C.E.Hubb. & Schweick.) De Winter LC
micrantha Hack....LC
moggii De Winter var. moggii....LC
nindensis Ficalho & Hiern....LC
obtusa Munro ex Ficalho & Hiern LC
pallens Hack....LC
patens Oliv. LC
patentipilosa Hack. LC
patentissima Hack....LC
pilgeriana Dinter ex Pilg. LC
pilosa (L.) P.Beauv. LC
plana Nees LC
planiculmis Nees....LC
porosa Nees LC
procumbens Nees LC
pseudopoa C.E.Hubb. LC
pseudoteff Peter LC
racemosa (Thunb.) Steud. LC
remotiflora De Winter LC
rigidior Pilg. LC
rotifer Rendle....LC
sabulosa (Steud.) Schweick. LC
sarmentosa (Thunb.) Trin. LC
sclerantha Nees subsp. sclerantha....LC
sclerantha Nees subsp. villosipes (Jedwabn.) Launert....LC
stapfii De Winter LC
superba Peyr....LC
tenuifolia (A.Rich.) Steud. LC
trichophora Coss. & Durieu LC
truncata Hack....LC
viscosa (Retz.) Trin. LC
volkensii Pilg....LC
Erepsia, 421
anceps (Haw.) Schwantes....LC
aperta L.Bolus LC
aristata (L.Bolus) Liede & H.E.K.Hartmann ..... Rare
aspera (Haw.) L.Bolus LC
babiloniae Liede....VU
bracteata (Aiton) Schwantes LC
brevipetala L.Bolus....EN
distans L.Bolus LC
dubia Liede....CR
dunensis (Sond.) Klak....EN
esterhuyseniae L.Bolus LC
forficata (L.) Schwantes....Rare
gracilis (Haw.) L.Bolus LC
hallii L.Bolus....EN
heteropetala (Haw.) Schwantes....LC
inclaudens (Haw.) Schwantes....LC
insignis (Schltr.) Schwantes....Critically Rare
lacera (Haw.) Liede....LC
oxysepala (Schltr.) L.Bolus....VU
patula (Haw.) Schwantes ....VU
pentagona (L.Bolus) L.Bolus....NT
pillansii (Kensit) Liede....VU
polita (L.Bolus) L.Bolus....EN
polypetala (A.Berger & Schltr.) L.Bolus ....CR
promontorii L.Bolus....CR PE
ramosa L.Bolus....VU
saturata L.Bolus LC
simulans (L.Bolus) Klak ....VU
steytlerae L.Bolus....EN
urbaniana (Schltr.) Schwantes LC
villiersii L.Bolus....CR PE
Erianthemum
dregei (Eckl. & Zeyh.) Tiegh....LC
ngamicum (Sprague) Danser LC
Erica, 312
abbottii E.G.H.Oliv.....VU
abelii E.G.H.Oliv.....VU
abietina L. subsp. abietina LC
abietina L. subsp. atrorosea E.G.H.Oliv. & I.M.Oliv....LC
abietina L. subsp. aurantiaca E.G.H.Oliv. & I.M.Oliv....LC
abietina L. subsp. constantiana E.G.H.Oliv. & I.M.Oliv....LC
abietina L. subsp. diabolis E.G.H.Oliv. & I.M.Oliv. ....CR
abietina L. subsp. perfoliosa E.G.H.Oliv. & I.M.Oliv. ....CR
abietina L. subsp. petraea E.G.H.Oliv. & I.M.Oliv. ....EN
accommodata Klotzsch ex Benth. var. accommodata LC
accommodata Klotzsch ex Benth. var. subviscidula Bolus....Rare
acuta Andrews var. acuta LC
acuta Andrews var. breviflora Dulfer....DDT
adaequata Tausch....DDT
adnata L.Bolus....LC
aemula Guthrie & Bolus LC
aestiva Markötter var. aestiva LC
aestiva Markötter var. minor Dulfer....DDT
affinis Benth. ....NT
agglutinans E.G.H.Oliv.....EN
aghillana Guthrie & Bolus var. aghillana ....EN
aghillana Guthrie & Bolus var. latifolia Guthrie & Bolus ....DDT
albens L. var. albens LC
albens L. var. longiflora Benth....DDT
albertyniae E.G.H.Oliv. LC
albescens Klotzsch ex Benth. var. albescens LC
albescens Klotzsch ex Benth. var. erecta Bolus ....DDT
albospicata Hilliard & B.L.Burtt ....Rare
alexandri Guthrie & Bolus subsp. acockii (Compton) E.G.H.Oliv.....EX
alexandri Guthrie & Bolus subsp. alexandri ..... CR
alfredii Guthrie & Bolus ....VU
algida Bolus....LC
alnea E.G.H.Oliv. LC
alopecurus Harv. var. alopecurus LC
alopecurus Harv. var. glabriflora Bolus LC
altevivens H.A.Baker LC
alticola Guthrie & Bolus....LC
altiphila E.G.H.Oliv. ....Rare
amalophylla E.G.H.Oliv. & I.M.Oliv.....DDD
amatolensis E.G.H.Oliv. LC
amicorum E.G.H.Oliv. ....Rare
amoena J.C.Wendl. ....Rare
amphigena Guthrie & Bolus....VU
ampullacea Curtis var. ampullacea....LC
ampullacea Curtis var. obbata (Andrews) Bolus ....DDT
andreaei Compton LC
aneimena Dulfer....VU
anemodes E.G.H.Oliv....LC
anguliger (N.E.Br.) E.G.H.Oliv. LC
angulosa E.G.H.Oliv....LC
annalis E.G.H. & I.M.Oliv. ....Critically Rare
annectens Guthrie & Bolus ....VU
anomala Hilliard & B.L.Burtt....Rare
arachnocalyx E.G.H.Oliv. LC
arcuata Compton LC
ardens Andrews LC
arenaria L.Bolus....NT
areolata (N.E.Br.) E.G.H.Oliv. LC
argentea Klotzsch ex Benth. var. argentea....LC
argentea Klotzsch ex Benth. var. rigida Bolus....DDT
argyrea Guthrie & Bolus....LC
aristata Andrews var. aristata....LC
aristata Andrews var. minor (L.Bolus) Dulfer....LC
aristata Andrews var. turrisbabylonica H.A.Baker ....DDT
aristifolia Benth....VU
armata Klotzsch ex Benth. var. armata....LC
armata Klotzsch ex Benth. var. breviaristata Bolus LC
artemisioides (Klotzsch) E.G.H.Oliv....LC
articularis L. var. articularis....LC
articularis L. var. implexa Bolus LC
articularis L. var. meyeriana Bolus....DDT
aspalathifolia Bolus var. aspalathifolia .... Declining
aspalathifolia Bolus var. bachmannii Bolus ....DDT
aspalathoides Guthrie & Bolus....VU
astroites Guthrie & Bolus var. astroites ....Rare
astroites Guthrie & Bolus var. minor Guthrie & Bolus LC
atherstonei Diels ex Guthrie & Bolus....NT
atricha Dulfer....LC
atromontana E.G.H.Oliv. ....Rare
atropurpurea Dulfer....LC
atrovinosa E.G.H.Oliv.....EN
autumnalis L.Bolus....LC
axillaris Thunb. LC

axilliflora Bartl. LC
azaleifolia Salisb. LC
baccans L. LC
bakeri T.M.Salter ....CR
banksii Andrews subsp. banksii LC
banksii Andrews subsp. comptonii (T.M.Salter) E.G.H.Oliv. & I.M.Oliv. ....EN
banksii (Andrews) E.G.H.Oliv. subsp. purpurea Andrews LC
barbigeroides E.G.H.Oliv. LC
barrydalensis L.Bolus ....Rare
baueri Andrews subsp. baueri ....CR
baueri Andrews subsp. gouriquae E.G.H.Oliv. & I.M.Oliv. ....CR
baurii Bolus ....DDT
beatricis Compton ....DDT
benthamiana E.G.H.Oliv. LC
bergiana L. var. bergiana LC
bergiana L. var. glabra J.C.Wendl. LC
bergiana L. var. parviflora (Klotzsch) Dulfer LC
berzelioides Guthrie & Bolus ....CR
bibax Salisb. LC
bicolor Thunb. LC
binaria E.G.H.Oliv. LC
blaerioides E.G.H.Oliv. subsp. blaerioides ....Rare
blaerioides E.G.H.Oliv. subsp. hirsuta E.G.H.Oliv. ....Rare
blandfordii Andrews LC
blenna Salisb. var. blenna LC
blenna Salisb. var. grandiflora Bolus ....DDT
bodkinii Guthrie & Bolus LC
bokkeveldia E.G.H.Oliv. LC
bolusanthus E.G.H.Oliv. LC
bolusiae Salter var. bolusiae ....CR
bolusiae Salter var. cyathiformis H.A.Baker ....EW
borboniifolia Salisb. LC
botryoides Dulfer LC
boucheri E.G.H.Oliv. ....Rare
brachialis Salisb. ....EN
brachycentra Benth. LC
brachysepala Guthrie & Bolus ....EN
bracteolaris Lam. LC
bredasiana E.G.H.Oliv. LC
brevicaulis Guthrie & Bolus ....Rare
brevifolia Sol. ex Salisb. LC
brownii E.G.H.Oliv. LC
brownleeae Bolus LC
bruniades L. LC
bruniifolia Salisb. var. barbigera (Klotzsch ex Benth.) Dulfer ....DDT
bruniifolia Salisb. var. bruniifolia LC
bruniifolia Salisb. var. solandroides (Andrews) Dulfer LC
bruniifolia Salisb. var. stellata (Lodd.) Dulfer ....DDT
bruniifolia Salisb. var. subglabra Dulfer ....DDT
burchelliana E.G.H.Oliv. ....CR
cabernetea E.G.H.Oliv. ....CR
caespitosa Hilliard & B.L.Burtt LC
caffra L. var. auricularis (Salisb.) Bolus LC
caffra L. var. caffra LC
caffrorum Bolus var. aristula Bolus ....DDT
caffrorum Bolus var. caffrorum LC
caffrorum Bolus var. glomerata Bolus ....DDT
caffrorum Bolus var. luxurians Bolus ....DDT
calcareophila E.G.H.Oliv. ....VU
calcicola (E.G.H.Oliv.) E.G.H.Oliv. ....EN
caledonica A.Spreng. ....EN
calycina L. var. calycina LC
calycina L. var. fragrans (Andrews) Bolus LC
calycina L. var. longibracteata Esterh. & T.M.Salter ....DDT
calycina L. var. periplociflora (Salisb.) Bolus LC
calycina L. var. vespertina (L.f.) Dulfer LC
cameronii L.Bolus LC
campanularis Salisb. LC
canaliculata Andrews LC
canescens J.C.Wendl. var. canescens LC
canescens J.C.Wendl. var. micranthera (Bolus) Dulfer ....DDT
capensis Salter ....Rare
capillaris Bartl. var. capillaris ....CR
capillaris Bartl. var. poliotes Bolus ....DDT
capitata L. ....VU
caprina E.G.H.Oliv. ....VU
carduifolia Salisb. LC
caterviflora Salisb. var. caterviflora ....EN
caterviflora Salisb. var. glabrata Benth. ....CR
cavartica E.G.H. & I.M.Oliv. ....DDD
cederbergensis Compton LC
cedromontana E.G.H.Oliv. LC
ceraria E.G.H.Oliv. & I.M.Oliv. ....Critically Rare
cereris (Compton) E.G.H.Oliv. ....Rare
cerinthoides L. var. barbertona (Galpin) Bolus LC
cerinthoides L. var. cerinthoides LC
cernua Montin LC
cetrata E.G.H.Oliv. LC
chamissonis Klotzsch ex Benth. var. chamissonis LC
chamissonis Klotzsch ex Benth. var. hirtifolia Dulfer ....DDT
chamissonis Klotzsch ex Benth. var. polyantha (Klotzsch ex Benth.) Dulfer LC
chartacea Guthrie & Bolus LC
chionodes E.G.H.Oliv. ....Rare
chionophila Guthrie & Bolus LC
chiroptera E.G.H.Oliv. ....Rare
chloroloma Lindl. LC
chlorosepala Benth. ....VU
chonantha Dulfer var. chonantha LC
chonantha Dulfer var. longistyla Dulfer ....DDT
chrysocodon Guthrie & Bolus ....CR
cincta L.Bolus LC
clavisepala Guthrie & Bolus ....Rare
coacervata H.A.Baker LC
coarctata J.C.Wendl. var. coarctata LC
coarctata J.C.Wendl. var. longipes (Bartl.) Bolus ....DDT
coccinea L. subsp. coccinea LC
coccinea L. subsp. uniflora E.G.H.Oliv. & I.M.Oliv. LC
collina Guthrie & Bolus LC
colorans Andrews LC
colorans Andrews var. hispidula H.A.Baker ....DDT
columnaris E.G.H.Oliv. ....VU
comata Guthrie & Bolus ....DDD
condensata Benth. var. condensata LC
condensata Benth. var. quadrifida Bolus ....DDT
conferta Andrews LC
conspicua Sol. subsp. conspicua LC
conspicua Sol. subsp. roseoflora E.G.H.Oliv. & I.M.Oliv. ....Rare
constantia Nois. ex Benth. ....Rare
cooperi Bolus var. cooperi ....Rare
cooperi Bolus var. missionis Bolus LC
copiosa J.C.Wendl. var. copiosa LC
copiosa J.C.Wendl. var. linearisepala Bolus LC
cordata Andrews var. arachnoidea (Klotzsch) Dulfer ....DDT
cordata Andrews var. cordata LC
corifolia L. var. bracteata (Thunb.) Dulfer LC
corifolia L. var. concolor Dulfer LC
corifolia L. var. corifolia LC
corifolia L. var. erectiuscula (J.C.Wendl.) Dulfer LC
coronanthera Compton LC
coruscans L.Bolus ....DDD
corydalis Salisb. LC
costatisepala H.A.Baker ....Rare
crassisepala Benth. LC
crateriformis Guthrie & Bolus ....DDT
cremea Dulfer ....VU
crenata E.Mey. ex Benth. ....Rare
cristata Dulfer LC
cristiflora Salisb. var. blanda (Salisb.) Bolus LC
cristiflora Salisb. var. cristiflora LC
cristiflora Salisb. var. moschata (Andrews) Dulfer LC
croceovirens E.G.H.Oliv. & I.M.Oliv. ..Critically Rare
cruenta Sol. LC
cryptanthera Guthrie & Bolus ....DDD
cubica L. var. coronifera Bolus LC
cubica L. var. cubica LC
cubica L. var. natalensis Bolus LC
cubitans E.G.H.Oliv. ....Rare
cumuliflora Salisb. LC
cunoniensis E.G.H.Oliv. ....EN
curtophylla Guthrie & Bolus LC
curviflora L. LC
curvifolia Salisb. var. curvifolia LC
curvifolia Salisb. var. zeyheri Bolus ....DDT
curvirostris Salisb. var. curvirostris LC
curvirostris Salisb. var. longisepala L.Bolus LC
curvistyla (N.E.Br.) E.G.H.Oliv. LC
cuscutiformis Dulfer LC
cyathiformis Salisb. var. cyathiformis LC
cyathiformis Salisb. var. orientalis L.Bolus ....DDT
cygnea Salter ....Rare
cylindrica Thunb. LC
cymosa E.Mey. ex Benth. subsp. cymosa ....Rare
cymosa E.Mey. ex Benth. subsp. grandiflora E.G.H. & I.M.Oliv. ....Rare
cyrilliflora Salisb. ....EN
daphniflora Salisb. var. daphniflora LC
daphniflora Salisb. var. latisepala Bolus LC
daphniflora Salisb. var. leipoldtii Bolus LC
daphniflora Salisb. var. muscari (Andrews) Bolus LC
daphniflora Salisb. var. pedicellata (Klotzsch) Bolus LC
deflexa Sinclair LC
demissa Klotzsch ex Benth. var. crassifolia Dulfer ....DDT
demissa Klotzsch ex Benth. var. demissa LC
densifolia Willd. LC
denticulata L. var. denticulata LC
denticulata L. var. grandiloba Bolus LC
denticulata L. var. longiflora Bolus LC
denticulata L. var. retusa (Tausch) Dulfer LC
depressa L. LC
desmantha Benth. var. desmantha LC
desmantha Benth. var. urceolata H.A.Baker ....DDT
dianthifolia Salisb. LC
diaphana Spreng. LC
diosmifolia Salisb. ....Rare
diotiflora Salisb. ....EN
discolor Andrews var. discolor LC
discolor Andrews var. puberula Benth. ....DDT
dispar (N.E.Br.) E.G.H.Oliv. ....VU
dissimulans Hilliard & B.L.Burtt LC
distorta Bartl. LC
dodii Guthrie & Bolus LC
dolfiana E.G.H.Oliv. & I.M.Oliv. ....Rare
doliiformis Salisb. ....Rare
dominans Killick LC
dracomontana E.G.H.Oliv. LC
drakensbergensis Guthrie & Bolus LC
dregei E.G.H.Oliv. ....CR
duthieae L.Bolus LC
dysantha Benth. ....VU
ebracteata Bolus ....Rare
eburnea Salter ....Rare
ecklonii E.G.H.Oliv. ....EN
eglandulosa (Klotzsch) E.G.H.Oliv. ....DDD
elimensis L.Bolus var. elimensis LC
elimensis L.Bolus var. parvibracteata L.Bolus ....DDT
elsieana (E.G.H.Oliv.) E.G.H.Oliv. ....EN
embothriifolia Salisb. var. embothriifolia LC
embothriifolia Salisb. var. longiflora Bolus LC
embothriifolia Salisb. var. subaequalis Bolus LC
empetrina L. LC
equisetifolia Salisb. LC
erasmia Dulfer LC
eremioides (MacOwan) E.G.H.Oliv. subsp. eglandula (N.E.Br.) E.G.H.Oliv. LC
eremioides (MacOwan) E.G.H.Oliv. subsp. eremioides LC
eremioides (MacOwan) E.G.H.Oliv. subsp. pubescens (E.G.H.Oliv.) E.G.H.Oliv. LC
ericoides (L.) E.G.H.Oliv. LC
erina (Klotzsch ex Benth.) E.G.H.Oliv. ....EN
eriocephala Lam. LC
eriocodon Bolus LC
eriophoros Guthrie & Bolus ....VU
esterhuyseniae Compton LC
esteriana E.G.H.Oliv. subsp. esteriana LC
esteriana E.G.H.Oliv. subsp. swartbergensis (E.G.H.Oliv.) E.G.H.Oliv. LC
etheliae L.Bolus ....DDT
eugenea Dulfer LC
euryphylla R.C.Turner ....VU
eustacei L.Bolus LC
evansii (N.E.Br.) E.G.H.Oliv. LC
excavata L.Bolus LC
exleeana E.G.H.Oliv. LC
extrusa Compton ....CR
fairii Bolus ....VU
fascicularis L.f. var. fascicularis LC
fascicularis L.f. var. imperialis (Andrews) Bolus ....DDT
fastigiata L. var. coventryi Bolus ....DDT
fastigiata L. var. fastigiata LC
fastigiata L. var. immaculata Bolus ....DDT
fastigiata L. var. longituba L.Bolus ....DDT

fausta Salisb. LC
feminarum E.G.H.Oliv. ....**CR**
ferrea P.J.Bergius ....**EN**
filamentosa Andrews ....**VU**
filialis E.G.H.Oliv. ....**VU**
filiformis Salisb. var. filiformis ....**EN**
filiformis Salisb. var. longibracteata Bolus ....DDT
filipendula Benth. subsp. filipendula ....**Rare**
filipendula Benth. subsp. parva E.G.H.Oliv. & I.M.Oliv. LC
fimbriata Andrews LC
flacca E.Mey. ex Benth. LC
flanaganii Bolus LC
flavicoma Bartl. ....DDT
flexistyla E.G.H.Oliv. ....**CR**
floccifera Zahlbr. LC
flocciflora Benth. ....**NT**
florifera (Compton) E.G.H.Oliv. LC
foliacea Andrews subsp. foliacea ....**EN**
foliacea Andrews subsp. fulgens (Klotzsch) E.G.H.Oliv. & I.M.Oliv. ....**EX**
fontana L.Bolus ....**Rare**
formosa Thunb. LC
frigida Bolus LC
fuscescens (Klotzsch) E.G.H.Oliv. LC
galgebergensis H.A.Baker ....**VU**
galpinii T.M.Salter ....**EN**
garciae E.G.H.Oliv. ....**VU**
genistifolia Salisb. LC
georgica Guthrie & Bolus LC
gerhardii E.G.H. & I.M.Oliv. ....**CR**
gigantea Klotzsch ex Benth. ....**Rare**
gillii Benth. ....**VU**
glabella Thunb. subsp. glabella LC
glabella Thunb. subsp. laevis E.G.H.Oliv. LC
glabripes L.Bolus LC
glandulifera Klotzsch ....Thr*
glandulipila Compton ....**Rare**
glandulosa Thunb. subsp. bondiae (Compton) E.G.H.Oliv. & I.M.Oliv. LC
glandulosa Thunb. subsp. breviflora (Bolus) E.G.H.Oliv. & I.M.Oliv. ....**EN**
glandulosa Thunb. subsp. fourcadei (L.Bolus) E.G.H.Oliv. & I.M.Oliv. ....**VU**
glandulosa Thunb. subsp. glandulosa LC
glaphyra Killick LC
glauca Andrews var. elegans (Andrews) Bolus LC
glauca Andrews var. glauca LC
globiceps (N.E.Br.) E.G.H.Oliv. subsp. consors (N.E.Br.) E.G.H.Oliv. LC
globiceps (N.E.Br.) E.G.H.Oliv. subsp. globiceps LC
globiceps (N.E.Br.) E.G.H.Oliv. subsp. gracilis (Benth.) E.G.H.Oliv. LC
globulifera Dulfer LC
glomiflora Salisb. var. canthariformis (Lodd.) Bolus LC
glomiflora Salisb. var. glomiflora LC
glumiflora Klotzsch ex Benth. ....**VU**
glutinosa P.J.Bergius var. glutinosa LC
glutinosa P.J.Bergius var. parviflora Benth. LC
gnaphaloides L. LC
goatcheriana L.Bolus var. drakensteinensis L.Bolus ....DDT
goatcheriana L.Bolus var. goatcheriana LC
goatcheriana L.Bolus var. petrensis L.Bolus LC
gossypioides E.G.H.Oliv. ....**EN**
gracilipes Guthrie & Bolus ....**CR**
gracilis J.C.Wendl. LC
granulatifolia H.A.Baker ....**VU**
granulosa H.A.Baker LC
grata Guthrie & Bolus ....**Rare**
greyi Guthrie & Bolus ....**DDD**
grisbrookii Guthrie & Bolus LC
guthriei Bolus var. guthriei LC
guthriei Bolus var. strictior Bolus ....DDT
gysbertii Guthrie & Bolus var. ampliata L.Bolus ....DDT
gysbertii Guthrie & Bolus var. gysbertii LC
gysbertii Guthrie & Bolus var. longiflora L.Bolus ....DDT
haemastoma J.C.Wendl. ....DDT
haematocodon T.M.Salter ....**Rare**
haematosiphon Guthrie & Bolus LC
halicacaba L. LC
hameriana L.Bolus ....DDT
hanekomii E.G.H.Oliv. ....**VU**
hansfordii E.G.H.Oliv. ....**CR**
harveyana Guthrie & Bolus LC
hebdomadalis E.G.H. & I.M.Oliv. ....**Rare**
hebecalyx Benth. LC
heleogena T.M.Salter ....**CR**
heleophila Guthrie & Bolus ....DDT
hendricksei H.A.Baker var. alba H.A.Baker ....DDT
hendricksei H.A.Baker var. hendricksei ....**VU**
hermani E.G.H.Oliv. ....**CR**
heterophylla Guthrie & Bolus ....DDT
hexensis E.G.H.Oliv. ....**Rare**
hibbertii Andrews ....**CR**
hillburttii (E.G.H.Oliv.) E.G.H.Oliv. ....**CR**
hippurus Compton ....**EN**
hirta Thunb. LC
hirtiflora Curtis var. hirtiflora LC
hirtiflora Curtis var. minor (Andrews) Benth. ....DDT
hispidula L. var. hispidula LC
hispidula L. var. micrantha Benth. ....DDT
hispidula L. var. serpyllifolia (Andrews) Benth. ..DDT
hispidula L. var. viscidula (L.Bolus) Dulfer ....DDT
hispiduloides E.G.H.Oliv. LC
holosericea Salisb. var. holosericea LC
holosericea Salisb. var. parviflora Bolus ....DDT
holtii Schweick. LC
hottentotica E.G.H.Oliv. ....**Rare**
humansdorpensis Compton ....**CR**
humidicola E.G.H.Oliv. ....**CR**
humifusa Hibbert ex Salisb. LC
ignita E.G.H.Oliv. ....**VU**
imbricata L. LC
inaequalis (N.E.Br.) E.G.H.Oliv. LC
inamoena Dulfer ....**Rare**
incarnata Thunb. LC
inclusa H.L.Wendl. ex Benth. LC
inconstans Zahlbr. ....**VU**
inflata Thunb. LC
inflaticalyx E.G.H.Oliv. ....**Rare**
infundibuliformis Andrews LC
ingeana E.G.H.Oliv. ....**Rare**
innovans E.G.H.Oliv. ....**EN**
inordinata H.A.Baker ....**Rare**
insignis E.G.H.Oliv. ....**Rare**
insolitanthera H.A.Baker ....**VU**
intermedia Klotzsch ex Benth. subsp. albiflora E.G.H.Oliv. & I.M.Oliv. ....**Rare**
intermedia Klotzsch ex Benth. subsp. intermedia LC
interrupta (N.E.Br.) E.G.H.Oliv. ....**CR**
intervallaris Salisb. var. grandiflora Bolus ....DDT
intervallaris Salisb. var. intervallaris LC
intervallaris Salisb. var. trifolia H.A.Baker ....DDT
intonsa L.Bolus ....DDT
intricata H.A.Baker ....**VU**
involucrata Klotzsch ex Benth. LC
involvens Benth. ....**DDD**
ioniana E.G.H.Oliv. LC
irbyana Andrews LC
irregularis Benth. ....**EN**
irrorata Guthrie & Bolus LC
ixanthera Benth. ....**VU**
jacksoniana H.A.Baker ....**Rare**
jananthus E.G.H.Oliv. & I.M.Oliv. ....**VU**
jasminiflora Salisb. ....**CR**
jonasiana E.G.H.Oliv. ....**Rare**
jugicola E.G.H.Oliv. & I.M.Oliv. ....**Rare**
juniperina E.G.H.Oliv. ....**EN**
junonia Bolus var. junonia ....**VU**
junonia Bolus var. minor Bolus LC
kammanassieae E.G.H.Oliv. ....**Critically Rare**
karooica E.G.H.Oliv. LC
karwyderi E.G.H.Oliv. ....**CR**
keeromsbergensis H.A.Baker ....**Rare**
keetii L.Bolus ....DDT
kirstenii E.G.H.Oliv. LC
klotzschii (Alm & T.C.E.Fr.) E.G.H.Oliv. LC
kogelbergensis E.G.H.Oliv. ....**Critically Rare**
kougabergensis H.A.Baker var. kougabergensis ....**Rare**
kougabergensis H.A.Baker var. recurvifolia H.A.Baker ....DDT
kraussiana Klotzsch ....**CR PE**
krugeri E.G.H.Oliv. LC
labialis Salisb. LC
lachnaeifolia Salisb. LC
laeta Bartl. LC
laevigata Bartl. var. elongata Bolus ....DDT
laevigata Bartl. var. laevigata ....DDT
lageniformis Salisb. ....**EN**
lananthera L.Bolus LC
lanata Andrews LC
langebergensis H.A.Baker ....**Rare**
lanipes Guthrie & Bolus LC
lanuginosa Andrews LC
lasciva Salisb. LC
lasiocarpa Guthrie & Bolus ....DDT
lateralis Willd. LC
lateriflora E.G.H.Oliv. ....**VU**
latiflora L.Bolus ....**CR**
latifolia Andrews ....DDT
latituba L.Bolus LC
lavandulifolia Salisb. LC
lawsonii Andrews LC
lehmannii Klotzsch ex Benth. LC
lepidota Rach LC
leptantha Dulfer ....DDT
leptoclada Van Heurck & Müll.Arg. var. aristata Bolus LC
leptoclada Van Heurck & Müll.Arg. var. leptoclada LC
leptopus Benth. var. breviloba Bolus LC
leptopus Benth. var. leptopus LC
leptopus Benth. var. piquetbergensis Bolus LC
lerouxiae Bolus ....**EN**
leucantha Link LC
leucanthera L.f. LC
leucodesmia Benth. LC
leucopelta Tausch var. ephebioides Bolus LC
leucopelta Tausch var. leucopelta LC
leucopelta Tausch var. luxurians I.Verd. ....DDT
leucopelta Tausch var. pubescens Bolus ....DDT
leucosiphon L.Bolus ....**Rare**
leucotrachela H.A.Baker subsp. leucotrachela LC
leucotrachela H.A.Baker subsp. monicae E.G.H. & I.M.Oliv. ....**Critically Rare**
lignosa H.A.Baker ....**Rare**
limnophila E.G.H.Oliv. ....**Rare**
limosa L.Bolus ....**VU**
lithophila E.G.H. & I.M.Oliv. LC
loganii Compton LC
longiaristata Benth. LC
longimontana E.G.H.Oliv. LC
longipedunculata Lodd. var. intermedia (Bolus) Dulfer LC
longipedunculata Lodd. var. longipedunculata LC
longipedunculata Lodd. var. setifera (Bolus) Dulfer LC
longistyla L.Bolus var. appressa Dulfer ....DDT
longistyla L.Bolus var. longistyla LC
lowryensis Bolus var. glandulifera Dulfer ....DDT
lowryensis Bolus var. lowryensis ....**Rare**
lucida Salisb. var. laxa (Andrews) Bolus LC
lucida Salisb. var. lucida LC
lucida Salisb. var. pauciflora Bolus ....DDT
lutea P.J.Bergius LC
lycopodiastrum Lam. LC
macilenta Guthrie & Bolus ....DDT
macowanii Cufino subsp. lanceolata (Bolus) E.G.H.Oliv. & I.M.Oliv. ....**Rare**
macowanii Cufino subsp. macowanii LC
macroloma Benth. LC
macrophylla Klotzsch ex Benth. ....**Rare**
macrotrema Guthrie & Bolus var. glabripedicellata Dulfer LC
macrotrema Guthrie & Bolus var. macrotrema LC
maderi Guthrie & Bolus LC
madida E.G.H.Oliv. ....**Rare**
maesta Bolus var. longistyla Dulfer ....DDT
maesta Bolus var. maesta LC
magistrati E.G.H.Oliv. LC
magnisylvae E.G.H.Oliv. ....**VU**
malmesburiensis E.G.H.Oliv. ....**CR**
mammosa L. LC
margaritacea Sol. ....**CR**
marifolia Sol. ....**VU**
maritima Guthrie & Bolus LC
marlothii Bolus ....**Rare**
massonii L.f. var. massonii LC
massonii L.f. var. minor Benth. ....DDT
mauritanica L. LC
maximiliani Guthrie & Bolus LC
melanacme Guthrie & Bolus ....**EN**
melanomontana E.G.H.Oliv. LC
melanthera L. LC
melastoma Andrews subsp. melastoma LC

melastoma Andrews subsp. minor E.G.H.Oliv. & I.M.Oliv. ..... **EN**
micrandra Guthrie & Bolus ..... **DDD**
miniscula E.G.H.Oliv. ..... **DDD**
mira Klotzsch ex Benth. LC
mitchellensis Dulfer ..... **Rare**
modesta Salisb. ..... **EN**
mollis Andrews LC
monadelphia Andrews LC
monantha Compton ..... DDT
monsoniana L.f. var. exserta Klotzsch LC
monsoniana L.f. var. monsoniana LC
montis-hominis E.G.H.Oliv. ..... **VU**
mucronata Andrews LC
muirii L.Bolus ..... DDT
multiflexuosa E.G.H.Oliv. ..... **VU**
multumbellifera P.J.Bergius LC
mundii Guthrie & Bolus ..... DDT
muscosa (Aiton) E.G.H.Oliv. LC
myriocodon Guthrie & Bolus LC
nabea Guthrie & Bolus LC
nana Salisb. ..... **VU**
natalensis Dulfer ..... **DDD**
natalitia Bolus var. natalitia LC
natalitia Bolus var. robusta Dulfer ..... DDT
navigatoris E.G.H.Oliv. ..... **VU**
nematophylla Guthrie & Bolus ..... **VU**
nemorosa Klotzsch ex Benth. LC
nervata Guthrie & Bolus LC
nevillei L.Bolus ..... **Rare**
newdigateae Dulfer LC
nigrimontana Guthrie & Bolus ..... DDT
nivea Sinclair LC
niveniana E.G.H.Oliv. ..... **VU**
notholeeana (E.G.H.Oliv.) E.G.H.Oliv. LC
nubigena Bolus LC
nudiflora L. LC
nutans J.C.Wendl. LC
oakesiorum E.G.H.Oliv. ..... **EN**
oatesii Rolfe var. latifolia Bolus ..... DDT
oatesii Rolfe var. oatesii LC
obconica H.A.Baker ..... DDT
obliqua Thunb. LC
oblongiflora Benth. ..... **CR**
obtusata Klotzsch ex Benth. LC
occulta E.G.H.Oliv. ..... **VU**
ocellata Guthrie & Bolus LC
octonaria L.Bolus ..... DDT
odorata Andrews LC
oligantha Guthrie & Bolus ..... **EN**
oliveri H.A.Baker LC
omninoglabra H.A.Baker ..... **Rare**
onusta Guthrie & Bolus ..... **CR**
oophylla Benth. ..... **Critically Rare**
opulenta (J.C.Wendl. ex Klotzsch) Benth. LC
orculiflora Dulfer LC
oreophila Guthrie & Bolus LC
oreotragus E.G.H.Oliv. LC
oresigena Bolus LC
orientalis R.A.Dyer ..... DDT
orthiocola E.G.H.Oliv. ..... **EN**
ostiaria Compton ..... DDT
outeniquae (Compton) E.G.H.Oliv. ..... **VU**
ovina Klotzsch var. ovina LC
ovina Klotzsch var. purpurea Bolus ..... DDT
oxyandra Guthrie & Bolus ..... **DDD**
oxycoccifolia Salisb. LC
oxysepala Guthrie & Bolus ..... **VU**
pageana L.Bolus ..... **Rare**
palliiflora Salisb. LC
paludicola L.Bolus ..... **VU**
paniculata L. LC
pannosa Salisb. ..... **Rare**
papyracea Guthrie & Bolus LC
parilis Salisb. var. parilis LC
parilis Salisb. var. parviflora Benth. ..... DDT
parviflora L. var. exigua (Salisb.) Bolus ..... DDT
parviflora L. var. glabra Compton LC
parviflora L. var. hispida Bolus ..... DDT
parviflora L. var. inermis (Klotzsch) Bolus LC
parviflora L. var. parviflora LC
parviflora L. var. puberula (Bartl.) Bolus ..... DDT
parviflora L. var. ternifolia Bolus LC
parviporandra E.G.H.Oliv. LC
passerinae Montin LC
passerinoides (Bolus) E.G.H.Oliv. ..... **VU**
patens Andrews ..... **EN**
patersonii Andrews ..... **EN**
paucifolia (J.C.Wendl.) E.G.H.Oliv. subsp. ciliata (Klotzsch) E.G.H.Oliv. ..... **EN**
paucifolia (J.C.Wendl.) E.G.H.Oliv. subsp. paucifolia ..... **EN**
paucifolia (J.C.Wendl.) E.G.H.Oliv. subsp. squarrosa (Benth.) E.G.H.Oliv. ..... **EN**
pauciovulata H.A.Baker ..... **VU**
pearsoniana L.Bolus ..... DDT
pectinifolia Salisb. var. oblongifolia Dulfer LC
pectinifolia Salisb. var. pectinifolia LC
pellucida Sol. ex Salisb. LC
peltata Andrews LC
penduliflora E.G.H.Oliv. ..... **EN**
penicilliformis Salisb. var. chrysantha (Klotzsch ex Benth.) Dulfer ..... DDT
penicilliformis Salisb. var. penicilliformis LC
perlata Sinclair LC
permutata Dulfer LC
perplexa E.G.H.Oliv. ..... **CR**
perspicua J.C.Wendl. subsp. latifolia (Benth.) E.G.H.Oliv. & I.M.Oliv. ..... **VU**
perspicua J.C.Wendl. subsp. perspicua LC
petiolaris Lam. LC
petraea Benth. LC
petricola E.G.H.Oliv. ..... **Rare**
petrophila L.Bolus LC
petrusiana E.G.H.Oliv. & I.M.Oliv. ..... **Rare**
peziza Lodd. LC
phacelanthera E.G.H.Oliv. LC
phaeocarpa (N.E.Br.) E.G.H.Oliv. LC
philippioides Compton ..... **Rare**
phillipsii L.Bolus LC
physantha Benth. ..... **CR**
physodes L. LC
physophylla Benth. ..... **Rare**
pilaarkopensis H.A.Baker ..... **Rare**
pillansii Bolus subsp. fervida (L.Bolus) E.G.H.Oliv. & I.M.Oliv. ..... **Rare**
pillansii Bolus subsp. pillansii ..... **Rare**
pilosiflora E.G.H.Oliv. subsp. pilosiflora ..... **VU**
pilosiflora E.G.H.Oliv. subsp. purpurea E.G.H.Oliv. ..... **VU**
pilulifera L. ..... **VU**
pinea Thunb. LC
piquetbergensis (N.E.Br.) E.G.H.Oliv. ..... **CR**
placentiflora Salisb. LC
planifolia L. var. calycina Bolus ..... DDT
planifolia L. var. planifolia LC
platycalyx E.G.H.Oliv. ..... **EN**
plena L.Bolus ..... **Rare**
plukenetii L. subsp. bredensis E.G.H.Oliv. & I.M.Oliv. LC
plukenetii L. subsp. breviflora (Dulfer) E.G.H. & I.M.Oliv. LC
plukenetii L. subsp. lineata (Benth.) E.G.H.Oliv. & I.M.Oliv. LC
plukenetii L. subsp. penicellata (Andrews) E.G.H.Oliv. & I.M.Oliv. LC
plukenetii L. subsp. plukenetii LC
plumigera Bartl. LC
plumosa Thunb. LC
podophylla Benth. ..... **Rare**
pogonanthera Bartl. ..... DDT
polifolia Salisb. ex Benth. var. angustata Bolus ..... DDT
polifolia Salisb. ex Benth. var. polifolia LC
polycoma Benth. LC
portenschlagiana Dulfer LC
praecox Klotzsch LC
praenitens Tausch LC
priorii Guthrie & Bolus LC
procaviana (E.G.H.Oliv.) E.G.H.Oliv. ..... **DDD**
prolata E.G.H.Oliv. & I.M.Oliv. ..... **EN**
propendens Andrews ..... **CR**
propinqua Guthrie & Bolus LC
pseudocalycina Compton LC
psittacina E.G.H.Oliv. & I.M.Oliv. ..... **EN**
puberuliflora E.G.H.Oliv. LC
pubescens L. var. glabrifolia Dulfer ..... DDT
pubescens L. var. pubescens LC
pubigera Salisb. LC
pudens H.A.Baker LC
pulchella Houtt. var. major T.M.Salter ..... DDT
pulchella Houtt. var. pulchella LC
pulchelliflora E.G.H.Oliv. ..... **DDD**
pulvinata Guthrie & Bolus ..... **CR**
pumila Andrews LC
purgatoriensis H.A.Baker ..... **VU**
pycnantha Benth. ..... **Rare**
pyramidalis Sol. var. pyramidalis ..... **EX**
pyramidalis Sol. var. vernalis (Lodd.) Benth. LC
pyxidiflora Salisb. LC
quadrangularis Salisb. LC
quadrifida (Benth.) E.G.H.Oliv. LC
quadrisulcata L.Bolus ..... **Rare**
racemosa Thunb. var. aristata L.Bolus ..... DDT
racemosa Thunb. var. racemosa LC
radicans (L.Guthrie) E.G.H.Oliv. subsp. radicans LC
radicans (L.Guthrie) E.G.H.Oliv. subsp. schlechteri (N.E.Br.) E.G.H.Oliv. ..... **EN**
recta Bolus LC
recurvata Andrews ..... **CR**
recurvifolia E.G.H.Oliv. LC
reenensis Zahlbr. LC
regerminans L. LC
regia Bartl. subsp. mariae (Guthrie & Bolus) E.G.H.Oliv. & I.M.Oliv. LC
regia Bartl. subsp. regia ..... **EN**
rehmii Dulfer ..... **VU**
remota (N.E.Br.) E.G.H.Oliv. ..... **CR**
retorta Montin LC
revoluta (Bolus) L.E.Davidson LC
rhodantha Guthrie & Bolus ..... DDT
rhodopis (Bolus) Guthrie & Bolus ..... **CR**
rhopalantha Dulfer var. delapsa (Bolus) Dulfer ..... DDT
rhopalantha Dulfer var. rhopalantha LC
ribisaria Guthrie & Bolus ..... **CR**
richardii E.G.H.Oliv. & I.M.Oliv. ..... **Rare**
rigidula (N.E.Br.) E.G.H.Oliv. LC
rimarum E.G.H.Oliv. LC
riparia H.A.Baker ..... **EN**
rivularis L.E.Davidson ..... **EN**
rosacea (L.Guthrie) E.G.H.Oliv. subsp. glabrata E.G.H.Oliv. LC
rosacea (L.Guthrie) E.G.H.Oliv. subsp. rosacea LC
roseoloba E.G.H.Oliv. ..... **Rare**
rubens Thunb. LC
rubiginosa Dulfer var. caespitosa (Bolus) Dulfer ..... DDT
rubiginosa Dulfer var. rubiginosa LC
rudolfii Bolus LC
rufescens Klotzsch ..... **Rare**
rugata E.G.H.Oliv. LC
rupicola Klotzsch ..... **DDD**
russakiana E.G.H.Oliv. ..... **DDD**
rusticula E.G.H.Oliv. ..... **Rare**
sacciflora Salisb. ..... **CR PE**
sagittata Klotzsch ex Benth. ..... **DDD**
salax Salisb. ..... DDT
salicina E.G.H.Oliv. ..... **CR**
salteri L.Bolus ..... DDT
saptouensis E.G.H.Oliv. LC
savileae Andrews var. grandiflora Bolus ..... DDT
savileae Andrews var. mutica L.Bolus ..... DDT
savileae Andrews var. savileae LC
saxicola Guthrie & Bolus LC
saxigena Dulfer LC
scabriuscula Lodd. LC
schelpeorum E.G.H. & I.M.Oliv. LC
schlechteri Bolus LC
schumannii E.G.H.Oliv. ..... **EN**
scytophylla Guthrie & Bolus LC
selaginifolia Salisb. LC
senilis Klotzsch ex Benth. LC
seriphiifolia Salisb. LC
serrata Thunb. LC
sessiliflora L.f. LC
setacea Andrews LC
setociliata H.A.Baker LC
setosa Bartl. LC
setulosa Benth. ..... **Rare**
sexfaria F.A.Bauer LC
shannonii Andrews ..... DDT
sicifolia Salisb. ..... **VU**
simii (S.Moore) E.G.H.Oliv. LC
similis (N.E.Br.) E.G.H.Oliv. LC
simulans Dulfer var. simulans LC
simulans Dulfer var. tetragona (Bolus) Dulfer ..... DDT
simulans Dulfer var. trivialis (Klotzsch) Dulfer LC
sitiens Klotzsch LC
sociorum L.Bolus ..... **CR**
solandri Andrews LC

sonderiana Guthrie & Bolus LC
sparrmanii L.f. LC
sparsa Lodd. var. glanduloso-pedicellata Dulfer ... LC
sparsa Lodd. var. sparsa LC
speciosa Andrews LC
spectabilis Klotzsch ex Benth. LC
sperata E.G.H.Oliv. ..... **Rare**
sphaerocephala J.C.Wendl. ex Benth. LC
spumosa L. LC
squarrosa Salisb. ..... **VU**
stagnalis Salisb. subsp. minor E.G.H.Oliv. & I.M.Oliv. ..... DDT
stagnalis Salisb. subsp. stagnalis LC
steinbergiana H.L.Wendl. ex Klotzsch var. abbreviata Bolus ..... DDT
steinbergiana H.L.Wendl. ex Klotzsch var. steinbergiana LC
stenantha Klotzsch ex Benth. LC
stokoeanthus E.G.H.Oliv. ..... **VU**
stokoei L.Bolus LC
straussiana Gilg LC
strigilifolia Salisb. var. rosea Bolus ..... DDT
strigilifolia Salisb. var. strigilifolia LC
strigosa Sol. LC
stylaris Spreng. ..... **VU**
subcapitata (N.E.Br.) E.G.H.Oliv. LC
subdivaricata P.J.Bergius LC
subulata J.C.Wendl. LC
subverticillaris Diels ex Guthrie & Bolus ..... **VU**
suffulta J.C.Wendl. ex Benth. LC
syngenesia Compton LC
tarantulae E.G.H.Oliv. ..... **VU**
taxifolia F.A.Bauer LC
taylorii E.G.H.Oliv. LC
tegetiformis E.G.H.Oliv. LC
tegulifolia Salisb. LC
tenella Andrews var. gracilior Bolus ..... DDT
tenella Andrews var. tenella LC
tenuicaulis Klotzsch ex Benth. LC
tenuifolia L. LC
tenuipes Guthrie & Bolus ..... **Rare**
tenuis Salisb. LC
terniflora E.G.H.Oliv. LC
tetragona L.f. LC
tetrathecoides Benth. ..... **VU**
thamnoides E.G.H.Oliv. LC
thimifolia J.C.Wendl. LC
thodei Guthrie & Bolus LC
thomae L.Bolus LC
thunbergii Montin var. celsiana (Lodd.) Benth. LC
thunbergii Montin var. thunbergii LC
tomentosa Salisb. LC
toringbergensis H.A.Baker ..... DDT
totta Thunb. LC
trachysantha Bolus LC
tradouwensis Compton LC
tragomontana R.C.Turner ..... **VU**
tragulifera Salisb. LC
transparens P.J.Bergius LC
triceps Link LC
trichadenia Bolus LC
trichoclada Guthrie & Bolus ..... DDT
trichophora Benth. ..... DDT
trichophylla Benth. ..... **VU**
trichostigma Salter ..... **VU**
trichroma Benth. var. imbricata Bolus ..... DDT
trichroma Benth. var. trichroma LC
triflora L. var. rosea Benth. LC
triflora L. var. triflora LC
tristis Bartl. LC
truncata L.Bolus ..... DDT
tubercularis Salisb. ..... DDT
tumida Ker Gawl. var. minor Bolus LC
tumida Ker Gawl. var. tumida LC
turgida Salisb. ..... **EW**
turmalis Salisb. LC
turneri E.G.H.Oliv. ..... **VU**
turrisbabylonica H.A.Baker ..... **VU**
tysonii Bolus var. krookii Zahlbr. ..... DDT
tysonii Bolus var. tysonii LC
uberiflora E.G.H.Oliv. LC
umbelliflora Klotzsch ex Benth. LC
umbratica E.G.H. & I.M.Oliv. ..... **Critically Rare**
unicolor J.C.Wendl. subsp. georgensis E.G.H.Oliv. & I.M.Oliv. ..... **Critically Rare**
unicolor J.C.Wendl. subsp. mutica E.G.H.Oliv. & I.M.Oliv. ..... **EN**
unicolor J.C.Wendl. subsp. unicolor LC
unilateralis Klotzsch ex Benth. LC
urceolata (Klotzsch) E.G.H.Oliv. LC
urna-viridis Bolus ..... **Rare**
ustulescens Guthrie & Bolus ..... **CR**
utriculosa L.Bolus LC
uysii H.A.Baker ..... **VU**
valida H.A.Baker ..... **Rare**
vallis-aranearum E.G.H.Oliv. ..... **CR**
vallis-fluminis E.G.H.Oliv. ..... **Rare**
vallis-gratiae Guthrie & Bolus ..... **Rare**
vanheurckii Müll.Arg. LC
varderi L.Bolus ..... DDT
velatiflora E.G.H.Oliv. ..... **VU**
velitaris Salisb. var. hemisphaerica Bolus LC
velitaris Salisb. var. parvibracteata L.Bolus LC
velitaris Salisb. var. velitaris ..... DDT
ventricosa Thunb. var. meyeriana Dulfer LC
ventricosa Thunb. var. ventricosa LC
venustiflora E.G.H.Oliv. subsp. glandulosa E.G.H.Oliv. ..... **VU**
venustiflora E.G.H.Oliv. subsp. venustiflora ..... **EN**
verecunda Salisb. LC
vernicosa E.G.H.Oliv. LC
versicolor Andrews LC
verticillata P.J.Bergius ..... **EW**
vestita Thunb. LC
villosa J.C.Wendl. LC
virginalis Klotzsch ex Benth. LC
viridescens Lodd. ..... DDT
viridiflora Andrews subsp. primulina (Bolus) E.G.H.Oliv. & I.M.Oliv. LC
viridiflora Andrews subsp. redacta E.G.H.Oliv. & I.M.Oliv. ..... **EN**
viridiflora Andrews subsp. viridiflora LC
viridimontana E.G.H. & I.M.Oliv. subsp. nivicola E.G.H. & I.M.Oliv. ..... **DDD**
viridimontana E.G.H. & I.M.Oliv. subsp. viridimontana ..... **CR**
viscaria L. subsp. gallorum (L.Bolus) E.G.H.Oliv. & I.M.Oliv. ..... **CR PE**
viscaria L. subsp. longifolia (F.A.Bauer) E.G.H.Oliv. & I.M.Oliv. LC
viscaria L. subsp. macrosepala E.G.H.Oliv. & I.M.Oliv. LC
viscaria L. subsp. pendula E.G.H.Oliv. & I.M.Oliv. ..... **VU**
viscaria L. subsp. pustulata (H.A.Baker) E.G.H.Oliv. & I.M.Oliv. ..... **VU**
viscaria L. subsp. viscaria LC
viscidiflora Esterh. ..... **VU**
viscosissima E.G.H.Oliv. ..... **VU**
vlokii E.G.H.Oliv. ..... **EN**
vogelpoelii H.A.Baker LC
walkeri Andrews var. praestans (Andrews) Bolus .. LC
walkeri Andrews var. walkeri LC
wendlandiana Klotzsch LC
williamsiorum E.G.H.Oliv. ..... **VU**
winteri H.A.Baker LC
wittebergensis Dulfer ..... **Rare**
woodii Bolus var. robusta Dulfer ..... DDT
woodii Bolus var. woodii LC
wyliei Bolus LC
xanthina Guthrie & Bolus ..... **Rare**
xeranthemifolia Salisb. ..... **CR**
zebrensis Compton ..... **EN**
zeyheriana (Klotzsch) E.G.H.Oliv. ..... **VU**
zitzikammensis Dulfer var. glutinosa Dulfer ..... DDT
zitzikammensis Dulfer var. zitzikammensis .... **DDD**
zwartbergensis Bolus ..... **Rare**

Eriocaulon

abyssinicum Hochst. LC
africanum Hochst. LC
dregei Hochst. LC
hydrophilum Markötter LC
maculatum Schinz LC
mutatum N.E.Br. var. angustisepalum (H.E.Hess) S.M.Phillips LC
schlechteri Ruhland LC
sonderianum Körn. LC
transvaalicum N.E.Br. subsp. tofieldifolium (Schinz) S.M.Phillips LC
transvaalicum N.E.Br. subsp. transvaalicum LC

Eriocephalus, 252

africanus L. var. africanus LC
africanus L. var. paniculatus (Cass.) M.A.N.Müll., P.P.J.Herman & Kolberg LC
ambiguus (DC.) M.A.N.Müll. LC
aromaticus C.A.Sm. LC
brevifolius (DC.) M.A.N.Müll. LC
capitellatus DC. LC
decussatus Burch. LC
ericoides (L.f.) Druce subsp. ericoides LC
ericoides (L.f.) Druce subsp. griquensis M.A.N.Müll. LC
eximius DC. LC
glandulosus M.A.N.Müll. LC
grandiflorus M.A.N.Müll ..... **Rare**
karooicus M.A.N.Müll. LC
longifolius M.A.N.Müll. LC
luederitzianus O.Hoffm. LC
macroglossus B.Nord. LC
merxmuelleri M.A.N.Müll. LC
microcephalus DC. LC
microphyllus DC. var. carnosus M.A.N.Müll. ..... Thr*
microphyllus DC. var. microphyllus LC
microphyllus DC. var. pubescens (DC.) M.A.N.Müll. LC
namaquensis M.A.N.Müll. LC
pauperrimus Merxm. & Eberle LC
pedicellaris DC. LC
punctulatus DC. LC
purpureus Burch. LC
racemosus L. var. affinis (DC.) Harv. LC
racemosus L. var. racemosus LC
scariosus DC. LC
spinescens Burch. LC
tenuifolius DC. LC
tenuipes C.A.Sm. ..... **Rare**

Eriochloa

fatmensis (Hochst. & Steud.) Clayton LC
meyeriana (Nees) Pilg. subsp. grandiglumis (Stent & J.M.Rattray) Gibbs-Russ. LC
meyeriana (Nees) Pilg. subsp. meyeriana LC
parvispiculata C.E.Hubb. LC
stapfiana Clayton LC

Eriochrysis

brachypogon (Stapf) Stapf LC
pallida Munro LC

Eriosema, 372

acuminatum (Eckl. & Zeyh.) C.H.Stirt. LC
angustifolium Burtt Davy LC
buchananii Baker f. var. buchananii LC
burkei Benth. ex Harv. var. burkei LC
cordatum E.Mey. LC
distinctum N.E.Br. LC
dregei E.Mey. LC
durnfordensis C.H.Stirt. LC
ellipticifolium Schinz LC
fasciculatum Schinz ..... **DDD**
gunniae C.H.Stirt. LC
kraussianum Meisn. LC
latifolium (Benth. ex Harv.) C.H.Stirt. ..... **VU**
lucipetum C.H.Stirt. LC
luteopetalum C.H.Stirt. LC
naviculare C.H.Stirt. ..... **EN**
nutans Schinz LC
parviflorum E.Mey. subsp. parviflorum LC
pauciflorum Klotzsch var. pauciflorum LC
populifolium Benth. ex Harv. subsp. capensis C.H.Stirt. & Gordon-Gray LC
populifolium Benth. ex Harv. subsp. populifolium ..... **EN**
preptum C.H.Stirt. LC
psoraleoides (Lam.) G.Don LC
rossii C.H.Stirt. LC
salignum E.Mey. LC
simulans C.H.Stirt. LC
squarrosum (Thunb.) Walp. LC
streyi C.H.Stirt. LC
superpositum C.H.Stirt. LC
transvaalense C.H.Stirt. LC
umtamvunense C.H.Stirt. ..... **VU**
zuluense C.H.Stirt. LC

Eriosemopsis, 520

subanisophylla Robyns ..... **VU**

Eriospermum, 107

aequilibre Poelln. ..... **VU**
alcicorne Baker LC
algiferum A.V.Duthie ..... **DDD**
aphyllum Marloth LC

appendiculatum A.V.Duthie ..... VU
arachnoideum P.L.Perry ..... CR
arenosum P.L.Perry ..... VU
aribesense P.L.Perry ..... VU
armianum P.L.Perry ..... Rare
attenuatum P.L.Perry ..... DDD
bakerianum Schinz subsp. bakerianum LC
bayeri P.L.Perry LC
bifidum R.A.Dyer LC
bowieanum Baker ..... VU
bracteatum Archibald ..... VU
brevipes Baker LC
breviscapum P.L.Perry LC
bruynsii P.L.Perry ..... VU
calcareum P.L.Perry ..... EN
capense (L.) Thunb. subsp. capense LC
capense (L.) Thunb. subsp. stoloniferum (Marloth) P.L.Perry ..... VU
cernuum Baker LC
cervicorne Marloth LC
ciliatum P.L.Perry LC
coactum P.L.Perry ..... VU
cooperi Baker var. cooperi LC
cooperi Baker var. natalense (Baker) P.L.Perry LC
cordiforme Salter LC
corymbosum Baker LC
crispum P.L.Perry ..... VU
descendens P.L.Perry LC
deserticolum Marloth ex P.L.Perry LC
dielsianum Poelln. subsp. dielsianum LC
dielsianum Poelln. subsp. molle P.L.Perry LC
dissitiflorum Schltr. LC
dregei Schönland LC
dyeri Archibald LC
erinum P.L.Perry ..... EN
eriophorum P.L.Perry ..... CR
ernstii P.L.Perry ..... Rare
exigium P.L.Perry ..... Rare
exile P.L.Perry ..... Rare
filicaule P.L.Perry ..... Rare
flabellatum P.L.Perry LC
flagelliforme (Baker) J.C.Manning LC
flavum P.L.Perry ..... Rare
folioliferum Andrews LC
fragile P.L.Perry ..... Rare
glaciale P.L.Perry ..... EN
graminifolium A.V.Duthie LC
inconspicuum P.L.Perry LC
lanceifolium Jacq. LC
lanimarginatum P.L.Perry LC
lanuginosum Jacq. LC
laxiracemosum P.L.Perry ..... VU
macgregoriorum P.L.Perry ..... Rare
mackenii (Hook.f.) Baker LC
marginatum P.L.Perry LC
minutiflorum P.L.Perry LC
minutipustulatum P.L.Perry ..... VU
multifidum Marloth LC
namaquanum P.L.Perry LC
nanum Marloth LC
occultum Archibald ..... Critically Rare
ornithogaloides Baker LC
orthophyllum (Archibald) P.L.Perry LC
papilliferum A.V.Duthie ..... DDD
paradoxum (Jacq.) Ker Gawl. LC
parvifolium Jacq. LC
parvulum P.L.Perry ..... VU
patentiflorum Schltr. ..... VU
porphyrium Archibald LC
porphyrovalve Baker LC
proliferum Baker LC
pubescens Jacq. LC
pumilum Salter LC
pusillum P.L.Perry ..... Rare
pustulatum A.V.Duthie LC
ramosum P.L.Perry ..... Rare
ratelpoortianum P.L.Perry ..... Rare
rhizomatum P.L.Perry ..... VU
roseum Schinz LC
sabulosum P.L.Perry ..... VU
schinzii Baker LC
schlechteri Baker LC
spirale Schult ..... VU
subincanum P.L.Perry ..... EN
subtile P.L.Perry ..... Rare
titanopsoides P.L.Perry ..... VU
tuberculatum P.L.Perry ..... VU
undulatum P.L.Perry ..... VU
vermiforme P.L.Perry ..... EN
villosum Baker LC
viscosum P.L.Perry ..... VU
zeyheri R.A.Dyer LC

Erlangea
misera (Oliv. & Hiern) S.Moore LC

Erucastrum
griquense (N.E.Br.) O.E.Schulz LC
strigosum (Thunb.) O.E.Schulz LC

Erythrina
acanthocarpa E.Mey. LC
caffra Thunb. LC
humeana Spreng. LC
latissima E.Mey. LC
lysistemon Hutch. LC
zeyheri Harv. LC

Erythrococca
berberidea Prain LC
menyharthii (Pax) Prain LC
natalensis Prain LC
trichogyne (Müll.Arg.) Prain var. trichogyne LC

Erythrophleum, 373
lasianthum Corbishley ..... NT*

Erythrophysa
alata (Eckl. & Zeyh.) Hutch. LC
transvaalensis I.Verd. LC

Erythroxylum
delagoense Schinz LC
emarginatum Thonn. LC
pictum E.Mey. ex Sond. LC

Esterhuysenia, 423
alpina L.Bolus ..... Rare
drepanophylla (Schltr. & A.Berger) H.E.K.Hartmann LC
inclaudens (L.Bolus) H.E.K.Hartmann ..... Rare
mucronata (L.Bolus) Klak LC
stokoei (L.Bolus) H.E.K.Hartmann LC

Euchaetis, 533
albertiniana I.Williams ..... EN
avisylvana I.Williams ..... VU
burchellii Dummer LC
cristagalli I.Williams ..... Rare
diosmoides (Schltr.) I.Williams ..... NT
elata Eckl. & Zeyh. LC
elsieae I.Williams LC
ericoides Dummer LC
esterhuyseniae I.Williams LC
flexilis Eckl. & Zeyh. LC
glabra I.Williams ..... Rare
glomerata Bartl. & H.L.Wendl. LC
intonsa I.Williams ..... Rare
laevigata Turcz. ..... VU
linearis Sond. LC
longibracteata Schltr. LC
longicornis I.Williams ..... CR
meridionalis I.Williams LC
pungens (Bartl. & H.L.Wendl.) I.Williams ..... VU
scabricosta I.Williams LC
schlechteri Schinz ..... VU
tricarpellata I.Williams ..... Rare
vallis-simiae I.Williams LC

Euclea, 312
acutifolia E.Mey. ex A.DC. LC
coriacea A.DC. LC
crispa (Thunb.) Gürke subsp. crispa LC
crispa (Thunb.) Gürke subsp. ovata (Burch.) F.White LC
daphnoides Hiern LC
dewinteri Retief ..... Critically Rare
divinorum Hiern LC
lancea Thunb. LC
linearis Zeyh. ex Hiern LC
natalensis A.DC. subsp. angustifolia F.White LC
natalensis A.DC. subsp. capensis F.White LC
natalensis A.DC. subsp. magutensis F.White LC
natalensis A.DC. subsp. natalensis LC
natalensis A.DC. subsp. obovata F.White LC
natalensis A.DC. subsp. rotundifolia F.White LC
polyandra (L.f.) E.Mey. ex Hiern LC
pseudebenus E.Mey. ex A.DC. LC
racemosa Murray subsp. bernardii F.White LC
racemosa Murray subsp. macrophylla (E.Mey. ex A.DC.) F.White LC
racemosa Murray subsp. racemosa LC
racemosa Murray subsp. sinuata F.White LC
racemosa Murray subsp. zuluensis F.White LC
schimperi (A.DC.) Dandy LC
tomentosa E.Mey. ex A.DC. LC
undulata Thunb. LC

Eucomis, 115
autumnalis (Mill.) Chitt. ..... Declining
bicolor Baker ..... NT
comosa (Houtt.) Wehrh. ..... Declining
humilis Baker LC
montana Compton ..... Declining
pallidiflora Baker subsp. pallidiflora LC
pallidiflora Baker subsp. pole-evansii (N.E.Br.) Reyneke ex J.C.Manning ..... NT
regia (L.) L'Hér. LC
schijffii Reyneke LC
vandermerwei I.Verd. ..... VU
zambesiaca Baker LC

Eugenia, 445
albanensis Sond. LC
capensis (Eckl. & Zeyh.) Sond. subsp. a LC
capensis (Eckl. & Zeyh.) Sond. subsp. capensis LC
capensis (Eckl. & Zeyh.) Sond. subsp. gueinzii (Sond.) F.White LC
erythrophylla Strey ..... NT
natalitia Sond. LC
pusilla N.E.Br. ..... EX
simii Dummer ..... VU
umtamvunensis A.E.van Wyk ..... EN
verdoorniae A.E.van Wyk ..... NT
woodii Dummer LC
zeyheri (Harv.) Harv. LC
zuluensis Dummer LC

Eulalia, 200
aurea (Bory) Kunth ..... NT*
villosa (Thunb.) Nees LC

Eulophia, 188
aculeata (L.f.) Spreng. subsp. aculeata LC
aculeata (L.f.) Spreng. subsp. huttonii (Rolfe) A.V.Hall LC
adenoglossa (Lindl.) Rchb.f. LC
angolensis (Rchb.f.) Summerh. LC
calanthoides Schltr. LC
chlorantha Schltr. ..... DDD
clitellifera (Rchb.f.) Bolus LC
coddii A.V.Hall ..... VU
coeloglossa Schltr. LC
cooperi Rchb.f. LC
cucullata (Afzel. ex Sw.) Steud. LC
ensata Lindl. LC
foliosa (Lindl.) Bolus LC
fridericii (Rchb.f.) A.V.Hall LC
hereroensis Schltr. LC
hians Spreng. var. hians LC
hians Spreng. var. inaequalis (Schltr.) S.Thomas LC
hians Spreng. var. nutans (Sond.) S.Thomas LC
horsfallii (Bateman) Summerh. LC
leachii Greatrex ex A.V.Hall LC
leontoglossa Rchb.f. LC
litoralis Schltr. ..... EN
livingstoneana (Rchb.f.) Schltr. LC
longisepala Rendle LC
macowanii Rolfe LC
meleagris Rchb.f. LC
milnei Rchb.f. LC
odontoglossa Rchb.f. LC
ovalis Lindl. var. bainesii (Rolfe) P.J.Cribb & la Croix LC
ovalis Lindl. var. ovalis LC
parviflora (Lindl.) A.V.Hall. LC
parvilabris Lindl. LC
petersii (Rchb.f.) Rchb.f. LC
platypetala Lindl. ..... VU
schweinfurthii Kraenzl. LC
speciosa (R.Br. ex Lindl.) Bolus ..... Declining
streptopetala Lindl. LC
tabularis (L.f.) Bolus LC
tenella Rchb.f. LC
tuberculata Bolus LC
welwitschii (Rchb.f.) Rolfe LC
zeyheriana Sond. LC

Eumorphia
corymbosa E.Phillips LC
davyi Bolus LC
dregeana DC. LC
prostrata Bolus LC

sericea J.M.Wood & M.S.Evans subsp. robustior Hilliard & B.L.Burtt LC
sericea J.M.Wood & M.S.Evans subsp. sericea LC

Euphorbia, 343

aequoris N.E.Br. LC
aeruginosa Schweick. LC
aggregata A.Berger var. aggregata LC
aggregata A.Berger var. alternicolor (N.E.Br.) A.C.White, R.A.Dyer & B.Sloane LC
albanica N.E.Br. LC
albertensis N.E.Br. ..... **Rare**
albipollinifera L.C.Leach ..... **NT**
amarifontana N.E.Br. LC
anoplia Stapf ..... DDT
arceuthobioides Boiss. LC
arida N.E.Br. LC
artifolia N.E.Br. ..... DDT
aspericaulis Pax LC
astrophora Marx ..... **VU**
atrispina N.E.Br. var. atrispina LC
atrispina N.E.Br. var. viridis A.C.White, R.A.Dyer & B.Sloane LC
avasmontana Dinter var. avasmontana LC
avasmontana Dinter var. sagittaria (Marloth) A.C.White, R.A.Dyer & B.Sloane LC
barnardii A.C.White, R.A.Dyer & B.Sloane ..... **EN**
bayeri L.C.Leach ..... **CR**
bergii A.C.White, R.A.Dyer & B.Sloane LC
bolusii N.E.Br. LC
brachiata E.Mey. ex Boiss. LC
brakdamensis N.E.Br. ..... DDT
braunsii N.E.Br. LC
brevirama N.E.Br. ..... DDT
bruynsii L.C.Leach ..... **Critically Rare**
bubalina Boiss. LC
bupleurifolia Jacq. ..... **Declining**
burmannii E.Mey. ex Boiss. LC
caerulescens Haw. LC
caput-medusae L. LC
caterviflora N.E.Br. LC
celata R.A.Dyer LC
cereiformis L. LC
chersina N.E.Br. LC
cibdela N.E.Br. LC
clandestina Jacq. LC
clava Jacq. LC
clavarioides Boiss. var. clavarioides LC
clavarioides Boiss. var. truncata (N.E.Br.) A.C.White, R.A.Dyer & B.Sloane LC
clavigera N.E.Br. LC
clivicola R.A.Dyer ..... **CR**
colliculina A.C.White, R.A.Dyer & B.Sloane ..... **EN**
complexa R.A.Dyer LC
confinalis R.A.Dyer subsp. confinalis LC
confluens Nel LC
cooperi N.E.Br. ex A.Berger var. cooperi LC
corymbosa N.E.Br. ..... DDT
crassipes Marloth ..... DDT
crispa (Haw.) Sweet LC
crotonoides Boiss. subsp. crotonoides LC
cumulata R.A.Dyer LC
curvirama R.A.Dyer LC
cylindrica A.C.White, R.A.Dyer & B.Sloane LC
davyi N.E.Br. LC
decepta N.E.Br. LC
decussata E.Mey. ex Boiss. LC
dregeana E.Mey. ex Boiss. LC
dumosa E.Mey. ex Boiss. LC
duseimata R.A.Dyer LC
ecklonii (Klotzsch & Garcke) A.Hässl LC
enopla Boiss. var. enopla LC
enopla Boiss. var. viridis A.C.White, R.A.Dyer & B.Sloane LC
enormis N.E.Br. LC
ephedroides E.Mey. ex Boiss. var. ephedroides LC
ephedroides E.Mey. ex Boiss. var. imminuta L.C.Leach & G.Will. LC
epicyparissias E.Mey. ex Boiss. LC
ericoides Lam. LC
ernestii N.E.Br. LC
erythrina Link var. erythrina LC
erythrina Link var. meyeri N.E.Br. LC
esculenta Marloth LC
espinosa Pax LC
eustacei N.E.Br. LC
evansii Pax LC
excelsa A.C.White, R.A.Dyer & B.Sloane LC
exilis L.C.Leach LC
fasciculata Thunb. ..... **VU**
ferox Marloth LC
filiflora Marloth LC
fimbriata Scop. LC
flanaganii N.E.Br. LC
foliosa N.E.Br. LC
fortuita A.C.White, R.A.Dyer & B.Sloane LC
franckiana A.Berger LC
franksiae N.E.Br. ..... **VU**
friedrichiae Dinter LC
fusca Marloth LC
gamkensis Marx LC
gariepina Boiss. subsp. gariepina LC
gatbergensis N.E.Br. LC
genistoides P.J.Bergius LC
gentilis N.E.Br. subsp. gentilis LC
gentilis N.E.Br. subsp. tanquana L.C.Leach LC
glandularis L.C.Leach & G.Will. LC
globosa (Haw.) Sims ..... **EN**
gorgonis A.Berger LC
grandialata R.A.Dyer ..... **Rare**
grandicornis Goebel ex N.E.Br. subsp. grandicornis LC
grandidens Haw. LC
gregaria Marloth LC
griseola Pax subsp. griseola LC
groenewaldii R.A.Dyer ..... **CR**
gueinzii Boiss. var. albovillosa (Pax) N.E.Br. LC
gueinzii Boiss. var. gueinzii LC
guerichiana Pax LC
gummifera Boiss. LC
hallii R.A.Dyer ..... **Rare**
hamata (Haw.) Sweet LC
heptagona L. var. dentata (A.Berger) N.E.Br. LC
heptagona L. var. heptagona LC
heptagona L. var. ramosa A.C.White, R.A.Dyer & B.Sloane LC
heptagona L. var. subsessilis A.C.White, R.A.Dyer & B.Sloane LC
heptagona L. var. viridis A.C.White, R.A.Dyer & B.Sloane LC
herrei A.C.White, R.A.Dyer & B.Sloane LC
hopetownensis Nel ..... DDT
horrida Boiss. var. horrida LC
horrida Boiss. var. major A.C.White, R.A.Dyer & B.Sloane LC
horrida Boiss. var. noorsveldensis A.C.White, R.A.Dyer & B.Sloane LC
horrida Boiss. var. striata A.C.White, R.A.Dyer & B.Sloane LC
hottentota Marloth LC
hypogaea Marloth LC
inaequilatera Sond. var. inaequilatera LC
inaequilatera Sond. var. perennis N.E.Br. LC
inconstantia R.A.Dyer LC
inermis Mill. var. huttoniae (N.E.Br.) A.C.White, R.A.Dyer & B.Sloane LC
inermis Mill. var. inermis LC
ingens E.Mey. ex Boiss. LC
inornata N.E.Br. ..... DDT
jansenvillensis Nel ..... DDT
juglans Compton LC
karroensis (Boiss.) N.E.Br. LC
knobelii Letty ..... DDT
knuthii Pax subsp. knuthii LC
kraussiana Bernh. var. erubescens N.E.Br. LC
kraussiana Bernh. var. kraussiana LC
ledienii A.Berger var. dregei N.E.Br. ..... DDT
ledienii A.Berger var. ledienii LC
limpopoana L.C.Leach ex S.Carter LC
livida E.Mey. ex Boiss. LC
loricata Lam. LC
louwii L.C.Leach ..... **Rare**
lumbricalis L.C.Leach ..... **VU**
lydenburgensis Schweick. & Letty LC
macella N.E.Br. LC
maleolens E.Phillips LC
mammillaris L. LC
marlothiana N.E.Br. ..... DDT
mauritanica L. var. lignosa A.C.White, R.A.Dyer & B.Sloane LC
mauritanica L. var. mauritanica LC
mauritanica L. var. minor A.C.White, R.A.Dyer & B.Sloane LC
mauritanica L. var. namaquensis N.E.Br. LC
melanohydrata Nel LC
meloformis Aiton subsp. meloformis ..... **NT**
meloformis Aiton subsp. valida (N.E.Br.) G.D.Rowley ..... **NT**
micracantha Boiss. LC
mira L.C.Leach LC
mixta N.E.Br. LC
monteiroi Hook.f. subsp. ramosa L.C.Leach LC
mossambicensis (Klotzsch & Garcke) Boiss. LC
muirii N.E.Br. LC
multiceps A.Berger LC
multifida N.E.Br. LC
multifolia A.C.White, R.A.Dyer & B.Sloane LC
mundii N.E.Br. LC
muraltioides N.E.Br. LC
muricata Thunb. LC
natalensis Bernh. LC
neopolycnemoides Pax & K.Hoffm. LC
nesemannii R.A.Dyer ..... **NT**
obesa Hook.f. subsp. obesa ..... **EN**
obesa Hook.f. subsp. symmetrica (A.C.White, R.A.Dyer & B.Sloane) G.D.Rowley ..... **CR**
ornithopus Jacq. LC
oxystegia Boiss. ..... **DDD**
pedemontana L.C.Leach ..... **VU**
pentagona Haw. LC
pentops A.C.White, R.A.Dyer & B.Sloane ..... **Rare**
perangusta R.A.Dyer ..... **EN**
perpera N.E.Br. LC
pfeilii Pax LC
phylloclada Boiss. LC
pillansii N.E.Br. var. albovirens A.C.White, R.A.Dyer & B.Sloane LC
pillansii N.E.Br. var. pillansii LC
pillansii N.E.Br. var. ramosissima A.C.White, R.A.Dyer & B.Sloane LC
planiceps A.C.White, R.A.Dyer & B.Sloane ..... DDT
polycephala Marloth ..... **VU**
polygona Haw. LC
pseudocactus A.Berger LC
pseudoduseimata A.C.White, R.A.Dyer & B.Sloane LC
pseudoglobosa Marloth ..... **VU**
pseudotuberosa Pax LC
pubescens Vahl LC
pubiglans N.E.Br. LC
pugniformis Boiss. LC
pulvinata Marloth LC
quadrata Nel ..... **Rare**
ramiglans N.E.Br. LC
rectirama N.E.Br. LC
restituta N.E.Br. LC
restricta R.A.Dyer ..... **Rare**
rhombifolia Boiss. LC
rowlandii R.A.Dyer ..... **NT**
rudis N.E.Br. LC
rudolfii N.E.Br. ..... DDT
ruscifolia N.E.Br. LC
schinzii Pax LC
schoenlandii Pax ..... **VU**
sclerophylla Boiss. LC
sekukuniensis R.A.Dyer ..... **Rare**
silenifolia (Haw.) Sweet LC
spicata E.Mey. ex Boiss. LC
spinea N.E.Br. LC
squarrosa Haw. LC
stapelioides Boiss. LC
stellata Willd. LC
stellispina Haw. var. astrispina (N.E.Br.) A.C.White, R.A.Dyer & B.Sloane LC
stellispina Haw. var. stellispina LC
stolonifera Marloth LC
striata Thunb. var. cuspidata (Boiss.) N.E.Br. LC
striata Thunb. var. striata LC
submammillaris (A.Berger) A.Berger LC
suffulta Bruyns LC
superans Nel LC
suppressa Marx LC
susannae Marloth ..... **EN**
tenax Burch. LC
tetragona Haw. LC
tettensis Klotzsch LC
tirucalli L. LC
tortirama R.A.Dyer LC
transvaalensis Schltr. LC
triangularis Desf. LC
trichadenia Pax var. trichadenia LC

tridentata Lam. LC
tuberculata Jacq. var. macowani (N.E.Br.) A.C.White, R.A.Dyer & B.Sloane LC
tuberculata Jacq. var. tuberculata LC
tuberculatoides N.E.Br. LC
tuberosa L. LC
tubiglans Marloth ex R.A.Dyer LC
tugelensis N.E.Br. LC
umfoloziensis Peckover ....VU
vaalputsiana L.C.Leach ....DDT
vandermerwei R.A.Dyer LC
versicolores G.Will. ....Critically Rare
virosa Willd. subsp. virosa LC
waterbergensis R.A.Dyer ....Rare
wilmaniae Marloth LC
woodii N.E.Br. ....EN
zambesiana Benth. var. zambesiana LC
zoutpansbergensis R.A.Dyer LC

Euryops, 252
abrotanifolius (L.) DC. LC
acraeus M.D.Hend LC
algoensis DC. LC
annae E.Phillips LC
annuus Compton LC
anthemoides B.Nord. subsp. anthemoides LC
anthemoides B.Nord. subsp. astrotrichus B.Nord. LC
asparagoides (Licht. ex Less.) DC. LC
bolusii B.Nord. LC
brachypodus (DC.) B.Nord. LC
brevilobus Compton ....Rare
brevipapposus M.D.Hend. LC
brevipes B.Nord. ....Rare
calvescens DC. ....Rare
candollei Harv. LC
chrysanthemoides (DC.) B.Nord. LC
ciliatus B.Nord. ....Rare
cuneatus B.Nord. LC
decipiens Schltr. ....VU
decumbens B.Nord. LC
dentatus B.Nord. ....VU
discoideus Burtt Davy ....DDD
dregeanus Sch.Bip. LC
dyeri Hutch. ....DDD
empetrifolius DC. LC
erectus (Compton) B.Nord. LC
ericifolius (Bél.) B.Nord. ....EN
ericoides (L.f.) B.Nord. LC
euryopoides (DC.) B.Nord. LC
evansii Schltr. subsp. evansii LC
evansii Schltr. subsp. parvus B.Nord. LC
floribundus N.E.Br. LC
galpinii Bolus LC
gilfillanii Bolus LC
glutinosus B.Nord. ....Rare
gracilipes B.Nord. ....VU
hebecarpus (DC.) B.Nord. ....EN
hypnoides B.Nord. ....VU
imbricatus (Thunb.) DC. LC
indecorus B.Nord. ....Critically Rare
integrifolius B.Nord. ....DDD
lasiocladus (DC.) B.Nord. ....CR
lateriflorus (L.f.) DC. LC
latifolius B.Nord. ....Rare
laxus (Harv.) Burtt Davy LC
leiocarpus (DC.) B.Nord. LC
linearis Harv. ....VU
linifolius (L.) DC. LC
longipes DC. var. lasiocarpus B.Nord. ....Rare
longipes DC. var. longipes LC
marlothii B.Nord. ....Rare
microphyllus (Compton) B.Nord. LC
mirus B.Nord. ....CR
montanus Schltr. LC
muirii C.A.Sm. ....EN
multifidus (Thunb.) DC. LC
munitus (L.f.) B.Nord. LC
namaquensis Schltr. ....VU
namibensis (Merxm.) B.Nord. LC
nodosus B.Nord. LC
oligoglossus DC. subsp. oligoglossus LC
oligoglossus DC. subsp. racemosus (DC.) B.Nord. LC
othonnoides (DC.) B.Nord. LC
pectinatus (L.) Cass. subsp. lobulatus B.Nord. ....VU
pectinatus (L.) Cass. subsp. pectinatus LC
pedunculatus N.E.Br. LC
petraeus B.Nord. ....Rare
pinnatipartitus (DC.) B.Nord. LC
pleiodontus B.Nord. ....DDD
polytrichoides (Harv.) B.Nord. ....DDD
rehmannii Compton LC
rosulatus B.Nord. ....CR PE
rupestris Schltr. var. dasycarpus B.Nord. LC
rupestris Schltr. var. rupestris LC
serra DC. ....Rare
spathaceus DC. LC
speciosissimus DC. LC
subcarnosus DC. subsp. foetidus B.Nord. LC
subcarnosus DC. subsp. minor B.Nord. ....DDD
subcarnosus DC. subsp. subcarnosus LC
subcarnosus DC. subsp. vulgaris B.Nord. LC
sulcatus (Thunb.) Harv. LC
tagetoides (DC.) B.Nord ....NT
tenuilobus (DC.) B.Nord. ....DDD
tenuissimus (L.) DC. subsp. tenuissimus LC
tenuissimus (L.) DC. subsp. trifurcatus (L.f.) B.Nord. LC
thunbergii B.Nord. LC
transvaalensis Klatt subsp. setilobus (N.E.Br.) B.Nord. LC
transvaalensis Klatt subsp. transvaalensis LC
trifidus (L.f.) DC. LC
trilobus Harv. LC
tysonii E.Phillips LC
ursinoides B.Nord. ....VU
virgatus B.Nord. ....CR
virgineus (L.f.) DC. LC
wageneri Compton LC
zeyheri B.Nord. ....CR PE

Eustachys
paspaloides (Vahl) Lanza & Mattei LC

Eustegia
filiformis (L.f.) Schult. LC
fraterna N.E.Br. var. fraterna ....Thr*
fraterna N.E.Br. var. pubescens N.E.Br. ....Thr*
macropetala Schltr. ....Thr*
minuta (L.f.) R.Br. LC
plicata Schinz ....Thr*

Euthystachys
abbreviata (E.Mey.) A.DC. ....DDT

Evolvulus
alsinoides (L.) L. LC
nummularius (L.) L. LC

Evotella, 195
rubiginosa (Sond. ex Bolus) Kurzweil & H.P.Linder ....Rare

Exacum
oldenlandioides (S.Moore) Klack. LC

Excoecaria
simii (Kuntze) Pax LC

Exomis
microphylla (Thunb.) Aellen var. axyrioides (Fenzl) Aellen LC

Ezosciadium
capense (Eckl. & Zeyh.) B.L.Burtt LC

F

Fadogia
homblei De Wild. LC
tetraquetra K.Krause var. grandiflora (Robyns) Verdc. LC
tetraquetra K.Krause var. tetraquetra LC

Fagonia
capensis Hadidi LC
isotricha Murb. var. isotricha LC

Faidherbia
albida (Delile) A.Chev. LC

Falkia
oblonga Bernh. ex C.Krauss LC
repens Thunb. LC

Fanninia
caloglossa Harv. LC

Faucaria, 423
bosscheana (A.Berger) Schwantes LC
britteniae L.Bolus LC
felina (L.) Schwantes LC
gratiae L.Bolus ....Rare
nemorosa L.Bolus ex L.E.Groen ....Critically Rare
subintegra L.Bolus ....VU
tigrina (Haw.) Schwantes ....EN
tuberculosa (Rolfe) Schwantes LC

Faurea, 466
galpinii E.Phillips LC
macnaughtonii E.Phillips ....Rare
rochetiana (A.Rich.) Chiov. ex Pic.Serm. LC
saligna Harv. LC

Felicia, 255
aculeata Grau LC
aethiopica (Burm.f.) Bolus & Wolley-Dod ex Adamson & T.M.Salter subsp. aethiopica LC
aethiopica (Burm.f.) Bolus & Wolley-Dod ex Adamson & T.M.Salter subsp. ecklonis (Less.) Grau LC
amelloides (L.) Voss LC
amoena (Sch.Bip.) Levyns subsp. amoena LC
amoena (Sch.Bip.) Levyns subsp. latifolia Grau LC
amoena (Sch.Bip.) Levyns subsp. stricta (DC.) Grau LC
annectens (Harv.) Grau ....DDT
australis (Alston) E.Phillips LC
bechuanica Mattf. LC
bellidioides Schltr. subsp. bellidioides LC
bellidioides Schltr. subsp. foliata Grau LC
bergeriana (Spreng.) O.Hoffm. LC
brevifolia (DC.) Grau LC
burkei (Harv.) L.Bolus LC
caespitosa Grau LC
cana DC. LC
canaliculata Grau LC
clavipilosa Grau subsp. clavipilosa LC
clavipilosa Grau subsp. transvaalensis Grau LC
comptonii Grau ....Rare
cymbalariae (Aiton) Bolus & Wolley-Dod ex Adamson & T.M.Salter subsp. cymbalariae LC
cymbalariae (Aiton) Bolus & Wolley-Dod ex Adamson & T.M.Salter subsp. ionops (Harv.) Grau LC
cymbalarioides (DC.) Grau ....Rare
denticulata Grau LC
deserti Schltr. ex Grau ....DDD
diffusa (DC.) Grau subsp. diffusa ....Rare
diffusa (DC.) Grau subsp. khamiesbergensis Grau ....Critically Rare
drakensbergensis J.M.Wood & M.S.Evans LC
dregei DC. LC
dubia Cass. LC
ebracteata Grau ....VU
echinata (Thunb.) Nees LC
elongata (Thunb.) O.Hoffm. ....VU
erigeroides DC. LC
esterhuyseniae Grau ....Rare
fascicularis DC. LC
ferulacea Compton LC
filifolia (Vent.) Burtt Davy subsp. bodkinii (Compton) Grau LC
filifolia (Vent.) Burtt Davy subsp. filifolia LC
filifolia (Vent.) Burtt Davy subsp. schaeferi (Dinter) Grau LC
filifolia (Vent.) Burtt Davy subsp. schlechteri (Compton) Grau LC
flanaganii Bolus LC
fruticosa (L.) G.Nicholson subsp. brevipedunculata (Hutch.) Grau LC
fruticosa (L.) G.Nicholson subsp. fruticosa LC
heterophylla (Cass.) Grau LC
hirsuta DC. LC
hirta (Thunb.) Grau LC
hispida (DC.) Grau LC
hyssopifolia (P.J.Bergius) Nees subsp. glabra (DC.) Grau LC
hyssopifolia (P.J.Bergius) Nees subsp. hyssopifolia LC
hyssopifolia (P.J.Bergius) Nees subsp. polyphylla (Harv.) Grau LC
josephinae J.C.Manning & Goldblatt ....EN
joubertinae Grau subsp. glabrescens Grau ....DDT
joubertinae Grau subsp. joubertinae ....DDT
lasiocarpa DC. LC
linearis N.E.Br. LC
linifolia (Harv.) Grau LC
macrorrhiza (Thunb.) DC. LC
merxmuelleri Grau LC
microcephala Grau ....Rare
microsperma DC. LC

minima (Hutch.) Grau LC
mossamedensis (Hiern) Mendonça LC
muricata (Thunb.) Nees subsp. cinerascens Grau LC
muricata (Thunb.) Nees subsp. muricata LC
muricata (Thunb.) Nees subsp. strictifolia Grau LC
namaquana (Harv.) Merxm. LC
nigrescens Grau ..... **CR**
nordenstamii Grau ..... **NT**
odorata Compton LC
oleosa Grau ..... **Rare**
ovata (Thunb.) Compton LC
petiolata (Harv.) N.E.Br. LC
puberula Grau LC
quinquenervia (Klatt) Grau LC
rogersii S.Moore LC
rosulata Yeo LC
scabrida (DC.) Range LC
serrata (Thunb.) Grau ..... **Rare**
stenophylla Grau LC
tenella (L.) Nees subsp. cotuloides (DC.) Grau LC
tenella (L.) Nees subsp. longifolia (DC.) Grau LC
tenella (L.) Nees subsp. pusilla (Harv.) Grau LC
tenella (L.) Nees subsp. tenella LC
tenera (DC.) Grau LC
tsitsikamae Grau ..... **VU**
uliginosa (J.M.Wood & M.S.Evans) Grau LC
venusta S.Moore LC
westae (Fourc.) Grau ..... **DDD**
whitehillensis Compton LC
wrightii Hilliard & B.L.Burtt ..... **Critically Rare**
zeyheri (Less.) Nees subsp. linifolia (Harv.) Grau LC
zeyheri (Less.) Nees subsp. zeyheri LC

Fenestraria
rhopalophylla (Schltr. & Diels) N.E.Br. subsp. aurantiaca (N.E.Br.) H.E.K.Hartmann LC

Ferraria, 139
brevifolia G.J.Lewis ..... **Rare**
crispa Burm. subsp. crispa LC
crispa Burm. subsp. nortieri M.P.de Vos ..... **VU**
densepunctulata M.P.de Vos ..... **EN**
divaricata Sweet LC
ferrariola (Jacq.) Willd. LC
foliosa G.J.Lewis ..... **NT**
glutinosa (Baker) Rendle LC
kamiesbergensis M.P.de Vos ..... **VU**
macrochlamys (Baker) Goldblatt & J.C.Manning LC
ovata (Thunb.) Goldblatt & J.C.Manning ..... **Rare**
schaeferi Dinter LC
uncinata Sweet LC
variabilis Goldblatt & J.C.Manning LC

Festuca, 201
africana (Hack.) Clayton LC
caprina Nees var. caprina LC
caprina Nees var. curvula Lehm. LC
costata Nees LC
dracomontana H.P.Linder ..... **VU**
killickii Kenn.-O'Byrne LC
longipes Stapf LC
scabra Vahl LC
vulpioides Steud. ..... **DDD**

Ficinia, 104
acrostachys (Steud.) C.B.Clarke LC
acuminata (Nees) Nees LC
albicans Nees LC
anceps Nees ..... **Rare**
angustifolia (Schrad.) Levyns LC
anysbergensis Muasya ..... **Rare**
arenicola T.H.Arnold & Gordon-Gray var. arenicola LC
arenicola T.H.Arnold & Gordon-Gray var. erecta T.H.Arnold & Gordon-Gray LC
argyropa Nees LC
brevifolia Kunth LC
bulbosa (L.) Nees LC
capillifolia (Schrad.) C.B.Clarke LC
capitella (Thunb.) Nees LC
cedarbergensis T.H.Arnold & Gordon-Gray ..... **Rare**
cinnamomea C.B.Clarke LC
compasbergensis Drège LC
crinita (Poir.) B.L.Burtt LC
dasystachys C.B.Clarke LC
deusta (P.J.Bergius) Levyns LC
distans C.B.Clarke ..... **VU**
dunensis Levyns LC
dura Turrill ..... **EN**
ecklonea (Steud.) Nees LC
elatior Levyns ..... **VU**
esterhuyseniae Muasya LC
fascicularis Nees LC
fastigiata (Thunb.) Nees ..... **VU**
filiculmea B.L.Burtt LC
filiformis (Lam.) Schrad. LC
gracilis Schrad. LC
grandiflora T.H.Arnold & Gordon-Gray ..... **Rare**
gydomontana T.H.Arnold LC
indica (Lam.) Pfeiff. LC
ixioides Nees subsp. glabra T.H.Arnold & Gordon-Gray LC
ixioides Nees subsp. ixioides LC
laciniata (Thunb.) Nees LC
laevis (Vahl) Nees LC
lateralis (Vahl) Kunth LC
latifolia T.H.Arnold & Gordon-Gray ..... **EN**
levynsiae T.H.Arnold & Gordon-Gray LC
macowanii C.B.Clarke LC
micrantha C.B.Clarke ..... **EN**
minutiflora C.B.Clarke ..... **Rare**
monticola Kunth LC
mucronata C.B.Clarke LC
nigrescens (Schrad.) J.Raynal LC
nodosa (Rottb.) Goetgh., Muasya & D.A.Simpson LC
oligantha (Steud.) J.Raynal LC
pallens (Schrad.) Nees var. lithosperma (Boeck.) T.H.Arnold & Gordon-Gray LC
pallens (Schrad.) Nees var. pallens LC
paradoxa (Schrad.) Nees LC
petrophila T.H.Arnold & Gordon-Gray ..... **Rare**
pinguior C.B.Clarke ..... **VU**
polystachya Levyns LC
praemorsa Nees LC
pygmaea Boeck. ..... **NT**
quinquangularis Boeck. LC
radiata (L.f.) Kunth LC
ramosissima Kunth LC
repens (Nees) Kunth LC
rigida Levyns ..... **VU**
secunda (Vahl) Kunth LC
sp. nov. (*Drège 290a* Paris) ..... **Rare**
stolonifera Boeck. LC
trichodes (Schrad.) Benth. & Hook.f. LC
trispicata (L.f.) Druce LC
tristachya (Rottb.) Nees LC
truncata (Thunb.) Schrad. LC
zeyheri Boeck. LC

Ficus
abutilifolia (Miq.) Miq. LC
bizanae Hutch. & Burtt Davy LC
bubu Warb. LC
burkei (Miq.) Miq. LC
burtt-davyi Hutch. LC
capreifolia Delile LC
cordata Thunb. subsp. cordata LC
craterostoma Warb. ex Mildbr. & Burret LC
glumosa Delile LC
ilicina (Sond.) Miq. LC
ingens (Miq.) Miq. LC
lingua De Wild. & T.Durand subsp. depauperata (Sim) C.C.Berg LC
lutea Vahl LC
natalensis Hochst. subsp. graniticola J.E.Burrows LC
natalensis Hochst. subsp. natalensis LC
petersii Warb. LC
polita Vahl subsp. polita LC
salicifolia Vahl LC
sansibarica Warb. subsp. sansibarica LC
stuhlmannii Warb. LC
sur Forssk. LC
sycomorus L. subsp. gnaphalocarpa (Miq.) C.C.Berg LC
sycomorus L. subsp. sycomorus LC
tettensis Hutch. LC
tremula Warb. subsp. tremula LC
trichopoda Baker LC
verruculosa Warb. LC

Fimbristylis, 105
aphylla Steud. ..... **VU**
bisumbellata (Forssk.) Bubani LC
bivalvis (Lam.) Lye LC
complanata (Retz.) Link LC
dichotoma (L.) Vahl LC
ferruginea (L.) Vahl LC
obtusifolia (Lam.) Kunth LC
squarrosa (Poir.) Vahl LC
variegata Gordon-Gray LC

Fingerhuthia
africana Lehm. LC
sesleriiformis Nees LC

Flacourtia
indica (Burm.f.) Merr. LC

Flagellaria
guineensis Schumach. LC

Flemingia
grahamiana Wight & Arn. LC

Floscopa
glomerata (Willd. ex Schult. & J.H.Schult.) Hassk. LC

Flueggea
verrucosa (Thunb.) G.L.Webster LC
virosa (Roxb. ex Willd.) Voigt subsp. virosa LC

Fockea
angustifolia K.Schum. LC
capensis Endl. LC
comaru (E.Mey.) N.E.Br. LC
edulis (Thunb.) K.Schum. LC
sinuata (E.Mey.) Druce LC

Forsskaolea
candida L.f. LC
hereroensis Schinz LC

Foveolina
albidiformis (Thell.) Källersjö LC
dichotoma (DC.) Källersjö LC
tenella (DC.) Källersjö LC

Frankenia
pulverulenta L. LC
repens (P.J.Bergius) Fourc. LC

Freesia, 139
alba (G.L.Mey.) Gumbl. LC
andersoniae L.Bolus LC
caryophyllacea (Burm.f.) N.E.Br. ..... **Declining**
corymbosa (Burm.f.) N.E.Br. LC
fergusoniae L.Bolus ..... **VU**
fucata J.C.Manning & Goldblatt ..... **VU**
grandiflora (Baker) Klatt LC
laxa (Thunb.) Goldblatt & J.C.Manning subsp. azurea (Goldblatt & Hutchings) Goldblatt & J.C.Manning LC
laxa (Thunb.) Goldblatt & J.C.Manning subsp. laxa LC
leichtlinii Klatt ..... **VU**
marginata J.C.Manning & Goldblatt ..... **EN**
occidentalis L.Bolus LC
refracta (Jacq.) Klatt LC
sparrmannii (Thunb.) N.E.Br. ..... **Rare**
speciosa L.Bolus ..... **VU**
verrucosa (Vogel) Goldblatt & J.C.Manning LC
viridis (Aiton) Goldblatt & J.C.Manning LC

Freylinia, 542
crispa Van Jaarsv. ..... **VU**
densiflora Benth. LC
helmei Van Jaarsv. ..... **VU**
lanceolata (L.f.) G.Don LC
longiflora Benth. ..... **CR**
tropica S.Moore ..... **Rare**
undulata (L.f.) Benth. LC
visseri Van Jaarsv. ..... **CR**
vlokii Van Jaarsv. ..... **EN**

Frithia, 423
humilis Burgoyne ..... **EN**
pulchra N.E.Br. ..... **Rare**

Fuirena
bullifera J.Raynal & Roessler LC
ciliaris (L.) Roxb. LC
coerulescens Steud. LC
ecklonii Nees LC
hirsuta (P.J.Bergius) P.L.Forbes LC
leptostachya Oliv. LC
obcordata P.L.Forbes LC
pachyrrhiza Ridl. LC
pubescens (Poir.) Kunth var. pubescens LC
stricta Steud. var. stricta LC
tenuis P.L.Forbes LC
umbellata Rottb. LC

G

Gaillonia
crocyllis (Sond.) Thulin....LC

Galactia
tenuiflora (Willd.) Wight & Arn. var. villosa (Wight & Arn.) Benth. LC

Galenia
acutifolia Adamson LC
affinis Sond. LC
africana L. LC
collina (Eckl. & Zeyh.) Walp. LC
crystallina (Eckl. & Zeyh.) Fenzl var. crystallina LC
crystallina (Eckl. & Zeyh.) Fenzl var. maritima Adamson ....Thr*
cymosa Adamson LC
dregeana Fenzl ex Sond. LC
ecklonis Walp. LC
exigua Adamson LC
filiformis (Thunb.) N.E.Br. LC
fruticosa (L.f.) Sond. LC
glandulifera Bittrich LC
hemisphaerica Adamson LC
herniariaefolia (C.Presl) Fenzl LC
hispidissima Fenzl LC
meziana K.Müll. LC
namaensis Schinz LC
pallens (Eckl. & Zeyh.) Walp. ....DDT
papulosa (Eckl. & Zeyh.) Sond. LC
portulacacea Fenzl LC
procumbens L.f. LC
prostrata G.Schellenb. LC
pruinosa Sond. LC
pubescens (Eckl. & Zeyh.) Druce var. pubescens LC
rigida Adamson LC
sarcophylla Fenzl LC
secunda (L.f.) Sond. LC
squamulosa (Eckl. & Zeyh.) Fenzl LC
subcarnosa Adamson LC

Galeomma
oculus-cati (L.f.) Rauschert LC
stenolepis (S.Moore) Hilliard LC

Galium, 520
amatymbicum Eckl. & Zeyh. ....DDT
bredasdorpense Puff ....Rare
capense Thunb. subsp. capense LC
capense Thunb. subsp. garipense (Sond.) Puff var. garipense LC
capense Thunb. subsp. namaquense (Eckl. & Zeyh.) Puff. LC
monticolum Sond. ....DDT
mucroniferum Sond. var. dregeanum (Sond.) Puff. LC
mucroniferum Sond. var. mucroniferum LC
rourkei Puff ....Critically Rare
scabrelloides Puff. LC
spurium L. subsp. africanum Verdc. LC
spurium-aparine complex LC
subvillosum Sond. var. subglabrum Puff ....Rare
subvillosum Sond. var. subvillosum LC
thunbergianum Eckl. & Zeyh. var. hirsutum (Sond.) Verdc. LC
thunbergianum Eckl. & Zeyh. var. thunbergianum LC
tomentosum Thunb. LC
undulatum Puff LC

Galopina
aspera (Eckl. & Zeyh.) Walp. LC
circaeoides Thunb. LC
crocyllioides Baer ex Schinz. LC
tomentosa Hochst. LC

Galpinia
transvaalica N.E.Br. LC

Galtonia
candicans (Baker) Decne. LC
princeps (Baker) Decne. LC
regalis Hilliard & B.L.Burtt LC
viridiflora I.Verd. LC

Garcinia
gerrardii Harv. ex Sim LC
livingstonei T.Anderson LC

Gardenia
cornuta Hemsl. LC
lutea Fresen. LC
resiniflua Hiern subsp. resiniflua LC
ternifolia Schumach. & Thonn. subsp. jovis-tonantis (Welw.) Verdc. var. goetzei (Stapf & Hutch.) Verdc. LC
thunbergia L.f. LC
volkensii K.Schum. subsp. spatulifolia (Stapf & Hutch.) Verdc. LC
volkensii K.Schum. subsp. volkensii var. saundersiae (N.E.Br.) Verdc. LC
volkensii K.Schum. subsp. volkensii var. volkensii LC

Garuleum
album S.Moore ....DDT
bipinnatum (Thunb.) Less. LC
latifolium Harv. LC
pinnatifidum (Thunb.) DC. LC
schinzii O.Hoffm. subsp. schinzii LC
sonchifolium (DC.) Norl. LC
tanacetifolium (MacOwan) Norl. ....DDT
woodii Schinz LC

Gasteria, 92
acinacifolia (J.Jacq.) Haw. LC
batesiana G.D.Rowley var. batesiana ....NT
batesiana G.D.Rowley var. dolomitica Van Jaarsv. & A.E.van Wyk ....Critically Rare
baylissiana Rauh ....Rare
bicolor Haw. var. bicolor LC
bicolor Haw. var. liliputana (Poelln.) Van Jaarsv. ....Rare
brachyphylla (Salm-Dyck) Van Jaarsv. var. bayeri Van Jaarsv. LC
brachyphylla (Salm-Dyck) Van Jaarsv. var. brachyphylla LC
brevifolia Haw. LC
carinata (Mill.) Duval var. carinata LC
carinata (Mill.) Duval var. glabra (Salm-Dyck) Van Jaarsv. LC
carinata (Mill.) Duval var. retusa Van Jaarsv. .... Rare
carinata (Mill.) Duval var. thunbergii (N.E.Br.) Van Jaarsv. ....Rare
carinata (Mill.) Duval var. verrucosa (Mill.) Van Jaarsv. LC
croucheri (Hook.f.) Baker ....VU
dicta N.E.Br. LC
disticha (L.) Haw. ....CR
doreeniae Van Jaarsv. & A.E.van Wyk ....Critically Rare
ellaphieae Van Jaarsv. ....Rare
elongata Baker LC
excelsa Baker LC
glauca Van Jaarsv. ....Critically Rare
glomerata Van Jaarsv. ....Critically Rare
gracilis Baker LC
loeriensis Poelln. LC
nitida (Salm-Dyck) Haw. var. armstrongii (Schönland) Van Jaarsv. ....CR
nitida (Salm-Dyck) Haw. var. nitida LC
pendulifolia Van Jaarsv. ....DDT
pillansii Kensit var. ernesti-ruschii (Dinter & Poelln.) Van Jaarsv. LC
pillansii Kensit var. nov. (*Van Jaarsveld & Duncan 7912* NBG) ....VU
pillansii Kensit var. pillansii LC
polita Van Jaarsv. ....Critically Rare
prolifera Lem. LC
pulchra (Aiton) Haw. LC
rawlinsonii Oberm. ....Rare
trigona Haw. LC
tukhelensis Van Jaarsv. ....Rare
vlokii Van Jaarsv. ....Rare

Gazania
caespitosa Bolus ....DDT
ciliaris DC. LC
heterochaeta DC. LC
jurineifolia DC. subsp. jurineifolia LC
jurineifolia DC. subsp. scabra (DC.) Roessler LC
krebsiana Less. subsp. arctotoides (Less.) Roessler LC
krebsiana Less. subsp. krebsiana LC
krebsiana Less. subsp. serrulata (DC.) Roessler LC
leiopoda (DC.) Roessler LC
lichtensteinii Less. LC
linearis (Thunb.) Druce var. linearis LC
linearis (Thunb.) Druce var. ovalis (Harv.) Roessler LC
maritima Levyns LC
othonnites (Thunb.) Less. LC
pectinata (Thunb.) Spreng. LC
rigens (L.) Gaertn. var. leucolaena (DC.) Roessler ..LC
rigens (L.) Gaertn. var. rigens LC
rigens (L.) Gaertn. var. uniflora (L.f.) Roessler LC
rigida (Burm.f.) Roessler LC
schenckii O.Hoffm. LC
serrata DC. LC
tenuifolia Less. LC

Geigeria
acaulis (Sch.Bip.) Benth. & Hook.f. ex Oliv. & Hiern LC
aspera Harv. var. aspera LC
aspera Harv. var. rivularis (J.M.Wood & M.S.Evans) Merxm. LC
brevifolia (DC.) Harv. LC
burkei Harv. subsp. burkei var. burkei LC
burkei Harv. subsp. burkei var. elata Merxm. LC
burkei Harv. subsp. burkei var. hirtella Merxm. LC
burkei Harv. subsp. burkei var. intermedia (S.Moore) Merxm. LC
burkei Harv. subsp. burkei var. zeyheri (Harv.) Merxm. LC
burkei Harv. subsp. diffusa (Harv.) Merxm. LC
burkei Harv. subsp. fruticulosa Merxm. LC
burkei Harv. subsp. valida Merxm. LC
elongata Alston LC
filifolia Mattf. LC
obtusifolia L.Bolus LC
ornativa O.Hoffm. LC
pectidea (DC.) Harv. LC
vigintisquamea O.Hoffm. LC

Geissoloma
marginatum (L.) Juss. LC

Geissorhiza, 140
alticola Goldblatt ....Rare
arenicola Goldblatt ....VU
aspera Goldblatt LC
barkerae Goldblatt ....EN
bolusii Baker LC
bonaspei Goldblatt LC
bracteata Klatt LC
brehmii Eckl. ex Klatt ....VU
brevituba (G.J.Lewis) Goldblatt ....VU
bryicola Goldblatt ....Rare
burchellii R.C.Foster LC
callista Goldblatt ....Rare
cataractarum Goldblatt ....Rare
cedarmontana Goldblatt ....Rare
ciliatula Goldblatt ....Rare
confusa Goldblatt LC
corrugata Klatt ....Rare
darlingensis Goldblatt ....CR
delicatula Goldblatt LC
divaricata Goldblatt ....Rare
elsiae Goldblatt ....VU
erubescens Goldblatt ....Rare
esterhuyseniae Goldblatt ....Critically Rare
eurystigma L.Bolus ....CR
exscapa (Thunb.) Goldblatt LC
foliosa Klatt ....NT
fourcadei (L.Bolus) G.J.Lewis LC
furva Ker Gawl. ex Baker ....EN
geminata E.Mey. ex Baker ....EN
grandiflora Goldblatt LC
hesperanthoides Schltr. LC
heterostyla L.Bolus LC
hispidula (R.C.Foster) Goldblatt LC
humilis (Thunb.) Ker Gawl. ....VU
imbricata (D.Delaroche) Ker Gawl. subsp. bicolor (Thunb.) Goldblatt ....NT
imbricata (D.Delaroche) Ker Gawl. subsp. imbricata LC
inaequalis L.Bolus ....Rare
inconspicua Baker LC
inflexa (D.Delaroche) Ker Gawl. LC
intermedia Goldblatt ....Rare
juncea (Link) A.Dietr. LC
kamiesmontana Goldblatt ....VU
karooica Goldblatt ....VU
leipoldtii R.C.Foster ....Rare
lithicola Goldblatt ....VU
longifolia (G.J.Lewis) Goldblatt LC
louisabolusiae R.C.Foster ....EN
malmesburiensis R.C.Foster ....CR
mathewsii L.Bolus ....CR
minuta Goldblatt ....Rare
monanthos Eckl. ....NT

namaquensis W.F.Barker.....**Rare**
nana Klatt.....**VU**
nigromontana Goldblatt.....**Rare**
nubigena Goldblatt.....LC
ornithogaloides Klatt subsp. marlothii (R.C.Foster) Goldblatt.....LC
ornithogaloides Klatt subsp. ornithogaloides.....LC
outeniquensis Goldblatt.....**VU**
ovalifolia R.C.Foster.....LC
ovata (Burm.f.) Asch. & Graebn.....LC
pappei Baker.....DDT
parva Baker.....LC
pseudinaequalis Goldblatt.....LC
purpurascens Goldblatt.....**CR**
purpureolutea Baker.....**VU**
pusilla (Andrews) Klatt.....LC
radians (Thunb.) Goldblatt.....**EN**
ramosa Ker Gawl. ex Klatt.....LC
roseoalba (G.J.Lewis) Goldblatt.....LC
rupicola Goldblatt & J.C.Manning.....**Critically Rare**
schinzii (Baker) Goldblatt.....LC
scillaris A.Dietr.....LC
scopulosa Goldblatt.....**Rare**
setacea (Thunb.) Ker Gawl......**EN**
silenoides Goldblatt & J.C.Manning.....**VU**
similis Goldblatt.....LC
sp. nov. (*Helme 4200* NBG).....**CR**
spiralis (Burch.) M.P.de Vos ex Goldblatt.....**VU**
splendidissima Diels.....**VU**
stenosiphon Goldblatt.....**Rare**
subrigida L.Bolus.....**CR**
sulphurascens Schltr. ex R.C.Foster.....**VU**
tabularis Goldblatt.....**Rare**
tenella Goldblatt.....**VU**
tulbaghensis F.Bolus.....**EN**
uliginosa Goldblatt & J.C.Manning.....**Rare**
umbrosa G.J.Lewis.....LC
unifolia Goldblatt.....**Rare**

Genlisea
hispidula Stapf.....LC

Geranium, 389
amatolicum Hilliard & B.L.Burtt.....LC
angustipetalum Hilliard & B.L.Burtt.....**Critically Rare**
arabicum Forssk. subsp. arabicum.....LC
baurianum R.Knuth.....LC
brycei N.E.Br.....LC
caffrum Eckl. & Zeyh.....LC
canescens L'Hér.....LC
contortum Eckl. & Zeyh.....LC
discolor Hilliard & B.L.Burtt.....LC
drakensbergensis Hilliard & B.L.Burtt.....**Rare**
dregei Hilliard & B.L.Burtt.....LC
flanaganii R.Knuth.....LC
grandistipulatum Hilliard & B.L.Burtt.....LC
harveyi Briq.....LC
incanum Burm.f. var. incanum.....LC
incanum Burm.f. var. multifidum (Sweet) Hilliard & B.L.Burtt.....LC
magniflorum R.Knuth.....LC
multisectum N.E.Br.....LC
natalense Hilliard & B.L.Burtt.....Thr®
nyassense R.Knuth.....LC
ornithopodioides Hilliard & B.L.Burtt.....**EN**
ornithopodon Eckl. & Zeyh.....LC
pulchrum N.E.Br.....LC
robustum Kuntze.....LC
schlechteri R.Knuth.....LC
sparsiflorum R.Knuth.....**VU**
subglabrum Hilliard & B.L.Burtt.....LC
wakkerstroomianum R.Knuth.....LC

Gerardiina
angolensis Engl.....LC

Gerbera, 256
ambigua (Cass.) Sch.Bip.....LC
aurantiaca Sch.Bip.....**EN**
cordata (Thunb.) Less.....LC
crocea (L.) Kuntze.....LC
galpinii Klatt.....LC
jamesonii Bolus ex Adlam.....LC
linnaei Cass.....LC
natalensis Sch.Bip.....LC
parva N.E.Br.....LC
piloselloides (L.) Cass.....LC
serrata (Thunb.) Druce.....LC
tomentosa DC.....LC
viridifolia (DC.) Sch.Bip.....LC
wrightii Harv......**Rare**

Gerrardanthus, 312
macrorhizus Harv. ex Hook.f.....LC
tomentosus Hook.f......**VU**

Gerrardina
foliosa Oliv.....LC

Gethyllis, 68
afra L. LC
barkerae D.Müll.-Doblies subsp. barkerae.....DDT
barkerae D.Müll.-Doblies subsp. paucifolia D.Müll.-Doblies.....LC
britteniana Baker subsp. britteniana.....LC
britteniana Baker subsp. herrei (L.Bolus) D.Müll.-Doblies.....**DDD**
campanulata L.Bolus.....LC
ciliaris (Thunb.) Thunb. subsp. ciliaris.....**NT**
ciliaris (Thunb.) Thunb. subsp. longituba (L.Bolus) D.Müll.-Doblies.....DDT
fimbriatula D.Müll.-Doblies.....**DDD**
grandiflora L.Bolus.....**VU**
gregoriana D.Müll.-Doblies.....**Rare**
hallii D.Müll.-Doblies.....**Rare**
kaapensis D.Müll.-Doblies.....**EN**
lanuginosa Marloth.....LC
lata L.Bolus subsp. lata.....**Rare**
lata L.Bolus subsp. orbicularis D.Müll.-Doblies.....DDT
latifolia Masson ex Baker.....**CR**
linearis L.Bolus.....LC
longistyla Bolus.....**Rare**
namaquensis (Schönland) Oberm......**VU**
pectinata D.Müll.-Doblies.....**VU**
roggeveldensis D.Müll.-Doblies.....DDT
setosa Marloth.....LC
spiralis (Thunb.) Thunb.....LC
transkarooica D.Müll.-Doblies.....LC
uteana D.Müll.-Doblies.....DDT
verrucosa Marloth.....LC
verticillata R.Br. ex Herb.....LC
villosa (Thunb.) Thunb.....LC

Geum
capense Thunb.....LC

Gibbaeum, 423
album N.E.Br......**CR**
angulipes (L.Bolus) N.E.Br......**VU**
dispar N.E.Br......**VU**
esterhuyseniae L.Bolus.....**CR**
geminum N.E.Br.....LC
gibbosum (Haw.) N.E.Br.....LC
haaglenii H.E.K.Hartmann.....**EN**
heathii (N.E.Br.) L.Bolus.....LC
nebrownii Tischer.....**CR**
nuciforme (Haw.) Glen & H.E.K.Hartmann.....LC
pachypodium (Kensit) L.Bolus.....**CR**
petrense (N.E.Br.) Tischer.....**VU**
pilosulum (N.E.Br.) N.E.Br......**VU**
pubescens (Haw.) N.E.Br.....LC
schwantesii Tischer.....**VU**
shandii N.E.Br.....LC
velutinum (L.Bolus) Schwantes.....**VU**

Gibbaria
scabra (Thunb.) Norl.....LC

Girardinia
diversifolia (Link) Friis.....LC

Gisekia
africana (Lour.) Kuntze var. africana.....LC
africana (Lour.) Kuntze var. decagyna Hauman.....LC
pharnacioides L. var. pharnacioides.....LC

Gladiolus, 144
abbreviatus Andrews.....**VU**
acuminatus F.Bolus.....**EN**
alatus L.LC
albens Goldblatt & J.C.Manning.....LC
angustus L.....LC
antholyzoides Baker.....LC
appendiculatus G.J.Lewis.....LC
aquamontanus Goldblatt.....**VU**
arcuatus Klatt.....LC
atropictus Goldblatt & J.C.Manning.....**VU**
aurantiacus Klatt.....LC
aureus Baker.....**CR**
bilineatus G.J.Lewis.....**VU**
blommesteinii L.Bolus.....LC
bonaspei Goldblatt & M.P.de Vos.....**NT**
brachyphyllus F.Bolus.....LC
brevifolius Jacq.....LC
brevitubus G.J.Lewis.....LC
buckerveldii (L.Bolus) Goldblatt.....**Rare**
bullatus Thunb. ex G.J.Lewis.....LC
caeruleus Goldblatt & J.C.Manning.....**NT**
calcaratus G.J.Lewis.....LC
cardinalis Curtis.....LC
carinatus Aiton.....LC
carmineus C.H.Wright.....**VU**
carneus D.Delaroche.....LC
caryophyllaceus (Burm.f.) Poir.....LC
cataractarum Oberm......**EN**
ceresianus L.Bolus.....LC
comptonii G.J.Lewis.....**Critically Rare**
crassifolius Baker.....LC
crispulatus L.Bolus.....**Rare**
cruentus T.Moore.....**CR**
cunonius (L.) Gaertn.....LC
cylindraceus G.J.Lewis.....LC
dalenii Van Geel subsp. dalenii.....LC
debilis Sims.....LC
delpierrei Goldblatt.....**Rare**
densiflorus Baker.....LC
deserticola Goldblatt.....**Rare**
dolomiticus Oberm......**Rare**
ecklonii Lehm.....LC
elliotii Baker.....LC
emiliae L.Bolus.....**NT**
engysiphon G.J.Lewis.....**VU**
equitans Thunb.....LC
exiguus G.J.Lewis.....LC
exilis G.J.Lewis.....**NT**
ferrugineus Goldblatt & J.C.Manning.....LC
filiformis Goldblatt & J.C.Manning.....**Critically Rare**
flanaganii Baker.....LC
floribundus Jacq.....LC
fourcadei (L.Bolus) Goldblatt & M.P.de Vos.....**CR**
geardii L.Bolus.....**Rare**
gracilis Jacq.....LC
grandiflorus Andrews.....LC
griseus Goldblatt & J.C.Manning.....**CR**
gueinzii Kunze.....LC
guthriei F.Bolus.....LC
hirsutus Jacq.....LC
hollandii L.Bolus.....LC
huttonii (N.E.Br.) Goldblatt & M.P.de Vos.....**VU**
hyalinus Jacq.....LC
inandensis Baker.....LC
inflatus Thunb.....LC
inflexus Goldblatt & J.C.Manning.....LC
insolens Goldblatt & J.C.Manning.....**VU**
involutus D.Delaroche.....LC
jonquilliodorus Eckl. ex G.J.Lewis.....**EN**
kamiesbergensis G.J.Lewis.....**Rare**
lapeirousioides Goldblatt.....**VU**
leptosiphon F.Bolus.....**VU**
liliaceus Houtt.....LC
longicollis Baker subsp. longicollis.....LC
longicollis Baker subsp. platypetalus (Baker) Goldblatt & J.C.Manning.....LC
loteniensis Hilliard & B.L.Burtt.....**Critically Rare**
macneilii Oberm......**CR**
maculatus Sweet.....LC
malvinus Goldblatt & J.C.Manning.....**VU**
marlothii G.J.Lewis.....LC
martleyi L.Bolus.....LC
meliusculus (G.J.Lewis) Goldblatt & J.C.Manning.....**VU**
meridionalis G.J.Lewis.....LC
microcarpus G.J.Lewis.....LC
miniatus Eckl......**VU**
monticola G.J.Lewis ex Goldblatt & J.C.Manning.....**Rare**
mortonius Herb.....LC
mostertiae L.Bolus.....**VU**
mutabilis G.J.Lewis.....LC
nerineoides G.J.Lewis.....**Rare**
nigromontanus Goldblatt.....**Rare**
oatesii Rolfe.....LC
ochroleucus Baker.....LC
oppositiflorus Herb......**Declining**
orchidiflorus Andrews.....LC
oreocharis Schltr......**Rare**
ornatus Klatt.....LC
overbergensis Goldblatt & M.P.de Vos.....**VU**
paludosus Baker.....LC

papilio Hook.f. LC
pardalinus Goldblatt & J.C.Manning .... **Rare**
parvulus Schltr. LC
patersoniae F.Bolus LC
pavonia Goldblatt & J.C.Manning .... **CR**
permeabilis D.Delaroche subsp. edulis (Burch. ex Ker Gawl.) Oberm....LC
permeabilis D.Delaroche subsp. permeabilis....LC
phoenix Goldblatt & J.C.Manning .... **Critically Rare**
pole-evansii I.Verd. .... **Rare**
pretoriensis Kuntze....LC
priorii (N.E.Br.) Goldblatt & M.P.de Vos....LC
pritzelii Diels LC
pubigerus G.J.Lewis LC
pulcherrimus (G.J.Lewis) Goldblatt & J.C.Manning....LC
quadrangularis (Burm.f.) Ker Gawl. LC
quadrangulus (D.Delaroche) Barnard .... **EN**
recurvus L. .... **VU**
rehmannii Baker....LC
rhodanthus J.C.Manning & Goldblatt .... **Rare**
robertsoniae F.Bolus .... **NT**
rogersii Baker....LC
roseovenosus Goldblatt & J.C.Manning .... **CR**
rudis Licht. ex Roem. & Schult. LC
rufomarginatus G.J.Lewis .... **Rare**
saccatus (Klatt) Goldblatt & M.P.de Vos LC
salteri G.J.Lewis .... **Rare**
saundersii Hook.f. LC
saxatilis Goldblatt & J.C.Manning .... **Rare**
scabridus Goldblatt & J.C.Manning LC
scullyi Baker LC
sekukuniensis P.J.D.Winter .... **VU**
sempervirens G.J.Lewis .... **Rare**
sericeovillosus Hook.f. subsp. calvatus (Baker) Goldblatt LC
sericeovillosus Hook.f. subsp. sericeovillosus LC
serpenticola Goldblatt & J.C.Manning .... **Rare**
speciosus Thunb. LC
splendens (Sweet) Herb. LC
stefaniae Oberm. .... **Rare**
stellatus G.J.Lewis LC
stokoei G.J.Lewis .... **Critically Rare**
subcaeruleus G.J.Lewis .... **NT**
sufflavus (G.J.Lewis) Goldblatt & J.C.Manning .... **VU**
symonsii F.Bolus .... **Rare**
taubertianus Schltr. .... **Rare**
teretifolius Goldblatt & M.P.de Vos .... **NT**
trichonemifolius Ker Gawl. .... **VU**
tristis L. LC
uitenhagensis Goldblatt & Vlok .... **VU**
undulatus L. LC
uysiae L.Bolus ex G.J.Lewis LC
vaginatus F.Bolus .... **VU**
vandermerwei (L.Bolus) Goldblatt & M.P.de Vos .... **EN**
variegatus (G.J.Lewis) Goldblatt & J.C.Manning .... **VU**
varius F.Bolus LC
venustus G.J.Lewis LC
vernus Oberm. LC
vigilans Barnard .... **EN**
vinosomaculatus Kies....LC
violaceolineatus G.J.Lewis....LC
virescens Thunb. LC
virgatus Goldblatt & J.C.Manning LC
viridiflorus G.J.Lewis LC
watermeyeri L.Bolus LC
watsonius Thunb. .... **NT**
wilsonii (Baker) Goldblatt & J.C.Manning....LC
woodii Baker....LC

Gleichenia
polypodioides (L.) Sm. LC
umbraculifera (Kunze) T.Moore....LC

Glekia
krebsiana (Benth.) Hilliard LC

Glia
prolifera (Burm.f.) B.L.Burtt....LC

Glinus
bainesii (Oliv.) Pax LC
lotoides L. var. virens Fenzl....LC
oppositifolius (L.) Aug.DC. var. oppositifolius....LC

Glischrocolla, 455
formosa (Thunb.) R.Dahlgren .... **VU**

Globulariopsis, 545
adpressa (Choisy) Hilliard LC
montana Hilliard LC
obtusiloba Hilliard .... **Critically Rare**
pumila Hilliard .... **CR PE**
stricta (P.J.Bergius) Hilliard LC
tephrodes (E.Mey.) Hilliard....LC
wittebergensis Compton .... **Rare**

Gloriosa
modesta (Hook.) J.C.Manning & Vinn. LC
rigidifolia (Bredell) J.C.Manning & Vinn. LC
superba L. LC

Glossochilus
burchellii Nees LC
parviflorus Hutch. ....DDT

Glottiphyllum, 424
carnosum N.E.Br. .... **EN**
cruciatum (Haw.) N.E.Br. .... **EN**
depressum (Haw.) N.E.Br. LC
difforme (L.) N.E.Br. LC
fergusoniae L.Bolus .... **NT**
grandiflorum (Haw.) N.E.Br. LC
linguiforme (L.) N.E.Br. .... **VU**
longum (Haw.) N.E.Br. LC
neilii N.E.Br. LC
nelii Schwantes LC
oligocarpum L.Bolus LC
peersii L.Bolus....LC
regium N.E.Br. .... **EN**
salmii (Haw.) N.E.Br. .... **VU**
suave N.E.Br. .... **NT**
surrectum (Haw.) L.Bolus LC

Gloveria
integrifolia (L.f.) M.Jordaan LC

Glumicalyx
apiculatus (E.Mey.) Hilliard & B.L.Burtt LC
flanaganii (Hiern) Hilliard & B.L.Burtt LC
goseloides (Diels) Hilliard & B.L.Burtt....LC
montanus Hiern LC
nutans (Rolfe) Hilliard & B.L.Burtt....LC

Glyceria
maxima (Hartm.) Holmb....LC

Gnaphalium, 256
austroafricanum Hilliard LC
capense Hilliard LC
confine Harv. LC
declinatum L.f. .... **NT**
englerianum (O.Hoffm.) Hilliard & B.L.Burtt LC
filagopsis Hilliard & B.L.Burtt....LC
gnaphalodes (DC.) Hilliard & B.L.Burtt....LC
griquense Hilliard & B.L.Burtt .... **Rare**
limicola Hilliard LC
nelsonii Burtt Davy .... **Rare**
pauciflorum DC. LC
simii (Bolus) Hilliard & B.L.Burtt .... **CR**
vestitum Thunb....LC

Gnidia, 555
aberrans C.H.Wright LC
albosericea Moss ex B.Peterson....LC
anomala Meisn....LC
anthylloides (L.f.) Gilg LC
baurii C.H.Wright....LC
burchellii (Meisn.) Gilg LC
burmannii Eckl. & Zeyh. ex Meisn. ....DDT
caffra (Meisn.) Gilg LC
calocephala (C.A.Mey.) Gilg LC
caniflora Meisn. LC
canoargentea (C.H.Wright) Gilg LC
capitata L.f. LC
cayleyi C.H.Wright ....DDT
chrysophylla Meisn. .... **VU**
clavata Schinz LC
compacta (C.H.Wright) J.H.Ross....LC
conspicua Meisn. LC
coriacea Meisn. LC
cuneata Meisn....LC
decurrens Meisn. LC
denudata Lindl. LC
deserticola Gilg....LC
dregeana Meisn. ....DDT
ericoides C.H.Wright .... **EN**
fastigiata Rendle LC
flanaganii C.H.Wright....LC
fourcadei Moss LC
francisci Bolus....LC
fraterna (N.E.Br.) E.Phillips LC
galpinii C.H.Wright LC
geminiflora E.Mey. ex Meisn. LC
gymnostachya (C.A.Mey.) Gilg LC
harveyiana Meisn. LC
humilis Meisn. .... **EN**
imbricata L.f. LC
inconspicua Meisn. LC
insignis Compton .... **EN**
juniperifolia Lam. LC
kraussiana Meisn. var. kraussiana LC
laxa (L.f.) Gilg LC
leipoldtii C.H.Wright .... **Rare**
linearifolia (Wikstr.) B.Peterson LC
linoides Wikstr. LC
lucens Lam. ....DDT
macropetala Meisn....LC
meyeri Meisn. LC
microcephala Meisn. LC
microphylla Meisn....LC
myrtifolia C.H.Wright....LC
nana (L.f.) Wikstr. LC
nitida Bolus LC
nodiflora Meisn....LC
obtusissima Meisn. LC
oppositifolia L. LC
orbiculata C.H.Wright LC
ornata (Meisn.) Gilg .... **VU**
pallida Meisn....DDT
parviflora Meisn. ....DDT
parvula Wolley-Dod .... **DDD**
pedunculata Beyers .... **VU**
penicillata Licht. ex Meisn. .... **NT**
phaeotricha Gilg LC
pinifolia L. LC
polyantha Gilg....LC
polycephala (C.A.Mey.) Gilg....LC
propinqua (Hilliard) B.Peterson....LC
pulchella Meisn. LC
racemosa Thunb. LC
renniana Hilliard & B.L.Burtt LC
robusta B.Peterson....LC
rubescens B.Peterson....LC
scabra Thunb. LC
scabrida Meisn. ....DDT
sericea L. var. hirsuta Meisn. LC
sericea L. var. sericea LC
sericocephala (Meisn.) Gilg ex Engl. LC
setosa Wikstr. LC
similis C.H.Wright LC
simplex L. LC
sonderiana Meisn. .... **EN**
sparsiflora Bartl. ex Meisn. ....DDT
spicata (L.f.) Gilg .... **VU**
splendens Meisn. LC
squarrosa (L.) Druce LC
stellatifolia Gand. ....DDT
strigillosa Meisn....DDT
styphelioides Meisn. LC
suavissima Dinter....LC
subcordata Meisn....LC
subulata Lam. LC
tenella Meisn. LC
thesioides Meisn. var. condensata Meisn....LC
thesioides Meisn. var. laxa Meisn. LC
thesioides Meisn. var. thesioides LC
tomentosa L. LC
triplinervis Meisn....LC
variabilis (C.H.Wright) E.Phillips .... **VU**
variegata Gand. ....DDT
wikstroemiana Meisn....LC
wilmsii (C.H.Wright) Engl. LC
woodii C.H.Wright LC

Gomphocarpus
filiformis (E.Mey.) D.Dietr. LC
fruticosus (L.) Aiton f. subsp. decipiens (N.E.Br.) Goyder & Nicholas LC
glaucophyllus Schltr. LC
physocarpus E.Mey. LC
rivularis Schltr. LC
tomentosus Burch. subsp. tomentosus....LC

Gomphostigma
incomptum (L.f.) N.E.Br. LC
virgatum (L.f.) Baill. LC

Gonatopus
angustus N.E.Br. LC
boivinii (Decne.) Engl. LC

Gonioma
kamassi E.Mey. LC

Gorteria
corymbosa DC. LC
diffusa Thunb. subsp. calendulacea (DC.) Roessler LC
diffusa Thunb. subsp. diffusa LC
personata L. subsp. gracilis Roessler LC
personata L. subsp. personata LC

Gosela
eckloniana Choisy LC

Gossypioides
kirkii (Mast.) J.B.Hutch. LC

Gossypium
herbaceum L. subsp. africanum (Watt) Vollesen LC

Graderia, 446
linearifolia Codd ..... **VU**
scabra (L.f.) Benth. LC
subintegra Mast. LC

Grammatotheca
bergiana (Cham.) C.Presl var. bergiana LC
bergiana (Cham.) C.Presl var. ekloniana (C.Presl) E.Wimm. LC
bergiana (Cham.) C.Presl var. foliosa E.Wimm. LC
bergiana (Cham.) C.Presl var. pedunculata E.Wimm. LC

Grammitis
poeppigiana (Mett.) Pic.Serm. LC

Grangea
maderaspatana (L.) Poir. LC

Grewia, 406
avellana Hiern LC
bicolor Juss. var. bicolor LC
caffra Meisn. LC
flava DC. LC
flavescens Juss. LC
gracillima Wild LC
hexamita Burret LC
hispida Harv. LC
hornbyi Wild LC
inaequilatera Garcke LC
lasiocarpa E.Mey. ex Harv. LC
microthyrsa K.Schum. ex Burret LC
monticola Sond. LC
occidentalis L. var. occidentalis LC
olukondae Schinz LC
pondoensis Burret ..... **NT**
retinervis Burret LC
robusta Burch. LC
rogersii Burtt Davy & Greenway LC
subspathulata N.E.Br. LC
sulcata Mast. var. sulcata LC
tenax (Forssk.) Fiori LC
vernicosa Schinz LC
villosa Willd. var. villosa LC

Greyia, 397
flanaganii Bolus ..... **Rare**
radlkoferi Szyszyl. LC
sutherlandii Hook. & Harv. LC

Grielum
cuneifolium Schinz LC
grandiflorum (L.) Druce LC
humifusum Thunb. var. humifusum LC
humifusum Thunb. var. parviflorum Harv. LC
sinuatum Licht. ex Burch. LC

Grubbia, 397
rosmarinifolia P.J.Bergius subsp. gracilis (T.M.Salter) Carlquist LC
rosmarinifolia P.J.Bergius subsp. hirsuta (E.Mey. ex DC.) Carlquist LC
rosmarinifolia P.J.Bergius subsp. rosmarinifolia var. pinifolia (Sond.) Carlquist LC
rosmarinifolia P.J.Bergius subsp. rosmarinifolia var. rosmarinifolia LC
rourkei Carlquist ..... **Rare**
tomentosa (Thunb.) Harms LC

Guettarda
speciosa L. LC

Guibourtia
conjugata (Bolle) J.Léonard LC

Gunnera, 397
perpensa L. ..... **Declining**

Guthriea
capensis Bolus LC

Gymnodiscus
capillaris (L.f.) DC. LC
linearifolia DC. LC

Gymnopentzia
bifurcata Benth. LC

Gymnosporia, 299
arenicola Jordaan LC
bachmannii Loes. ..... **VU**
buxifolia (L.) Szyszyl. LC
capitata (E.Mey. ex Sond.) Loes. LC
devenishii Jordaan ..... **Rare**
elliptica (Thunb.) Schönland ..... **VU**
filiformis Davidson ..... DDT
gariepensis Jordaan LC
glaucophylla Jordaan LC
grandifolia (Davison) Jordaan LC
harveyana Loes. subsp. harveyana LC
heterophylla (Eckl. & Zeyh.) Loes. LC
linearis (L.f.) Loes. subsp. lanceolata (E.Mey. ex Sond.) Jordaan LC
linearis (L.f.) Loes. subsp. linearis LC
macrocarpa Jordaan LC
maranguensis (Loes.) Loes. LC
markwardii Jordaan LC
mossambicensis (Klotzsch) Loes. LC
nemorosa (Eckl. & Zeyh.) Szyszyl. LC
oxycarpa (N.Robson) Jordaan ..... **Rare**
polyacanthus (Sond.) Szyszyl. subsp. polyacanthus LC
polyacanthus (Sond.) Szyszyl. subsp. vaccinifolia (P.Conrath) Jordaan LC
pubescens (N.Robson) Jordaan LC
putterlickioides Loes. LC
rubra (Harv.) Loes. LC
senegalensis (Lam.) Loes. LC
sp. A LC
tenuispina (Sond.) Szyszyl. LC
uniflora Davison LC
vanwykii (R.H.Archer) M.Jordaan ..... **NT**
woodii Szyszyl. ..... **EN**

Gymnostephium, 257
angustifolium Harv. ..... DDT
ciliare (DC.) Harv. ..... DDT
corymbosum (Turcz.) Harv. ..... **EN**
fruticosum DC. ..... **Rare**
gracile Less. ..... DDT
hirsutum Less. ..... **CR**
leve Bolus ..... **Rare**
papposum G.L.Nesom ..... DDT

Gyrocarpus
americanus Jacq. subsp. africanus Kubitzki LC

H

Habenaria, 195
anguiceps Bolus LC
arenaria Lindl. LC
barbertoni Kraenzl. & Schltr. ..... **NT**
bicolor Conrath & Kraenzl. ..... **NT**
ciliosa Lindl. LC
clavata (Lindl.) Rchb.f. LC
cornuta Lindl. LC
culveri Schltr. ..... **Rare**
dives Rchb.f. LC
dregeana Lindl. LC
epipactidea Rchb.f. LC
falcicornis (Burch. ex Lindl.) Bolus subsp. caffra (Schltr.) J.C.Manning LC
falcicornis (Burch. ex Lindl.) Bolus subsp. falcicornis LC
filicornis Lindl. LC
galpinii Bolus LC
humilior Rchb.f. LC
kraenzliniana Schltr. ..... **NT**
laevigata Lindl. LC
lithophila Schltr. LC
malacophylla Rchb.f. LC
mossii (G.Will.) J.C.Manning ..... **EN**
nyikana Rchb.f. subsp. nyikana LC
petitiana (A.Rich.) T.Durand & Schinz LC
pseudociliosa Schelpe ex J.C.Manning LC
rautaneniana Kraenzl. LC
schimperiana Hochst. ex A.Rich. LC
stenorhynchos Schltr. LC
transvaalensis Schltr. LC
tridens Lindl. LC
trilobulata Schltr. LC
tysonii Bolus LC
woodii Schltr. ..... **VU**

Hackelochloa
granularis (L.) Kuntze LC

Haemanthus, 69
albiflos Jacq. LC
amarylloides Jacq. subsp. amarylloides ..... **NT**
amarylloides Jacq. subsp. polyanthus Snijman LC
amarylloides Jacq. subsp. toximontanus Snijman ..... **EN**
barkerae Snijman LC
canaliculatus Levyns ..... **EN**
carneus Ker Gawl. LC
coccineus L. LC
crispus Snijman LC
dasyphyllus Snijman ..... **Rare**
deformis Hook.f. ..... **NT**
graniticus Snijman ..... **EN**
humilis Jacq. subsp. hirsutus (Baker) Snijman LC
humilis Jacq. subsp. humilis LC
lanceifolius Jacq. ..... **VU**
montanus Baker LC
namaquensis R.A.Dyer ..... **Rare**
nortieri Isaac ..... **EN**
pauculifolius Snijman & A.E.van Wyk ..... **Rare**
pubescens L.f. subsp. arenicola Snijman ..... **Rare**
pubescens L.f. subsp. leipoldtii Snijman ..... **VU**
pubescens L.f. subsp. pubescens LC
pumilio Jacq. ..... **EN**
sanguineus Jacq. LC
tristis Snijman ..... **VU**
unifoliatus Snijman LC

Halleria, 545
elliptica Thunb. LC
lucida L. LC
ovata Benth. ..... **Rare**

Hallianthus
planus (L.Bolus) H.E.K.Hartmann LC

Halodule
uninervis (Forssk.) Asch. LC

Halophila
ovalis (R.Br.) Hook.f. subsp. ovalis LC

Halosarcia
indica (Willd.) Paul G.Wilson LC

Hammeria
gracilis Burgoyne LC
meleagris (L.Bolus) Klak LC

Haplocarpha, 257
lanata (Thunb.) Less. LC
lyrata Harv. LC
nervosa (Thunb.) Beauverd LC
oocephala (DC.) Beyers ..... **Rare**
parvifolia (Schltr.) Beauverd ..... **VU**
scaposa Harv. LC

Haplocoelum
foliolosum (Hiern) Bullock subsp. mombasense (Bullock) Verdc. LC

Harpagophytum
procumbens (Burch.) DC. ex Meisn. subsp. procumbens LC
procumbens (Burch.) DC. ex Meisn. subsp. transvaalense Ihlenf. & H.E.K.Hartmann LC
zeyheri Decne. subsp. schijffii Ihlenf. & H.E.K.Hartmann LC
zeyheri Decne. subsp. zeyheri LC

Harpephyllum
caffrum Bernh. ex Krauss LC

Harpochloa
falx (L.f.) Kuntze LC

Hartmanthus
pergamentaceus (L.Bolus) S.A.Hammer LC

Harveya, 446
anisodonta C.A.Sm. ..... DDT
bodkinii Hiern LC
bolusii Kuntze LC
capensis Hook. LC
cathcartensis Kuntze ..... DDT
coccinea (Harv.) Schltr. LC
euryantha Schltr. ..... **DDD**
hirtiflora Schltr. ..... Thr*

huttonii Hiern LC
hyobanchoides Schltr. ex Hiern LC
laxiflora Hiern LC
leucopharynx Hilliard & B.L.Burtt LC
pauciflora (Benth.) Hiern LC
pulchra Hilliard & B.L.Burtt LC
pumila Schltr. LC
purpurea (L.f.) Harv. ex Hook. LC
randii Hiern LC
roseoalba J.C.Manning & Goldblatt ..... Rare
scarlatina (Benth.) Hiern LC
silvatica Hilliard & B.L.Burtt LC
speciosa Bernh. LC
squamosa (Thunb.) Steud. LC
stenosiphon Hiern LC
sulphurea Hiern LC
tubulosa Harv. ex Hiern LC
vestita Hiern ..... DDT

Haworthia, 93

agnis L.Battista LC
angustifolia Haw. var. altissima M.B.Bayer ..... DDT
angustifolia Haw. var. angustifolia ..... DDT
angustifolia Haw. var. baylissii (C.L.Scott) M.B.Bayer ..... DDT
angustifolia Haw. var. paucifolia G.G.Sm. LC
arachnoidea (L.) Duval var. arachnoidea LC
arachnoidea (L.) Duval var. aranea (A.Berger) M.B.Bayer ..... DDT
arachnoidea (L.) Duval var. namaquensis M.B.Bayer LC
arachnoidea (L.) Duval var. nigricans (Haw.) M.B.Bayer LC
arachnoidea (L.) Duval var. scabrispina M.B.Bayer LC
arachnoidea (L.) Duval var. setata (Haw.) M.B.Bayer LC
aristata Haw. ..... EN
attenuata (Haw.) Haw. var. attenuata ..... EN
attenuata (Haw.) Haw. var. radula (Jacq.) M.B.Bayer LC
azurea M.Hayashi LC
bayeri J.D.Venter & S.A.Hammer ..... EN
blackburniae W.F.Barker var. blackburniae LC
blackburniae W.F.Barker var. derustensis M.B.Bayer ..... EN
blackburniae W.F.Barker var. graminifolia (G.G.Sm.) M.B.Bayer ..... CR
bolusii Baker var. blackbeardiana (Poelln.) M.B.Bayer LC
bolusii Baker var. bolusii ..... DDT
bolusii Baker var. pringlei (C.L.Scott) M.B.Bayer ... LC
breueri M.Hayashi LC
bronkhorstii M.Hayashi LC
bruynsii M.B.Bayer ..... EN
chloracantha Haw. var. chloracantha ..... DDT
chloracantha Haw. var. denticulifera (Poelln.) M.B.Bayer ..... EN
chloracantha Haw. var. subglauca Poelln. ..... EN
coarctata Haw. var. adelaidensis (Poelln.) M.B.Bayer ..... DDT
coarctata Haw. var. coarctata LC
coarctata Haw. var. tenuis (G.G.Sm.) M.B.Bayer ..... Critically Rare
cooperi Baker var. cooperi LC
cooperi Baker var. dielsiana (Poelln.) M.B.Bayer LC
cooperi Baker var. doldii M.B.Bayer LC
cooperi Baker var. gordoniana (Poelln.) M.B.Bayer LC
cooperi Baker var. gracilis (Poelln.) M.B.Bayer LC
cooperi Baker var. isabellae (Poelln.) M.B.Bayer ... LC
cooperi Baker var. picturata (M.B.Bayer) M.B.Bayer LC
cooperi Baker var. pilifera (Baker) M.B.Bayer LC
cooperi Baker var. tenera (Poelln.) M.B.Bayer LC
cooperi Baker var. truncata (H.Jacobsen) M.B.Bayer LC
cooperi Baker var. venusta (C.L.Scott) M.B.Bayer ..... CR
cooperi Baker var. viridis (M.B.Bayer) M.B.Bayer LC
crausii M.Hayashi LC
cymbiformis (Haw.) Duval var. cymbiformis LC
cymbiformis (Haw.) Duval var. incurvula (Poelln.) M.B.Bayer ..... DDT
cymbiformis (Haw.) Duval var. obtusa (Haw.) Baker ..... DDT
cymbiformis (Haw.) Duval var. ramosa (G.G.Sm.) M.B.Bayer ..... DDT
cymbiformis (Haw.) Duval var. reddii (C.L.Scott) M.B.Bayer ..... DDT
cymbiformis (Haw.) Duval var. setulifera (Poelln.) M.B.Bayer ..... DDT
decipiens Poelln. var. cyanea M.B.Bayer LC
decipiens Poelln. var. decipiens LC
decipiens Poelln. var. minor M.B.Bayer LC
decipiens Poelln. var. xiphiophylla (Baker) M.B.Bayer LC
devriesii Breuer LC
elizeae Breuer LC
emelyae Poelln. var. comptoniana (G.G.Sm.) J.D.Venter & S.A.Hammer ..... CR
emelyae Poelln. var. emelyae ..... VU
emelyae Poelln. var. major (G.G.Sm.) M.B.Bayer ..... VU
emelyae Poelln. var. multifolia M.B.Bayer ..... EN
enigma M.Hayashi ..... Thr*
esterhuizenii M.Hayashi LC
fasciata (Willd.) Haw. ..... NT
floribunda Poelln. var. dentata M.B.Bayer LC
floribunda Poelln. var. floribunda ..... CR
floribunda Poelln. var. major M.B.Bayer ..... EN
geraldii C.L.Scott ..... Thr*
glabrata (Salm-Dyck) Baker ..... VU
glauca Baker var. glauca LC
glauca Baker var. herrei (Poelln.) M.B.Bayer ..... DDT
hayashi M.Hayashi LC
heidelbergensis G.G.Sm. var. heidelbergensis .... EN
heidelbergensis G.G.Sm. var. minor M.B.Bayer... VU
heidelbergensis G.G.Sm. var. scabra M.B.Bayer LC
heidelbergensis G.G.Sm. var. toonensis M.B.Bayer ..... VU
herbacea (Mill.) Stearn var. flaccida M.B.Bayer... CR
herbacea (Mill.) Stearn var. herbacea ..... VU
herbacea (Mill.) Stearn var. lupula M.B.Bayer ..... DDT
herbacea (Mill.) Stearn var. paynei (Poelln.) M.B.Bayer ..... VU
integra Poelln. var. integra ..... DDT
integra Poelln. var. standeri J.M.Esterhuizen ..... DDT
kemari M.Hayashi ..... Rare
kingiana Poelln. ..... CR
koelmaniorum Oberm. & D.S.Hardy var. koelmaniorum ..... VU
koelmaniorum Oberm. & D.S.Hardy var. mcmurtryi (C.L.Scott) M.B.Bayer ..... EN
leightonii G.G.Sm. var. davidii Breuer LC
leightonii G.G.Sm. var. leightonii LC
limifolia Marloth ..... VU
lockwoodii Archibald ..... EN
longiana Poelln. ..... EN
maculata (Poelln.) M.B.Bayer var. intermedia M.B.Bayer ..... DDT
maculata (Poelln.) M.B.Bayer var. maculata ..... Thr*
magnifica Poelln. var. acuminata (M.B.Bayer) M.B.Bayer ..... CR
magnifica Poelln. var. atrofusca (G.G.Sm.) M.B.Bayer ..... VU
magnifica Poelln. var. dekenahii (G.G.Sm.) M.B.Bayer ..... CR
magnifica Poelln. var. magnifica LC
magnifica Poelln. var. splendens J.D.Venter & S.A.Hammer ..... CR
maraisii Poelln. var. maraisii LC
maraisii Poelln. var. meiringii M.B.Bayer ..... DDT
maraisii Poelln. var. notabilis (Poelln.) M.B.Bayer ..... DDT
marginata (Lam.) Stearn ..... VU
marumiana Uitewaal var. archeri (W.F.Barker ex M.B.Bayer) M.B.Bayer LC
marumiana Uitewaal var. batesiana (Uitewaal) M.B.Bayer ..... DDT
marumiana Uitewaal var. dimorpha (M.B.Bayer) M.B.Bayer ..... VU
marumiana Uitewaal var. marumiana LC
marumiana Uitewaal var. viridis M.B.Bayer ..... DDT
marxii Gildenhuys LC
maxima (Haw.) Duval LC
minima (Aiton) Haw. var. minima LC
minima (Aiton) Haw. var. poellnitziana (Uitewaal) M.B.Bayer ..... VU
mirabilis (Haw.) Haw. var. badia (Poelln.) M.B.Bayer ..... CR
mirabilis (Haw.) Haw. var. beukmannii (Poelln.) M.B.Bayer ..... CR
mirabilis (Haw.) Haw. var. calcarea M.B.Bayer ..... Rare
mirabilis (Haw.) Haw. var. consanguinea M.B.Bayer ..... Rare
mirabilis (Haw.) Haw. var. mirabilis ..... CR
mirabilis (Haw.) Haw. var. paradoxa (Poelln.) M.B.Bayer ..... EN
mirabilis (Haw.) Haw. var. sublineata (Poelln.) M.B.Bayer ..... CR
mirabilis (Haw.) Haw. var. triebneriana (Poelln.) M.B.Bayer ..... DDT
monticola Fourc. var. asema M.B.Bayer ..... VU
monticola Fourc. var. monticola ..... Rare
mucronata Haw. var. calitzdorpensis Breuer LC
mucronata Haw. var. habdomadis (Poelln.) M.B.Bayer LC
mucronata Haw. var. inconfluens (Poelln.) M.B.Bayer ..... DDT
mucronata Haw. var. morrisiae (Poelln.) M.B.Bayer LC
mucronata Haw. var. mucronata LC
mucronata Haw. var. rooibergensis J.M.Esterhuizen & L.Battista LC
mutica Haw. var. mutica ..... VU
mutica Haw. var. nigra M.B.Bayer ..... EN
nigra (Haw.) Baker var. diversifolia (Poelln.) Uitewaal LC
nigra (Haw.) Baker var. nigra LC
nortieri G.G.Sm. var. globosiflora (G.G.Sm.) M.B.Bayer ..... DDT
nortieri G.G.Sm. var. nortieri LC
nortieri G.G.Sm. var. pehlemanniae (C.L.Scott) M.B.Bayer LC
odetteae Breuer LC
opalina M.Hayashi LC
outeniquensis M.B.Bayer ..... VU
parksiana Poelln. ..... CR
picta Poelln. var. janvlokii Breuer LC
picta Poelln. var. picta LC
picta Poelln. var. tricolor Breuer LC
pubescens M.B.Bayer var. livida M.B.Bayer ..... VU
pubescens M.B.Bayer var. pubescens ..... CR
pulchella M.B.Bayer var. globifera M.B.Bayer ..... Rare
pulchella M.B.Bayer var. pulchella ..... Rare
pungens M.B.Bayer ..... VU
pygmaea Poelln. var. argenteo-maculosa (G.G.Sm.) M.B.Bayer ..... CR
pygmaea Poelln. var. pygmaea ..... CR
reinwardtii (Salm-Dyck) Haw. var. brevicula G.G.Sm. ..... DDT
reinwardtii (Salm-Dyck) Haw. var. reinwardtii LC
reticulata (Haw.) Haw. var. attenuata M.B.Bayer DDT
reticulata (Haw.) Haw. var. hurlingii (Poelln.) M.B.Bayer ..... DDT
reticulata (Haw.) Haw. var. reticulata LC
reticulata (Haw.) Haw. var. subregularis (Baker) Pilbeam LC
retusa (L.) Duval ..... VU
scabra Haw. var. johanii M.Hayashi LC
scabra Haw. var. lateganiae (Poelln.) M.B.Bayer ..... Critically Rare
scabra Haw. var. morrisiae (Poelln.) M.B.Bayer ..... DDT
scabra Haw. var. scabra LC
scabra Haw. var. starkiana (Poelln.) M.B.Bayer ... VU
schoemanii M.Hayashi LC
scottii Breuer LC
semiviva (Poelln.) M.B.Bayer LC
serrata M.B.Bayer ..... CR
sordida Haw. var. lavranii C.L.Scott ..... VU
sordida Haw. var. sordida LC
springbokvlakensis C.L.Scott ..... EN
tradouwensis Breuer LC
transiens (Poelln.) M.B.Bayer ..... Thr*
tretyrensis Breuer LC
truncata Schönland var. maughanii (Poelln.) B.Fearn ..... EN
truncata Schönland var. minor Breuer LC
truncata Schönland var. truncata ..... VU
turgida Haw. var. longibracteata (G.G.Sm.) M.B.Bayer LC
turgida Haw. var. suberecta Poelln. ..... Thr*
turgida Haw. var. turgida LC
variegata L.Bolus var. hemicrypta M.B.Bayer ..... Thr*
variegata L.Bolus var. modesta M.B.Bayer ..... DDT
variegata L.Bolus var. petrophila M.B.Bayer ..... DDT

variegata L.Bolus var. variegata ..... **EN**
venosa (Lam.) Haw. subsp. granulata (Marloth) M.B.Bayer ..... **Rare**
venosa (Lam.) Haw. subsp. tessellata (Haw.) M.B.Bayer LC
venosa (Lam.) Haw. subsp. venosa ..... **VU**
venosa (Lam.) Haw. subsp. woolleyi (Poelln.) Halda ..... **CR PE**
virella (M.B.Bayer) M.Hayashi LC
viscosa (L.) Haw. var. variabilis Breuer LC
viscosa (L.) Haw. var. viscosa LC
vlokii M.B.Bayer ..... **Rare**
wittebergensis W.F.Barker LC
zantneriana Poelln. var. minor M.B.Bayer ..... **Critically Rare**
zantneriana Poelln. var. zantneriana LC
zenigata M.Hayashi LC

Hebenstretia, 545

angolensis Rolfe LC
anomala Roessler LC
comosa Hochst. LC
cordata L. LC
dentata L. LC
dregei Rolfe ..... **DDD**
dura Choisy LC
fastigiosa Jaroscz LC
glaucescens Schltr. LC
hamulosa E.Mey. LC
integrifolia L. LC
kamiesbergensis Roessler LC
lanceolata (E.Mey.) Rolfe LC
minutiflora Rolfe LC
namaquensis Roessler LC
neglecta Roessler LC
oatesii Rolfe subsp. oatesii LC
oatesii Rolfe subsp. rhodesiana Roessler LC
paarlensis Roessler LC
parviflora E.Mey. LC
ramosissima Jaroscz LC
rehmannii Rolfe LC
repens Jaroscz LC
robusta E.Mey. LC
sarcocarpa Bolus ex Rolfe LC

Heeria

argentea (Thunb.) Meisn. LC

Heinsia

crinita (Afzel.) G.Taylor subsp. parviflora (K.Schum. & K.Krause) Verdc. LC

Helichrysopsis

septentrionalis (Vatke) Hilliard LC

Helichrysum, 257

acrophilum Bolus LC
acutatum DC. LC
adenocarpum DC. subsp. adenocarpum LC
adenocarpum DC. subsp. ammophilum Hilliard LC
albanense Hilliard LC
albertense Hilliard ..... **DDD**
albilanatum Hilliard LC
albirosulatum Killick LC
albo-brunneum S.Moore LC
album N.E.Br. ..... **Rare**
allioides Less. LC
alsinoides DC. LC
alticolum Bolus ..... **NT**
altigenum Schltr. & Moeser LC
ammitophilum Hilliard LC
amplectens Hilliard ..... **Rare**
anomalum Less. LC
appendiculatum (L.f.) Less. LC
archeri Compton ..... **DDD**
arenicola M.D.Hend. LC
argentissimum J.M.Wood LC
argyrolepis MacOwan LC
argyrophyllum DC. LC
argyrosphaerum DC. LC
asperum (Thunb.) Hilliard & B.L.Burtt var. albidulum (DC.) Hilliard LC
asperum (Thunb.) Hilliard & B.L.Burtt var. appressifolium (Moeser) Hilliard LC
asperum (Thunb.) Hilliard & B.L.Burtt var. asperum LC
asperum (Thunb.) Hilliard & B.L.Burtt var. comosum (Sch.Bip.) Hilliard LC
asperum (Thunb.) Hilliard & B.L.Burtt var. glabrum Hilliard LC
athrixiifolium (Kuntze) Moeser LC
aureofolium Hilliard ..... **VU**
aureolum Hilliard LC
aureonitens Sch.Bip. LC
aureum (Houtt.) Merr. var. argenteum Hilliard ..... **VU**
aureum (Houtt.) Merr. var. aureum LC
aureum (Houtt.) Merr. var. candidum Hilliard LC
aureum (Houtt.) Merr. var. monocephalum (DC.) Hilliard LC
aureum (Houtt.) Merr. var. scopulosum (M.D.Hend.) Hilliard LC
aureum (Houtt.) Merr. var. serotinum Hilliard LC
auriceps Hilliard LC
bachmannii Klatt ..... **DDD**
basalticum Hilliard LC
bellidiastrum Moeser LC
bellum Hilliard LC
caespititium (DC.) Harv. LC
callicomum Harv. LC
calocephalum Klatt ..... **Rare**
candolleanum H.Buek LC
capense Hilliard LC
catipes (DC.) Harv. LC
cephaloideum DC. LC
cerastioides DC. var. cerastioides LC
chionosphaerum DC. LC
chrysargyrum Moeser LC
citricephalum Hilliard & B.L.Burtt ..... **CR**
cochleariforme DC. ..... **NT**
confertifolium Klatt LC
confertum N.E.Br. LC
cooperi Harv. LC
crispum (L.) D.Don LC
cylindriflorum (L.) Hilliard & B.L.Burtt LC
cymosum (L.) D.Don subsp. calvum Hilliard LC
cymosum (L.) D.Don subsp. cymosum LC
dasyanthum (Willd.) Sweet LC
dasycephalum O.Hoffm. LC
dasymallum Hilliard LC
decorum DC. LC
difficile Hilliard LC
diffusum DC. LC
drakensbergense Killick ..... **Rare**
dregeanum Sond. & Harv. LC
dunense Hilliard ..... **VU**
ecklonis Sond. LC
edwardsii Wild LC
elegantissimum DC. LC
epapposum Bolus LC
ephelos Hilliard ..... **Rare**
evansii Hilliard LC
excisum (Thunb.) Less. LC
felinum Less. LC
flanaganii Bolus LC
foetidum (L.) Moench var. foetidum LC
fourcadei Hilliard ..... **DDD**
fruticans (L.) D.Don ..... **Rare**
fulvum N.E.Br. LC
galpinii N.E.Br. LC
gariepinum DC. LC
glaciale Hilliard LC
glomeratum Klatt LC
grandibracteatum M.D.Hend. LC
grandiflorum (L.) D.Don LC
griseolanatum Hilliard LC
griseum Sond. LC
gymnocomum DC. LC
hamulosum E.Mey. ex DC. LC
harveyanum Wild LC
haygarthii Bolus ..... **Rare**
hebelepis DC. LC
helianthemifolium (L.) D.Don LC
herbaceum (Andrews) Sweet LC
herniarioides DC. LC
heterolasium Hilliard LC
homilochrysum S.Moore ..... **Rare**
hyphocephalum Hilliard LC
hypoleucum Harv. LC
incarnatum DC. ..... **VU**
indicum (L.) Grierson LC
infaustum J.M.Wood & M.S.Evans LC
ingomense Hilliard ..... **EN**
inornatum Hilliard & B.L.Burtt LC
interjacens Hilliard LC
interzonale Compton LC
intricatum DC. LC
isolepis Bolus ..... **Rare**
jubilatum Hilliard ..... **Rare**
junodii Moeser ..... **Rare**
kraussii Sch.Bip. LC
krebsianum Less. LC
krookii Moeser LC
lambertianum DC. LC
lancifolium (Thunb.) Thunb. LC
leontonyx DC. LC
lepidissimum S.Moore LC
leptorhizum DC. ..... **DDD**
lesliei Hilliard ..... **EN**
lineare DC. LC
lineatum Bolus LC
lingulatum Hilliard LC
litorale Bolus LC
longifolium DC. LC
longinquum Hilliard ..... **Rare**
lucilioides Less. LC
marginatum DC. LC
mariepscopicum Hilliard LC
marifolium DC. ..... **Rare**
marmarolepis S.Moore ..... **NT**
melanacme DC. LC
miconiifolium DC. LC
micropoides DC. LC
milfordiae Killick LC
milleri Hilliard LC
mimetes S.Moore LC
mixtum (Kuntze) Moeser var. grandiceps Hilliard LC
mixtum (Kuntze) Moeser var. mixtum LC
moeserianum Thell. LC
molestum Hilliard LC
mollifolium Hilliard LC
montanum DC. LC
monticola Hilliard LC
montis-cati Hilliard ..... **VU**
mundtii Harv. LC
mutabile Hilliard LC
nanum Klatt LC
natalitium DC. LC
nimbicola Hilliard ..... **Rare**
niveum (L.) Less. LC
nudifolium (L.) Less. var. nudifolium LC
nudifolium (L.) Less. var. oxyphyllum (DC.) Beentje LC
nudifolium (L.) Less. var. pilosellum (L.f.) Beentje LC
obductum Bolus LC
obtusum (S.Moore) Moeser LC
odoratissimum (L.) Sweet var. lanatum Sond. LC
odoratissimum (L.) Sweet var. odoratissimum LC
oligopappum Bolus ..... Thr*
opacum Klatt LC
oreophilum Klatt LC
outeniquense Hilliard ..... **EX**
oxybelium DC. LC
pagophilum M.D.Hend. ..... **Rare**
paleatum Hilliard LC
pallidum DC. LC
palustre Hilliard LC
panduratum O.Hoffm. var. panduratum LC
panduratum O.Hoffm. var. transvaalense Moeser LC
pandurifolium Schrank LC
pannosum DC. LC
paronychioides DC. LC
patulum (L.) D.Don LC
pedunculatum Hilliard & B.L.Burtt LC
pentzioides Less. LC
petiolare Hilliard & B.L.Burtt LC
petraeum Hilliard LC
platypterum DC. LC
plebeium DC. LC
polycladum Klatt LC
populifolium DC. LC
praecinctum Klatt LC
praecurrens Hilliard LC
psilolepis Harv. LC
pulchellum DC. LC
pumilio (O.Hoffm.) Hilliard & B.L.Burtt subsp. fleckii (S.Moore) Hilliard LC
pumilio (O.Hoffm.) Hilliard & B.L.Burtt subsp. pumilio LC
qathlambanum Hilliard LC
reflexum N.E.Br. LC
refractum Hilliard ..... **Rare**
retortoides N.E.Br. LC

retortum (L.) Willd. LC
revolutum (Thunb.) Less. LC
rosum (P.J.Bergius) Less. var. arcuatum Hilliard....LC
rosum (P.J.Bergius) Less. var. rosum LC
rotundatum Harv.....**Rare**
rotundifolium (Thunb.) Less....LC
ruderale Hilliard & B.L.Burtt LC
rudolfii Hilliard....LC
rugulosum Less....LC
rutilans (L.) D.Don....LC
saxicola Hilliard....**Rare**
scabrum (Thunb.) Less. LC
scitulum Hilliard & B.L.Burtt LC
sessile DC....LC
sessilioides Hilliard LC
setosum Harv. LC
silvaticum Hilliard LC
simillimum DC. LC
simulans Harv. & Sond. LC
solitarium Hilliard....**VU**
sphaeroideum Moeser LC
spiciforme DC. LC
spiralepis Hilliard & B.L.Burtt LC
splendidum (Thunb.) Less. LC
spodiophyllum Hilliard & B.L.Burtt LC
stellatum (L.) Less. LC
stenopterum DC. LC
stoloniferum (L.f.) Willd. LC
subfalcatum Hilliard LC
subglomeratum Less. LC
subluteum Burtt Davy LC
summo-montanum I.Verd. ....**EN**
sutherlandii Harv. LC
swynnertonii S.Moore....LC
tenax M.D.Hend. var. pallidum Hilliard & B.L.Burtt ....**Rare**
tenax M.D.Hend. var. tenax....LC
tenuiculum DC. LC
tenuifolium Killick....LC
teretifolium (L.) D.Don....LC
thapsus (Kuntze) Moeser LC
tinctum (Thunb.) Hilliard & B.L.Burtt LC
tomentosulum (Klatt) Merxm. subsp. aromaticum (Dinter) Merxm. LC
tongense Hilliard LC
transmontanum Hilliard....LC
tricostatum (Thunb.) Less. ....**NT**
trilineatum DC. LC
truncatum Burtt Davy LC
tysonii Hilliard LC
umbraculigerum Less....LC
uninervium Burtt Davy....LC
vernum Hilliard LC
versicolor O.Hoffm. & Muschl....Thr*
wilmsii Moeser....LC
witbergense Bolus LC
woodii N.E.Br. LC
xerochrysum DC....LC
zeyheri Less. LC
zwartbergense Bolus LC

Helictotrichon, 201

barbatum (Nees) Schweick.....**VU**
capense Schweick. LC
dodii (Stapf) Schweick. LC
galpinii Schweick. LC
hirtulum (Steud.) Schweick. LC
leoninum (Steud.) Schweick....LC
longifolium (Nees) Schweick. LC
longum (Stapf) Schweick....LC
namaquense Schweick. ....**VU**
natalense (Stapf) Schweick. LC
quinquesetum (Steud.) Schweick. ....**CR PE**
turgidulum (Stapf) Schweick. LC

Helinus

integrifolius (Lam.) Kuntze....LC
spartioides (Engl.) Schinz ex Engl. LC

Heliophila, 287

acuminata (Eckl. & Zeyh.) Steud. LC
adpressa O.E.Schulz LC
affinis Sond.....**DDD**
africana (L.) Marais....LC
alpina Marais....LC
amplexicaulis L.f....LC
arenaria Sond. var. acocksii Marais LC
arenaria Sond. var. agtertuinensis (O.E.Schulz) Marais....**DDD**
arenaria Sond. var. arenaria LC
arenaria Sond. var. glabrescens (O.E.Schulz) Marais LC
arenosa Schltr....LC
brachycarpa Meisn. LC
brassicifolia Eckl. & Zeyh. ....DDT
bulbostyla P.E.Barnes LC
callosa (L.f.) DC. LC
carnosa (Thunb.) Steud. LC
cedarbergensis Marais ....**Rare**
cinerea Marais ....**Rare**
collina O.E.Schulz LC
concatenata Sond. LC
cornellsbergia B.J.Pienaar & Nicholas....**Rare**
cornuta Sond. var. cornuta....LC
cornuta Sond. var. squamata (Schltr.) Marais LC
coronopifolia L. LC
crithmifolia Willd. LC
cuneata Marais ....**Critically Rare**
descurva Schltr....LC
deserticola Schltr. var. deserticola LC
deserticola Schltr. var. micrantha A.Schreib. LC
diffusa (Thunb.) DC. var. diffusa....LC
diffusa (Thunb.) DC. var. flacca (Sond.) Marais LC
digitata L.f. LC
dregeana Sond. LC
elata Sond.....**EN**
elongata (Thunb.) DC. LC
ephemera P.A.Bean....**VU**
esterhuyseniae Marais LC
eximia Marais....LC
filicaulis Marais ....**VU**
formosa Hilliard & B.L.Burtt....LC
gariepina Schltr. LC
glauca Burch. ex DC. LC
katbergensis Marais ....**DDD**
laciniata Marais....LC
lactea Schltr. LC
leptophylla Schltr. ....**VU**
linearis (Thunb.) DC. var. linearifolia (Burch. ex DC.) Marais....LC
linearis (Thunb.) DC. var. linearis LC
linearis (Thunb.) DC. var. reticulata (Eckl. & Zeyh.) Marais....**VU**
linoides Schltr. LC
macowaniana Schltr. LC
macra Schltr. LC
macrosperma Burch. ex DC....LC
meyeri Sond. var. meyeri LC
meyeri Sond. var. minor Marais LC
minima (Stephens) Marais....LC
namaquana Bolus....LC
nubigena Schltr. LC
patens Oliv. ....DDT
pectinata Burch. ex DC. LC
pendula Willd. LC
pinnata L.f. LC
promontorii Marais....**VU**
pubescens Burch. ex Sond. LC
pusilla L.f. var. lanceolata (Adamson) Marais....Thr*
pusilla L.f. var. macrosperma Marais LC
pusilla L.f. var. pusilla....LC
pusilla L.f. var. setacea (Schltr.) Marais LC
ramosissima O.E.Schulz ....**DDD**
refracta Sond. LC
remotiflora O.E.Schulz LC
rigidiuscula Sond. LC
rimicola Marais ....**Rare**
scandens Harv. LC
schulzii Marais ....**Rare**
scoparia Burch. ex DC. var. aspera (Schltr.) Marais LC
scoparia Burch. ex DC. var. scoparia LC
seselifolia Burch. ex DC. var. marlothii (O.E.Schulz) Marais LC
seselifolia Burch. ex DC. var. nigellifolia (Schltr.) Marais LC
seselifolia Burch. ex DC. var. seselifolia LC
suavissima Burch. ex DC. LC
subulata Burch. ex DC....LC
tabularis Wolley-Dod ....**VU**
thunbergii (Eckl. & Zeyh.) Steud. var. macrostylis (E.Mey. ex Sond.) B.Nord....LC
thunbergii (Eckl. & Zeyh.) Steud. var. thunbergii ..LC
tricuspidata Schltr. ....**Rare**
trifurca Burch. ex DC....LC
tulbaghensis Schinz LC
variabilis Burch. ex DC. LC

Heliotropium

ciliatum Kaplan LC
giessii Friedr.-Holzh. LC
lineare (A.DC.) Gürke LC
nelsonii C.H.Wright....LC
ovalifolium Forssk....LC
rariflorum Stocks subsp. hereroense (Schinz) Verdc. LC
strigosum Willd. LC
tubulosum E.Mey. ex A.DC....LC
zeylanicum (Burm.f.) Lam....LC

Helixanthera

garciana (Engl.) Danser LC
woodii (Schltr. & K.Krause) Danser LC

Hellmuthia

membranacea (Thunb.) R.W.Haines & Lye....LC

Hemarthria

altissima (Poir.) Stapf & C.E.Hubb. LC

Hemimeris, 545

centrodes Hiern LC
gracilis Schltr....LC
racemosa (Houtt.) Merr. LC
sabulosa L.f. LC
sp. nov. (*Helme 4464* NBG) ....**NT**

Hemizygia

bracteosa (Benth.) Briq. LC
canescens (Gürke) M.Ashby LC
cinerea Codd....LC
linearis (Benth.) Briq. LC
macrophylla (Gürke) Codd LC
petiolata M.Ashby....LC
petrensis (Hiern) M.Ashby....LC

Hereroa, 431

acuminata L.Bolus....LC
aspera L.Bolus....LC
brevifolia L.Bolus LC
calycina L.Bolus....LC
carinans (Haw.) Dinter & Schwantes ex H.Jacobsen LC
concava L.Bolus ....**DDD**
crassa L.Bolus....LC
fimbriata L.Bolus....LC
glenensis (N.E.Br.) L.Bolus....LC
gracilis L.Bolus....LC
granulata (N.E.Br.) Dinter & Schwantes....LC
herrei Schwantes ....DDT
hesperantha (Dinter & A.Berger) Dinter & Schwantes LC
incurva L.Bolus....LC
joubertii L.Bolus....LC
latipetala L.Bolus LC
muirii L.Bolus....DDT
nelii Schwantes LC
odorata (L.Bolus) L.Bolus LC
pallens L.Bolus....LC
rehneltiana (A.Berger) Dinter & Schwantes ....DDT
stanfordiae L.Bolus LC
stenophylla L.Bolus....LC
tenuifolia L.Bolus....LC
teretifolia L.Bolus....LC
willowmorensis L.Bolus LC
wilmaniae L.Bolus....DDT

Hermannia, 406

abrotanoides Schrad. LC
affinis K.Schum. LC
alnifolia L. LC
althaeifolia L. LC
althaeoides Link....LC
amoena Dinter ex Friedr.-Holzh....LC
angularis Jacq....LC
antonii I.Verd. LC
aspera J.C.Wendl. LC
auricoma (Szyszyl.) K.Schum....LC
bicolor Engl. & Dinter LC
boraginiflora Hook....LC
brachymalla K.Schum. LC
bryoniifolia Burch. LC
burchellii (Sweet) I.Verd. LC
burkei Burtt Davy....LC
cernua Thunb....LC
coccocarpa (Eckl. & Zeyh.) Kuntze....LC
comosa Burch. ex DC. LC
concinnifolia I.Verd. LC

confusa T.M.Salter....LC
conglomerata Eckl. & Zeyh....LC
cordata (E.Mey. ex E.Phillips) De Winter....LC
cordifolia Harv.....**DDD**
cristata Bolus....LC
cuneifolia Jacq. var. cuneifolia....LC
cuneifolia Jacq. var. glabrescens (Harv.) I.Verd....LC
damarana Baker f....LC
decipiens E.Mey. ex Harv....LC
decumbens Willd. ex Spreng....LC
denudata L.f. var. denudata....LC
denudata L.f. var. erecta (N.E.Br.) Burtt Davy & Greenway....LC
depressa N.E.Br....LC
desertorum Eckl. & Zeyh....LC
diffusa L.f....LC
disermifolia Jacq....LC
disticha Schrad.....**Rare**
diversistipula C.Presl ex Harv. var. diversistipula....LC
diversistipula C.Presl ex Harv. var. gracilifloraI.Verd....LC
eenii Baker f....LC
erodioides (Burch. ex DC.) Kuntze....LC
filifolia L.f. var. filifolia....LC
filifolia L.f. var. grandicalyx I.Verd....LC
filifolia L.f. var. robusta I.Verd....LC
flammea Jacq....LC
flammula Harv....LC
floribunda Harv....LC
fruticulosa K.Schum....LC
gariepina Eckl. & Zeyh....LC
geniculata Eckl. & Zeyh....LC
gerrardii Harv....LC
glabrata L.f....LC
glanduligera K.Schum....LC
gracilis Eckl. & Zeyh....LC
grandiflora Aiton....LC
grandifolia N.E.Br....LC
grandistipula (Buchinger ex Hochst.) K.Schum....LC
grisea Schinz....LC
grossularifolia L....LC
helianthemum K.Schum....LC
helicoidea I.Verd.....**DDD**
heterophylla (Cav.) Thunb....LC
hispidula Rchb.f.....**VU**
holosericea Jacq....LC
hyssopifolia L....LC
incana Cav....LC
involucrata Cav....LC
jacobeifolia (Turcz.) R.A.Dyer....LC
johanssenii N.E.Br....LC
joubertiana Harv....LC
lacera (E.Mey. ex Harv.) Fourc....LC
lancifolia Szyszyl....LC
lavandulifolia L....LC
leucantha Schltdl....LC
linearifolia Harv....LC
linifolia Burm.f....LC
linnaeoides (Burch.) K.Schum....LC
litoralis I.Verd....LC
macra Schltr....LC
malvifolia N.E.Br....LC
marginata (Turcz.) Pillans....LC
micrantha Adamson....**Rare**
micropetala Harv....LC
minutiflora Engl....LC
modesta (Ehrenb.) Mast....LC
montana N.E.Br....LC
mucronulata Turcz....LC
muirii Pillans....**VU**
multiflora Jacq....LC
muricata Eckl. & Zeyh....LC
oblongifolia (Harv.) Hochr....LC
odorata Aiton....LC
oligosperma K.Schum....LC
parviflora Eckl. & Zeyh....LC
parvula Burtt Davy....LC
paucifolia Turcz....LC
pfeilii K.Schum....LC
pillansii Compton....**Critically Rare**
pinnata L....LC
prismatocarpa E.Mey. ex Harv....LC
procumbens Cav. subsp. myrrhifolia (Thunb.) De Winter....**EN**
procumbens Cav. subsp. procumbens....**CR**
pulchella L.f....LC
pulverata Andrews....LC
quartiniana A.Rich....LC
rautanenii Schinz ex K.Schum....LC
repetenda I.Verd.....**DDD**
rigida Harv....LC
rudis N.E.Br....LC
rugosa Adamson....**VU**
saccifera (Turcz.) K.Schum....LC
salviifolia L.f. var. grandistipula Harv....LC
salviifolia L.f. var. oblonga Harv....LC
salviifolia L.f. var. salviifolia....LC
sandersonii Harv.....**VU**
scabra Cav....LC
scabricaulis T.M.Salter....LC
schlechteriana Schinz ex K.Schum....LC
scordifolia Jacq....LC
sisymbriifolia (Turcz.) Hochr....LC
solaniflora K.Schum....LC
spinosa E.Mey. ex Harv....LC
staurostemon K.Schum....LC
stellulata (Harv.) K.Schum....LC
stipitata Pillans....LC
stipulacea Lehm. ex Eckl. & Zeyh....LC
stricta (E.Mey. ex Turcz.) Harv....LC
suavis C.Presl ex Harv....LC
sulcata Harv....LC
ternifolia C.Presl ex Harv....LC
tomentosa (Turcz.) Schinz ex Engl....LC
transvaalensis Schinz....LC
trifoliata L....LC
trifurca L....LC
umbratica I.Verd....LC
velutina DC....LC
veronicifolia (Eckl. & Zeyh.) Hochr....LC
vestita Thunb....LC
violacea (Burch. ex DC.) K.Schum.....**Rare**
woodii Schinz....LC

Hermas, 223

capitata L.f....LC
ciliata L.f....LC
gigantea L.f....LC
intermedia C.Norman....LC
pillansii C.Norman....**Rare**
quinquedentata L.f....LC
villosa (L.) Thunb....LC

Hermbstaedtia

caffra (Meisn.) Moq....LC
capitata Schinz....LC
fleckii (Schinz) Baker & C.B.Clarke....LC
glauca (J.C.Wendl.) Rchb. ex Steud....LC
odorata (Burch.) T.Cooke var. albi-rosea Suess....LC
odorata (Burch.) T.Cooke var. aurantiaca (Suess.) C.C.Towns....LC
odorata (Burch.) T.Cooke var. odorata....LC
rogersii Burtt Davy....LC
schaeferi (Schinz) Schinz & Dinter....LC

Herniaria, 298

capensis Bartl....LC
erckertii Herm. subsp. erckertii....LC
erckertii Herm. subsp. pulvinata Chaudhri....DDT
grimmii Herm.....**DDD**
pearsonii Chaudhri....LC
schlechteri Herm....LC

Hertia

alata (Thunb.) Kuntze....LC
ciliata (Harv.) Kuntze....LC
cluytiifolia (DC.) Kuntze....LC
kraussii (Sch.Bip.) Fourc....LC
pallens (DC.) Kuntze....LC

Hesperantha, 150

acuta (Licht. ex Roem. & Schult.) Ker Gawl. subsp. acuta....LC
acuta (Licht. ex Roem. & Schult.) Ker Gawl. subsp. tugwelliae (R.C.Foster) Goldblatt & J.C.Manning....LC
alborosea Hilliard & B.L.Burtt....**Rare**
altimontana Goldblatt....LC
bachmannii Baker....LC
baurii Baker subsp. baurii....LC
baurii Baker subsp. formosa Hilliard & B.L.Burtt....LC
brevicaulis (Baker) G.J.Lewis....**Rare**
brevifolia Goldblatt....LC
brevistyla Goldblatt....LC
bulbifera Baker....LC
candida Baker....LC
cedarmontana Goldblatt....**Rare**
ciliolata Goldblatt....LC
coccinea (Backh. & Harv.) Goldblatt & J.C.Manning....LC
cucullata Klatt....LC
curvula Hilliard & B.L.Burtt....**Rare**
debilis Goldblatt....LC
decipiens Goldblatt....LC
elsiae Goldblatt....**Critically Rare**
erecta (Baker) Benth. ex Baker....**NT**
falcata (L.f.) Ker Gawl....LC
fibrosa Baker....**VU**
flava G.J.Lewis....**Rare**
flexuosa Klatt....LC
glabrescens Goldblatt....**Rare**
glareosa Hilliard & B.L.Burtt....LC
gracilis Baker....**VU**
grandiflora G.J.Lewis....LC
hantamensis Schltr. ex R.C.Foster....**VU**
helmei Goldblatt & J.C.Manning....LC
humilis Baker....LC
hutchingsiae Hilliard & B.L.Burtt....**Rare**
huttonii (Baker) Hilliard & B.L.Burtt....LC
hygrophila Hilliard & B.L.Burtt....LC
inconspicua (Baker) Goldblatt....LC
ingeliensis Hilliard & B.L.Burtt....**Rare**
juncifolia Goldblatt....**EN**
karooica Goldblatt....**DDD**
lactea Baker....LC
latifolia (Klatt) M.P.de Vos....**VU**
leucantha Baker....LC
lithicola J.C.Manning & Goldblatt....LC
longicollis Baker....LC
longituba (Klatt) Baker....LC
luticola Goldblatt....LC
malvina Goldblatt....**Critically Rare**
marlothii R.C.Foster....LC
minima (Baker) R.C.Foster....**EN**
modesta Baker....LC
montigena Goldblatt....LC
muirii (L.Bolus) G.J.Lewis....**EN**
namaquana Goldblatt....**Rare**
oligantha (Diels) Goldblatt....**CR**
pallescens Goldblatt....**CR**
pauciflora (Baker) G.J.Lewis....LC
pilosa (L.f.) Ker Gawl....LC
pseudopilosa Goldblatt....LC
pubinervia Hilliard & B.L.Burtt....**Rare**
pulchra Baker....LC
purpurea Goldblatt....**VU**
quadrangula Goldblatt....**Rare**
radiata (Jacq.) Ker Gawl....LC
rivulicola Goldblatt....**EN**
rupestris N.E.Br. ex R.C.Foster....**DDD**
rupicola Goldblatt....LC
saldanhae Goldblatt....**CR PE**
saxicola Goldblatt....**VU**
schelpeana Hilliard & B.L.Burtt....LC
schlechteri (Baker) R.C.Foster....LC
scopulosa Hilliard & B.L.Burtt....LC
spicata (Burm.f.) N.E.Br. subsp. fistulosa (Baker) Goldblatt....**CR**
spicata (Burm.f.) N.E.Br. subsp. graminifolia (Sweet) Goldblatt....LC
spicata (Burm.f.) N.E.Br. subsp. spicata....**VU**
stenosiphon Goldblatt....LC
sufflava Goldblatt....**CR**
teretifolia Goldblatt....**Rare**
truncatula Goldblatt....**Critically Rare**
vaginata (Sweet) Goldblatt....**NT**
woodii Baker....LC

Hessea, 70

breviflora Herb....LC
cinnamomea (L'Hér.) T.Durand & Schinz....**EN**
incana Snijman....**VU**
mathewsii W.F.Barker....**CR**
monticola Snijman....LC
pilosula D. & U.Müll.-Doblies....**Rare**
pulcherrima (D. & U.Müll.-Doblies) Snijman....**Rare**
pusilla Snijman....DDT
speciosa Snijman....LC
stellaris (Jacq.) Herb....LC
stenosiphon (Snijman) D. & U.Müll.-Doblies....**Rare**
tenuipedicellata Snijman....**VU**
undosa Snijman....**VU**

Heteranthera

callifolia Rchb. ex Kunth....LC

Heterolepis, 261
aliena (L.f.) Druce LC
mitis (Burm.) DC. .... **Rare**
peduncularis DC. LC
Heteromma
decurrens (DC.) O.Hoffm. LC
krookii (O.Hoffm. & Muschl.) Hilliard & B.L.Burtt LC
simplicifolium J.M.Wood & M.S.Evans LC
Heteromorpha
arborescens (Spreng.) Cham. & Schltdl. var. abyssinica (Hochst. ex A.Rich.) H.Wolff LC
arborescens (Spreng.) Cham. & Schltdl. var. arborescens LC
arborescens (Spreng.) Cham. & Schltdl. var. collina (Eckl. & Zeyh.) Sond. LC
arborescens (Spreng.) Cham. & Schltdl. var. frutescens P.J.D.Winter LC
involucrata Conrath LC
pubescens Burtt Davy LC
stenophylla Welw. ex Schinz var. transvaalensis (Schltr. & H.Wolff) P.Winter LC
Heteropogon
contortus (L.) Roem. & Schult. LC
melanocarpus (Elliott) Benth. LC
Heteropyxis
canescens Oliv. LC
dehniae Suess. LC
natalensis Harv. LC
Heterorhachis, 261
aculeata (Burm.f.) Roessler .... **VU**
sp. nov. (*Helme 4284* NBG) .... **CR**
Heterosamara
galpinii (Hook.f.) Paiva LC
Hewittia
malabarica (L.) Suresh LC
Hexacyrtis
dickiana Dinter LC
Hexalobus
monopetalus (A.Rich.) Engl. & Diels var. monopetalus LC
Heywoodia
lucens Sim LC
Hibiscus
aethiopicus L. var. aethiopicus LC
aethiopicus L. var. angustifolius (Eckl. & Zeyh.) Exell LC
aethiopicus L. var. ovatus Harv. LC
altissimus Hornby LC
aridus R.A.Dyer LC
barbosae Exell LC
barnardii Exell LC
caesius Garcke var. caesius LC
calyphyllus Cav. LC
cannabinus L. LC
coddii Exell subsp. barnardii (Exell) Leistner & P.J.D.Winter LC
coddii Exell subsp. coddii LC
diversifolius Jacq. subsp. diversifolius LC
dongolensis Delile LC
elliottiae Harv. LC
engleri K.Schum. LC
fleckii Gürke LC
fuscus Garcke LC
ludwigii Eckl. & Zeyh. LC
lunarifolius Willd. LC
marlothianus K.Schum. LC
meyeri Harv. subsp. meyeri LC
meyeri Harv. subsp. transvaalensis (Exell) Exell LC
micranthus L.f. var. micranthus LC
microcarpus Garcke LC
mutatus N.E.Br. LC
nigricaulis Baker f. LC
palmatus Forssk. LC
pedunculatus L.f. LC
physaloides Guill. & Perr. LC
platycalyx Mast. LC
praeteritus R.A.Dyer LC
pusillus Thunb. LC
sabiensis Exell ....DDT
saxatilis J.M.Wood & M.S.Evans LC
schinzii Gürke LC
sidiformis Baill. LC
subreniformis Burtt Davy LC
surattensis L. LC
tiliaceus L. subsp. tiliaceus LC
upingtoniae Gürke LC
vitifolius L. subsp. vitifolius LC
vitifolius L. subsp. vulgaris Brenan & Exell LC
waterbergensis Exell LC
Hilleria
latifolia (Lam.) H.Walter LC
Hilliardia
zuurbergensis (Oliv.) B.Nord. LC
Hippia, 261
bolusae Hutch. LC
frutescens (L.) L. LC
hirsuta DC. .... **Rare**
hutchinsonii Merxm. .... **Rare**
integrifolia Less. .... **Rare**
montana Compton LC
pilosa (P.J.Bergius) Druce LC
sp. nov. (*Forsyth 469* NBG) .... **Rare**
trilobata Hutch. .... **Rare**
Hippobromus
pauciflorus (L.f.) Radlk. LC
Hippocratea
africana (Willd.) Loes. var. africana LC
Hirpicium
alienatum (Thunb.) Druce LC
armerioides (DC.) Roessler LC
bechuanense (S.Moore) Roessler LC
echinus Less. LC
gazanioides (Harv.) Roessler LC
integrifolium (Thunb.) Less. LC
linearifolium (Bolus) Roessler LC
Histiopteris
incisa (Thunb.) J.Sm. LC
Hoffmannseggia see **Pomaria**
Holarrhena
pubescens (Buch.-Ham.) Wall. ex G.Don LC
Holcus
setiger Nees LC
Holothrix, 195
aspera (Lindl.) Rchb.f. LC
brevipetala Immelman & Schelpe LC
burchellii (Lindl.) Rchb.f. LC
cernua (Burm.f.) Schelpe LC
culveri Bolus .... **CR**
exilis Lindl. LC
filicornis Immelman & Schelpe LC
grandiflora (Sond.) Rchb.f. .... **DDD**
incurva Lindl. LC
longicornu G.J.Lewis .... **CR**
macowaniana Rchb.f. .... **DDD**
majubensis C. & R.H.Archer .... **VU**
micrantha Schltr. .... **EN**
mundii Sond. LC
orthoceras (Harv.) Rchb.f. LC
parviflora (Lindl.) Rchb.f. LC
pilosa (Burch. ex Lindl.) Rchb.f. .... **NT**
randii Rendle .... **NT**
schlechteriana Schltr. ex Kraenzl. LC
scopularia (Lindl.) Rchb.f. LC
secunda (Thunb.) Rchb.f. LC
thodei Rolfe LC
villosa Lindl. var. condensata (Sond.) Immelman LC
villosa Lindl. var. villosa LC
Holubia
saccata Oliv. LC
Homalium
dentatum (Harv.) Warb. LC
rufescens Benth. LC
Hoodia, 236
alstonii (N.E.Br.) Plowes LC
currorii (Hook.) Decne. subsp. lugardii (N.E.Br.) Bruyns LC
dregei N.E.Br. .... **VU**
flava (N.E.Br.) Plowes LC
gordonii (Masson) Sweet ex Decne. .... **DDD**
officinalis (N.E.Br.) Plowes subsp. officinalis .... **NT**
pilifera (L.f.) Plowes subsp. annulata (N.E.Br.) Bruyns LC
pilifera (L.f.) Plowes subsp. pilifera .... **NT**
pilifera (L.f.) Plowes subsp. pillansii (N.E.Br.) Bruyns ....DDT
Hoplophyllum, 261
ferox Sond. .... **DDD**
spinosum DC. LC
Hordeum
capense Thunb. LC
Hoslundia
opposita Vahl LC
Huernia, 236
barbata (Masson) Haw. subsp. barbata LC
barbata (Masson) Haw. subsp. ingeae (Lavranos) Bruyns LC
bayeri L.C.Leach LC
blyderiverensis (L.C.Leach) Bruyns LC
brevirostris N.E.Br. var. ecornuta (N.E.Br.) A.C.White & B.Sloane ....DDT
brevirostris N.E.Br. subsp. baviaana L.C.Leach LC
brevirostris N.E.Br. subsp. brevirostris LC
brevirostris N.E.Br. subsp. intermedia (N.E.Br.) L.C.Leach LC
campanulata (Masson) Haw. LC
clavigera (Jacq.) Haw. LC
echidnopsioides (L.C.Leach) L.C.Leach .... **Rare**
guttata (Masson) Haw. subsp. calitzdorpensis L.C.Leach LC
guttata (Masson) Haw. subsp. guttata LC
guttata (Masson) Haw. subsp. reticulata (Masson) Bruyns LC
humilis (Masson) Haw. LC
hystrix (Hook.f.) N.E.Br. var. hystrix LC
hystrix (Hook.f.) N.E.Br. subsp. parvula (L.C.Leach) Bruyns LC
kennedyana Lavranos .... **Rare**
kirkii N.E.Br. LC
loeseneriana Schltr. LC
longii Pillans .... **Rare**
longituba N.E.Br. subsp. longituba LC
namaquensis Pillans LC
nouhuysii I.Verd. .... **VU**
pendula E.A.Bruce .... **Rare**
piersii N.E.Br. LC
pillansii N.E.Br. LC
praestans N.E.Br. LC
procumbens (R.A.Dyer) L.C.Leach LC
quinta (E.Phillips) A.C.White & B.Sloane var. quinta LC
stapelioides Schltr. LC
thudichumii L.C.Leach ....DDT
thuretii F.Cels var. primulina (N.E.Br.) L.C.Leach LC
thuretii F.Cels var. thuretii LC
transvaalensis Stent LC
venusta (Masson) Haw. LC
verekeri Stent subsp. pauciflora (L.C.Leach) Bruyns LC
whitesloaneana Nel LC
witzenbergensis C.A.Lückh. ....DDT
zebrina N.E.Br. subsp. insigniflora (C.A.Maass) Bruyns LC
zebrina N.E.Br. subsp. magniflora (E.Phillips) L.C.Leach LC
zebrina N.E.Br. subsp. zebrina LC
Hugonia
orientalis Engl. LC
Huperzia
dacrydioides (Baker) Pic.Serm. LC
gnidioides (L.f.) Trevis. LC
ophioglossoides (Lam.) Rothm. LC
saururus (Lam.) Trevis. LC
verticillata (L.f.) Trevis. LC
Huttonaea, 196
fimbriata (Harv.) Rchb.f. LC
grandiflora (Schltr.) Rolfe LC
oreophila Schltr. .... **Rare**
pulchra Harv. LC
woodii Schltr. .... **VU**
Hyaenanche
globosa (Gaertn.) Lamb. & Vahl LC
Hybanthus
capensis (Thunb.) Engl. LC
densifolius Engl. LC
Hydnora
abyssinica A.Br. LC
africana Thunb. LC
triceps Drège & E.Mey. LC
Hydrocotyle
bonariensis Lam. LC
schlechteri H.Wolff ....DDT
sibthorpioides Lam. LC

verticillata Thunb. LC

Hydroidea, 261

elsiae (Hilliard) P.O.Karis ..... Rare

Hydrophilus

rattrayi (Pillans) H.P.Linder LC

Hydrostachys, 397

polymorpha Klotzsch ex A.Br. ..... VU

Hygrophila

auriculata (Schumach.) Heine LC

Hymenocardia

ulmoides Oliv. LC

Hymenodictyon

parvifolium Oliv. subsp. parvifolium LC

Hymenogyne

conica L.Bolus LC

glabra (Aiton) Haw. LC

Hymenolepis, 261

cynopus K.Bremer & Källersjö ..... Critically Rare

dentata (DC.) Källersjö LC

gnidioides (S.Moore) Källersjö LC

incisa DC. LC

indivisa (Harv.) Källersjö LC

parviflora (L.) DC. LC

speciosa (Hutch.) Källersjö LC

Hymenophyllum

capense Schrad. LC

peltatum (Poir.) Desv. LC

tunbridgense (L.) Sm. LC

Hyobanche, 446

atropurpurea Bolus LC

barklyi N.E.Br. LC

calvescens Gand. LC

fulleri E.Phillips ..... CR

glabrata Hiern LC

robusta Schönland ..... EN

rubra N.E.Br. LC

sanguinea L. LC

Hyparrhenia

anamesa Clayton LC

collina (Pilg.) Stapf LC

cymbaria (L.) Stapf LC

dichroa (Steud.) Stapf LC

dregeana (Nees) Stapf ex Stent LC

filipendula (Hochst.) Stapf var. filipendula LC

filipendula (Hochst.) Stapf var. pilosa (Hochst.) Stapf LC

finitima (Hochst.) Andersson ex Stapf LC

gazensis (Rendle) Stapf LC

hirta (L.) Stapf LC

newtonii (Hack.) Stapf var. macra Stapf LC

newtonii (Hack.) Stapf var. newtonii LC

nyassae (Rendle) Stapf LC

pilgeriana C.E.Hubb. LC

poecilotricha (Hack.) Stapf LC

quarrei Robyns LC

rudis Stapf LC

rufa (Nees) Stapf var. rufa LC

schimperi (Hochst. ex A.Rich.) Andersson ex Stapf LC

tamba (Steud.) Stapf LC

umbrosa (Hochst.) Andersson ex Clayton LC

variabilis Stapf LC

Hyperacanthus

amoenus (Sims) Bridson LC

microphyllus (K.Schum.) Bridson LC

Hypericophyllum

elatum (O.Hoffm.) N.E.Br. LC

Hypericum

aethiopicum Thunb. subsp. aethiopicum LC

aethiopicum Thunb. subsp. sonderi (Bredell) N.Robson LC

lalandii Choisy LC

natalense J.M.Wood & M.S.Evans LC

revolutum Vahl subsp. revolutum LC

roeperianum G.W.Schimp. ex A.Rich. var. roeperianum LC

wilmsii R.Keller LC

Hypertelis, 444

angrae-pequenae Friedrich LC

arenicola Sond. LC

bowkeriana Sond. LC

caespitosa Friedrich LC

salsoloides (Burch.) Adamson var. salsoloides LC

spergulacea E.Mey. ex Fenzl LC

trachysperma Adamson ..... CR PE

Hyperthelia

dissoluta (Nees ex Steud.) Clayton LC

Hyphaene

coriacea Gaertn. LC

petersiana Klotzsch ex Mart. LC

Hypocalyptus

coluteoides (Lam.) R.Dahlgren LC

oxalidifolius (Sims) Baill. LC

sophoroides (P.J.Bergius) Baill. LC

Hypodematium, 54

crenatum (Forssk.) Kuhn var. crenatum ..... VU

Hypodiscus, 206

albo-aristatus (Nees) Mast. LC

alternans Pillans ..... VU

argenteus (Thunb.) Mast. LC

aristatus (Thunb.) C.Krauss LC

laevigatus (Kunth) H.P.Linder LC

montanus Esterh. ..... EN

neesii Mast. LC

procurrens Esterh. ..... EN

rigidus Mast. LC

rugosus Mast. LC

squamosus Esterh. ..... VU

striatus (Kunth) Mast. LC

sulcatus Pillans ..... EN

synchroolepis (Steud.) Mast. LC

willdenowia (Nees) Mast. LC

Hypoestes

aristata (Vahl) Sol. ex Roem. & Schult. var. alba K.Balkwill LC

aristata (Vahl) Sol. ex Roem. & Schult. var. aristata LC

aristata (Vahl) Sol. ex Roem. & Schult. var. thiniorum K.Balkwill LC

forskaolii (Vahl) R.Br. LC

triflora (Forssk.) Roem. & Schult. LC

Hypolepis

sparsisora (Schrad.) Kuhn LC

villosa-viscida (Thouars) Tardieu LC

Hypoxis, 124

acuminata Baker LC

angustifolia Lam. var. angustifolia LC

angustifolia Lam. var. buchananii Baker LC

argentea Harv. ex Baker var. argentea LC

argentea Harv. ex Baker var. sericea Baker LC

colchicifolia Baker LC

costata Baker LC

exaltata Nel LC

filiformis Baker LC

flanaganii Baker LC

floccosa Baker LC

galpinii Baker LC

gerrardii Baker LC

hemerocallidea Fisch., C.A.Mey. & Avé-Lall. ..... Declining

interjecta Nel LC

iridifolia Baker LC

kraussiana Buchinger LC

lata Nel LC

limicola B.L.Burtt LC

longifolia Baker LC

ludwigii Baker LC

membranacea Baker LC

multiceps Buchinger ex Baker LC

neliana Schinz LC

obconica Nel LC

oblonga Nel LC

obtusa Burch. ex Ker Gawl. LC

parvifolia Baker LC

parvula Baker var. albiflora B.L.Burtt LC

parvula Baker var. parvula LC

patula Nel ..... VU

rigidula Baker var. pilosissima Baker LC

rigidula Baker var. rigidula LC

sagittata Nel LC

setosa Baker LC

sobolifera Jacq. LC

stellipilis Ker Gawl. LC

tetramera Hilliard & B.L.Burtt LC

uniflorata Markötter ..... VU

villosa L.f. LC

zeyheri Baker LC

I

Ifloga

anomala Hilliard LC

glomerata (Harv.) Schltr. LC

molluginoides (DC.) Hilliard LC

thellungiana Hilliard & B.L.Burtt LC

Ihlenfeldtia

excavata (L.Bolus) H.E.K.Hartmann LC

vanzylii (L.Bolus) H.E.K.Hartmann LC

Ilex, 243

mitis (L.) Radlk. var. mitis ..... Declining

Impatiens, 285

flanaganiae Hemsl. ..... VU

hochstetteri Warb. subsp. hochstetteri LC

sylvicola Burtt Davy & Greenway LC

Imperata

cylindrica (L.) Raeusch. LC

Indigastrum

argyraeum (Eckl. & Zeyh.) Schrire LC

argyroides (E.Mey.) Schrire LC

burkeanum (Benth. ex Harv.) Schrire LC

candidissimum (Dinter) Schrire LC

costatum (Guill. & Perr.) Schrire subsp. macrum (E.Mey.) Schrire LC

costatum (Guill. & Perr.) Schrire subsp. theuschii (O.Hoffm.) Schrire LC

fastigiatum (E.Mey.) Schrire LC

parviflorum (B.Heyne ex Wight & Arn.) Schrire subsp. parviflorum var. parviflorum LC

Indigofera, 373

adenoides Baker f. LC

alopecuroides (Burm.f.) DC. var. alopecuroides LC

alopecuroides (Burm.f.) DC. var. minor E.Mey. LC

alpina Eckl. & Zeyh. LC

alternans DC. var. alternans LC

amitina N.E.Br. ..... Rare

amoena Aiton LC

angustata E.Mey. LC

angustifolia L. var. angustifolia LC

angustifolia L. var. tenuifolia (Lam.) Harv. LC

aquae-nitentis Bremek. ..... DDT

arrecta Hochst. ex A.Rich. LC

astragalina DC. LC

atrata N.E.Br. LC

auricoma E.Mey. LC

bainesii Baker LC

brachystachya (DC.) E.Mey. LC

buchananii Burtt Davy LC

burchellii DC. LC

candicans Aiton LC

candolleana Meisn. LC

capillaris Thunb. LC

charlieriana Schinz var. charlieriana LC

charlieriana Schinz var. lata J.B.Gillett LC

charlieriana Schinz var. scaberrima (Schinz) J.B.Gillett LC

circinnata Benth. ex Harv. LC

colutea (Burm.f.) Merr. var. colutea LC

commixta N.E.Br. LC

comosa N.E.Br. LC

concava Harv. LC

confusa Prain & Baker f. LC

crebra N.E.Br. LC

cryptantha Benth. ex Harv. var. cryptantha LC

cryptantha Benth. ex Harv. var. occidentalis Baker f. LC

cuneifolia Eckl. & Zeyh. var. angustifolia Harv. LC

cuneifolia Eckl. & Zeyh. var. cuneifolia LC

cytisoides (L.) L. LC

daleoides Benth. ex Harv. var. daleoides LC

daleoides Benth. ex Harv. var. gossweileri Baker f. LC

damarana Merxm. & A.Schreib. LC

declinata E.Mey. LC

delagoaensis Baker f. ex J.B.Gillett LC

densa N.E.Br. LC

denudata L.f. LC

depressa Harv. LC

digitata Thunb. LC

dillwynioides Benth. ex Harv. LC

dimidiata Vogel ex Walp. LC

disticha Eckl. & Zeyh. LC

dolichothyrsa Baker f. LC

dregeana E.Mey. LC

egens N.E.Br. LC
elandsbergensis Phillipson LC
enormis N.E.Br. LC
eriocarpa E.Mey. LC
evansiana Burtt Davy LC
evansii Schltr. LC
exigua Eckl. & Zeyh. LC
filicaulis Eckl. & Zeyh. LC
filifolia Thunb. LC
filiformis L.f. LC
filipes Benth. ex Harv. LC
flabellata Harv. LC
flavicans Baker LC
floribunda N.E.Br. LC
foliosa E.Mey. LC
frondosa N.E.Br. LC
frutescens L.f. LC
fulcrata Harv. LC
galpinii N.E.Br. LC
gifbergensis C.H.Stirt. & Jarvie LC
glaucescens Eckl. & Zeyh. LC
glomerata E.Mey. LC
gracilis Spreng. LC
grata E.Mey. LC
grisophylla Fourc. LC
guthriei Bolus LC
hamulosa Schltr. LC
hantamensis Diels ....Rare
hedyantha Eckl. & Zeyh. LC
hendecaphylla Jacq. LC
heterophylla Thunb. LC
heterotricha DC. LC
hilaris Eckl. & Zeyh. var. hilaris LC
hirsuta L. var. hirsuta LC
hispida Eckl. & Zeyh. ....VU
hochstetteri Baker subsp. streyana (Merxm.) A.Schreib. LC
hololeuca Benth. ex Harv. LC
holubii N.E.Br. LC
homblei Baker f. & Martin subsp. homblei LC
humifusa Eckl. & Zeyh. LC
hybrida N.E.Br. ....VU
incana Thunb. LC
ingrata N.E.Br. LC
inhambanensis Klotzsch LC
inyangana N.E.Br. LC
ionii Jarvie & C.H.Stirt. LC
jucunda Schrire LC
krookii Schltr. ex Zahlbr. LC
langebergensis L.Bolus LC
laxeracemosa Baker f. LC
leendertziae N.E.Br. ....DDT
lepida N.E.Br. ....DDT
leptocarpa Eckl. & Zeyh. LC
limosa L.Bolus ....DDD
longibarbata Engl. LC
lupatana Baker f. LC
lyalli Baker subsp. lyalli LC
lydenburgensis N.E.Br. LC
maritima Baker LC
masonae N.E.Br. LC
mauritanica (L.) Thunb. LC
melanadenia Benth. ex Harv. LC
meyeriana Eckl. & Zeyh. LC
micrantha E.Mey. LC
mimosoides Baker var. mimosoides LC
mischocarpa Schltr. ....DDT
mollicoma N.E.Br. LC
mollis Eckl. & Zeyh. LC
monostachya Eckl. & Zeyh. LC
mundiana Eckl. & Zeyh. LC
natalensis Bolus LC
nebrowniana J.B.Gillett LC
neglecta N.E.Br. LC
nigromontana Eckl. & Zeyh. LC
nudicaulis E.Mey. LC
obcordata Eckl. & Zeyh. LC
obscura N.E.Br. LC
ormocarpoides Baker LC
ovata L.f. LC
ovina Harv. LC
oxalidea Welw. ex Baker LC
oxytropis Benth. ex Harv. LC
pappei Fourc. LC
pechuelii Kuntze LC
placida N.E.Br. LC
platypoda E.Mey. ....EN
podophylla Benth. ex Harv. LC
poliotes Eckl. & Zeyh. LC
pongolana N.E.Br. LC
porrecta Eckl. & Zeyh. var. bicolor Harv. LC
porrecta Eckl. & Zeyh. var. porrecta LC
praticola Baker f. LC
procumbens L. LC
pseudoevansii Hilliard & B.L.Burtt ....Critically Rare
psoraloides (L.) L. ....VU
pungens E.Mey. LC
quinquefolia E.Mey. LC
reducta N.E.Br. LC
rehmannii Baker f. LC
rhytidocarpa Benth. ex Harv. subsp. angolensis J.B.Gillett LC
rhytidocarpa Benth. ex Harv. subsp. rhytidocarpa LC
ripae N.E.Br. LC
rostrata Bolus LC
rubroglandulosa Germish. LC
sanguinea N.E.Br. LC
sarmentosa L.f. LC
schimperi Jaub. & Spach var. baukeana (Vatke) J.B.Gillett LC
schimperi Jaub. & Spach var. schimperi LC
schinzii N.E.Br. LC
sessilifolia DC. LC
setiflora Baker LC
setosa N.E.Br. LC
sordida Benth. ex Harv. LC
spicata Forssk. var. spicata LC
stricta L.f. LC
subcorymbosa Baker var. subcorymbosa LC
sulcata DC. LC
superba C.H.Stirt. ....Rare
swaziensis Bolus var. perplexa (N.E.Br.) J.B.Gillett LC
swaziensis Bolus var. swaziensis LC
tenuissima E.Mey. LC
thesioides Jarvie & C.H.Stirt. ....EN
tinctoria L. var. arcuata J.B.Gillett LC
tomentosa Eckl. & Zeyh. LC
torulosa E.Mey. var. angustiloba (Baker f.) J.B.Gillett LC
torulosa E.Mey. var. torulosa LC
trifolioides Baker f. LC
triquetra E.Mey. ....VU
tristis E.Mey. LC
tristoides N.E.Br. LC
trita L.f. subsp. scabra (Roth) de Kort & G.Thijsse LC
trita L.f. subsp. subulata (Vahl ex Poir.) Ali LC
velutina E.Mey. LC
venusta Eckl. & Zeyh. LC
verrucosa Eckl. & Zeyh. LC
vicioides Jaub. & Spach var. rogersii (R.E.Fr.) J.B.Gillett LC
vicioides Jaub. & Spach var. vicioides LC
williamsonii (Harv.) N.E.Br. LC
woodii Bolus var. laxa Bolus LC
woodii Bolus var. woodii LC
zeyheri Spreng. ex Eckl. & Zeyh. LC

Inezia, 261
integrifolia (Klatt) E.Phillips LC
speciosa Brusse ....EN

Inhambanella
henriquesii (Engl. & Warb.) Dubard LC

Inula
glomerata Oliv. & Hiern LC
paniculata (Klatt) Burtt Davy LC

Inulanthera, 262
calva (Hutch.) Källersjö LC
coronopifolia (Harv.) Källersjö LC
dregeana (DC.) Källersjö LC
leucoclada (DC.) Källersjö LC
montana (J.M.Wood) Källersjö ....Rare
thodei (Bolus) Källersjö LC
tridens (Oliv.) Källersjö LC

Inuloides
tomentosa (L.f.) B.Nord. LC

Iphigenia
bechuanica Baker LC

Ipomoea, 300
adenioides Schinz var. adenioides LC
albivenia (Lindl.) Sweet LC
aquatica Forssk. LC
bathycolpos Hallier f. LC
bisavium A.Meeuse ....Rare
bolusiana Schinz LC
cairica (L.) Sweet var. cairica LC
chloroneura Hallier f. LC
consimilis Schulze-Menz LC
coptica (L.) Roth ex Roem. & Schult. LC
coscinosperma Hochst. ex Choisy LC
crassipes Hook. var. crassipes LC
crispa (Thunb.) Hallier f. LC
dichroa Choisy LC
eriocarpa R.Br. LC
ficifolia Lindl. LC
gracilisepala Rendle LC
hackeliana (Schinz) Hallier f. LC
hochstetteri House LC
holubii Baker LC
involucrata P.Beauv. var. involucrata LC
lapathifolia Hallier f. var. lapathifolia LC
magnusiana Schinz LC
mauritiana Jacq. LC
oblongata E.Mey. ex Choisy LC
obscura (L.) Ker Gawl. var. obscura LC
oenotherae (Vatke) Hallier f. var. oenotherae LC
oenotheroides (L.f.) Raf. ex Hallier f. LC
ommanneyi Rendle LC
papilio Hallier f. LC
pellita Hallier f. LC
pes-caprae (L.) R.Br. subsp. brasiliensis (L.) Ooststr. LC
pes-tigridis L. var. pes-tigridis LC
pileata Roxb. LC
plebeia R.Br. subsp. africana A.Meeuse LC
robertsiana Rendle LC
shirambensis Baker LC
simplex Thunb. LC
sinensis (Desr.) Choisy subsp. blepharosepala (Hochst. ex A.Rich.) Verdc. ex A.Meeuse LC
stenosiphon Hallier f. LC
suffruticosa Burch. LC
tenuipes Verdc. LC
transvaalensis A.Meeuse LC
wightii (Wall.) Choisy var. wightii LC

Ischaemum
afrum (J.F.Gmel.) Dandy LC
fasciculatum Brongn. LC

Ischnolepis
natalensis (Schltr.) Venter LC

Ischyrolepis, 207
affinis Esterh. ....Rare
arida (Pillans) H.P.Linder ....VU
caespitosa Esterh. LC
capensis (L.) H.P.Linder LC
cincinnata (Mast.) H.P.Linder LC
coactilis (Mast.) H.P.Linder ....VU
constipata H.P.Linder LC
curvibracteata Esterh. LC
curviramis (Kunth) H.P.Linder LC
distracta (Mast.) H.P.Linder LC
duthieae (Pillans) H.P.Linder ....VU
eleocharis (Mast.) H.P.Linder LC
elsieae H.P.Linder LC
esterhuyseniae (Pillans) H.P.Linder ....Rare
feminea Esterh. ....EN
fraterna (Kunth) H.P.Linder LC
fuscidula (Pillans) H.P.Linder ....Rare
gaudichaudiana (Kunth) H.P.Linder var. gaudichaudiana LC
gaudichaudiana (Kunth) H.P.Linder var. luxurians Pillans LC
gossypina (Mast.) H.P.Linder LC
helenae (Mast.) H.P.Linder LC
hystrix (Mast.) H.P.Linder LC
karooica Esterh. ....Rare
laniger (Kunth) H.P.Linder LC
leptoclados (Mast.) H.P.Linder LC
longiaristata H.P.Linder ....Rare
macer (Kunth) H.P.Linder LC
marlothii (Pillans) H.P.Linder LC
monanthos (Mast.) H.P.Linder LC
nana Esterh. LC
nubigena Esterh. LC
ocreata (Kunth) H.P.Linder LC
paludosa (Pillans) H.P.Linder ....VU
papillosa Esterh. ....VU
pratensis Esterh. ....EN
pygmaea (Pillans) H.P.Linder LC

rivula Esterh. ... LC
rottboellioides (Kunth) H.P.Linder ... LC
sabulosa (Pillans) H.P.Linder ... **EN**
saxatilis Esterh. ... **Rare**
schoenoides (Kunth) H.P.Linder ... LC
setiger (Kunth) H.P.Linder ... **Rare**
sieberi (Kunth) H.P.Linder ... LC
sp. nov. (*Esterhuysen 32998* BOL) ... **EN**
sp. nov. (*Linder, Harding & Moline 7523* BOL) ... **EN**
sporadica Esterh. ... LC
subverticillata Steud. ... LC
tenuis H.P.Linder ... **VU**
tenuissima (Kunth) H.P.Linder ... LC
triflora (Rottb.) H.P.Linder ... LC
unispicata H.P.Linder ... LC
venustulus (Kunth) H.P.Linder ... LC
vilis (Kunth) H.P.Linder ... **Rare**
virgea (Mast.) H.P.Linder ... LC
wallichii (Mast.) H.P.Linder ... LC
wittebergensis Esterh. ... **Rare**

Isoetes, 53
aequinoctialis Welw. ex A.Braun ... **VU**
capensis A.V.Duthie ... **EN**
schweinfurthii A.Braun ex Baker ... **Rare**
stellenbossiensis A.V.Duthie ... **NT**
stephanseniae A.V.Duthie ... **CR**
toximontana Musselman & J.P.Roux ... LC
transvaalensis Jermy & Schelpe ... **NT**
welwitschii A.Braun ex Kuhn ... **NT**
wormaldii Sim ... **CR**

Isoglossa, 217
bolusii C.B.Clarke ... LC
ciliata (Nees) Lindau ... LC
cooperi C.B.Clarke ... LC
delicatula C.B.Clarke ... LC
densa N.E.Br. ... **DDD**
eckloniana (Nees) Lindau ... LC
grantii C.B.Clarke ... LC
hypoestiflora Lindau ... LC
macowanii C.B.Clarke ... LC
origanoides (Nees) Lindau ... LC
ovata (Nees) Lindau ... LC
prolixa (Nees) Lindau ... LC
stipitata C.B.Clarke ... LC
sylvatica C.B.Clarke ... **DDD**
woodii C.B.Clarke ... LC

Isolepis, 105
angelica B.L.Burtt ... LC
antarctica (L.) Roem. & Schult. ... LC
brevicaulis (Levyns) J.Raynal ... LC
bulbifera (Boeck.) Muasya ... **EX**
capensis Muasya ... LC
cernua (Vahl) Roem. & Schult. var. cernua ... LC
cernua (Vahl) Roem. & Schult. var. setiformis (Benth.) Muasya ... LC
costata Hochst. ex A.Rich. ... LC
diabolica (Steud.) Schrad. ... LC
digitata Schrad. ... LC
expallescens Kunth ... LC
fluitans (L.) R.Br. var. fluitans ... LC
hemiuncialis (C.B.Clarke) J.Raynal ... LC
hystrix (Thunb.) Nees ... LC
incomtula Nees ... LC
inconspicua (Levyns) J.Raynal ... **EN**
inyangensis Muasya & Goetgh. ... LC
karroica (C.B.Clarke) J.Raynal ... LC
leptostachya Kunth ... LC
leucoloma (Nees) C.Archer ... **VU**
levynsiana Muasya & D.A.Simpson ... LC
ludwigii (Steud.) Kunth ... LC
marginata (Thunb.) A.Dietr. ... LC
minuta (Turrill) J.Raynal ... **DDD**
natans (Thunb.) A.Dietr. ... LC
pellocolea B.L.Burtt ... **Rare**
prolifera (Rottb.) R.Br. ... LC
pusilla Kunth ... **DDD**
rubicunda (Nees) Kunth ... LC
sepulcralis Steud. ... LC
setacea (L.) R.Br. ... LC
sororia Kunth ... LC
striata (Nees) Kunth ... LC
tenuissima (Nees) Kunth ... LC
trachysperma Nees ... LC
venustula Kunth ... **VU**

Itasina
filifolia (Thunb.) Raf. ... LC

Ixia, 157
acaulis Goldblatt & J.C.Manning ... **VU**
amethystina J.C.Manning & Goldblatt ... **Rare**
atrandra Goldblatt & J.C.Manning ... **EN**
aurea J.C.Manning & Goldblatt ... **VU**
brevituba G.J.Lewis ... **Rare**
brunneobractea G.J.Lewis ... **VU**
campanulata Houtt. ... **EN**
capillaris L.f. ... LC
cochlearis G.J.Lewis ... **Rare**
collina Goldblatt & Snijman ... **EN**
curta Andrews ... **VU**
curvata G.J.Lewis ... LC
dubia Vent. ... **Declining**
erubescens Goldblatt ... LC
esterhuyseniae M.P.de Vos ... **Rare**
flexuosa L. ... LC
fucata Ker Gawl. var. filifolia G.J.Lewis ... LC
fucata Ker Gawl. var. fucata ... LC
gloriosa G.J.Lewis ... **EN**
latifolia D.Delaroche var. angustifolia G.J.Lewis ... LC
latifolia D.Delaroche var. curviramosa G.J.Lewis ... LC
latifolia D.Delaroche var. latifolia ... LC
latifolia D.Delaroche var. parviflora G.J.Lewis ... Thr*
latifolia D.Delaroche var. ramulosa G.J.Lewis ... LC
leipoldtii G.J.Lewis ... **CR**
longituba N.E.Br. var. bellendenii (R.C.Foster) M.P.de Vos ... **VU**
longituba N.E.Br. var. longituba ... LC
lutea Eckl. var. lutea ... LC
lutea Eckl. var. ovata (Andrews) B.Nord. ... **EN**
maculata L. var. fuscocitrina (Desf. ex DC.) G.J.Lewis ... **EN**
maculata L. var. intermedia G.J.Lewis ... **NT**
maculata L. var. maculata ... **NT**
marginifolia G.J.Lewis ... LC
metelerkampiae L.Bolus ... **Rare**
micrandra Baker var. confusa G.J.Lewis ... LC
micrandra Baker var. micrandra ... LC
micrandra Baker var. minor G.J.Lewis ... LC
monadelpha D.Delaroche ... **EN**
mostertii M.P.de Vos ... **EN**
odorata Ker Gawl. var. hesperanthoides G.J.Lewis ... LC
odorata Ker Gawl. var. odorata ... LC
orientalis L.Bolus ... LC
paniculata D.Delaroche ... LC
patens Aiton var. linearifolia G.J.Lewis ... **EN**
patens Aiton var. patens ... **EN**
pauciflora G.J.Lewis ... LC
paucifolia G.J.Lewis ... LC
polystachya L. var. crassifolia G.J.Lewis ... LC
polystachya L. var. longistylis M.P.de Vos ... Thr*
polystachya L. var. lutea (Ker Gawl.) G.J.Lewis ... LC
polystachya L. var. polystachya ... LC
pumilio Goldblatt & Snijman ... **VU**
purpureorosea G.J.Lewis ... **EN**
rapunculoides Delile var. flaccida G.J.Lewis ... LC
rapunculoides Delile var. namaquana (L.Bolus) G.J.Lewis ... LC
rapunculoides Delile var. rapunculoides ... LC
rapunculoides Delile var. rigida G.J.Lewis ... LC
rapunculoides Delile var. robusta G.J.Lewis ... LC
rapunculoides Delile var. subpendula G.J.Lewis ... LC
rouxii G.J.Lewis ... **CR PE**
scillaris L. var. scillaris ... LC
scillaris L. var. subundulata G.J.Lewis ... LC
splendida G.J.Lewis ... **VU**
stohriae L.Bolus ... **Rare**
stolonifera G.J.Lewis ... **DDD**
stricta (Eckl. ex Klatt) G.J.Lewis ... LC
superba J.C.Manning & Goldblatt ... Thr*
tenuifolia Vahl ... **EN**
thomasiae Goldblatt ... LC
trifolia G.J.Lewis ... LC
trinervata (Baker) G.J.Lewis ... **NT**
vanzijliae L.Bolus ... **VU**
versicolor G.J.Lewis ... **CR**
vinacea G.J.Lewis ... **EN**
viridiflora Lam. var. minor M.P.de Vos ... **CR**
viridiflora Lam. var. viridiflora ... **EN**

Ixianthes
retzioides Benth. ... LC

J

Jacobsenia, 431
hallii L.Bolus ... **VU**
kolbei (L.Bolus) L.Bolus & Schwantes ... LC
vaginata (L.Bolus) Ihlenf. ... **VU**

Jacquemontia
tamnifolia (L.) Griseb. ... LC

Jamesbrittenia, 545
accrescens (Hiern) Hilliard ... LC
adpressa (Dinter) Hilliard ... LC
albanensis Hilliard ... LC
albiflora (I.Verd.) Hilliard ... LC
albomarginata Hilliard ... LC
amplexicaulis (Benth.) Hilliard ... LC
argentea (L.f.) Hilliard ... LC
aridicola Hilliard ... LC
aspalathoides (Benth.) Hilliard ... LC
aspleniifolia Hilliard ... LC
atropurpurea (Benth.) Hilliard subsp. atropurpurea ... LC
atropurpurea (Benth.) Hilliard subsp. pubescens Hilliard ... LC
aurantiaca (Burch.) Hilliard ... LC
bergae P.Lemmer ... **VU**
breviflora (Schltr.) Hilliard ... LC
burkeana (Benth.) Hilliard ... LC
calciphila Hilliard ... Thr*
candida Hilliard ... LC
canescens (Benth.) Hilliard var. canescens ... LC
canescens (Benth.) Hilliard var. seineri (Pilg.) Hilliard ... LC
crassicaulis (Benth.) Hilliard ... LC
dentatisepala (Overkott) Hilliard ... LC
filicaulis (Benth.) Hilliard ... LC
foliolosa (Benth.) Hilliard ... LC
fruticosa (Benth.) Hilliard ... LC
glutinosa (Benth.) Hilliard ... LC
grandiflora (Galpin) Hilliard ... LC
huillana (Diels) Hilliard ... LC
incisa (Thunb.) Hilliard ... **VU**
integerrima (Benth.) Hilliard ... LC
kraussiana (Bernh.) Hilliard ... LC
macrantha (Codd) Hilliard ... **NT**
major (Pilg.) Hilliard ... LC
maritima (Hiern) Hilliard ... LC
maxii (Hiern) Hilliard ... LC
megadenia Hilliard ... LC
megaphylla Hilliard ... **Rare**
merxmuelleri (Roessler) Hilliard ... LC
micrantha (Klotzsch) Hilliard ... LC
microphylla (L.f.) Hilliard ... LC
montana (Diels) Hilliard ... LC
multisecta Hilliard ... LC
namaquensis Hilliard ... LC
pedunculosa (Benth.) Hilliard ... LC
phlogiflora (Benth.) Hilliard ... LC
pinnatifida (L.f.) Hilliard ... LC
pristisepala (Hiern) Hilliard ... LC
racemosa (Benth.) Hilliard ... LC
ramosissima (Hiern) Hilliard ... LC
silenoides (Hilliard) Hilliard ... LC
stellata Hilliard ... LC
stricta (Benth.) Hilliard ... LC
tenella (Hiern) Hilliard ... LC
tenuifolia (Bernh.) Hilliard ... LC
thunbergii (G.Don) Hilliard ... LC
tortuosa (Benth.) Hilliard ... LC
tysonii (Hiern) Hilliard ... LC
zuurbergensis Hilliard ... LC

Jasminum
abyssinicum Hochst. ex DC. ... LC
angulare Vahl ... LC
breviflorum Harv. ex C.H.Wright ... LC
fluminense Vell. subsp. fluminense ... LC
glaucum (L.f.) Aiton ... LC
multipartitum Hochst. ... LC
quinatum Schinz ... LC
stenolobum Rolfe ... LC
streptopus E.Mey. var. streptopus ... LC
streptopus E.Mey. var. transvaalensis (S.Moore) I.Verd. ... LC
tortuosum Willd. ... LC

Jatropha
capensis (L.f.) Sond. ... LC
erythropoda Pax & K.Hoffm. ... LC

hirsuta Hochst. var. glabrescens (Pax & K.Hoffm.) Prain....LC
hirsuta Hochst. var. hirsuta....LC
hirsuta Hochst. var. oblongifolia Prain....LC
lagarinthoides Sond.....LC
latifolia Pax var. angustata Prain....LC
latifolia Pax var. latifolia....LC
latifolia Pax var. swazica Prain....LC
natalensis Müll.Arg.....LC
orangeana Dinter ex P.G.Mey.....LC
schlechteri Pax subsp. schlechteri....LC
schlechteri Pax subsp. setifera (Hutch.) Radcl.-Sm.....LC
spicata Pax....LC
variifolia Pax....LC
woodii Kuntze....LC
zeyheri Sond.....LC

Jordaaniella, 431
anemoniflora (L.Bolus) Van Jaarsv.....LC
clavifolia (L.Bolus) H.E.K.Hartmann....VU
cuprea (L.Bolus) H.E.K.Hartmann....LC
dubia (Haw.) H.E.K.Hartmann....LC
spongiosa (L.Bolus) H.E.K.Hartmann....LC
uniflora (L.Bolus) H.E.K.Hartmann....NT

Jubaeopsis, 78
caffra Becc.....EN

Jumellea
walleri (Rolfe) la Croix....LC

Juncus, 180
acutus L. subsp. leopoldii (Parl.) Snogerup....LC
capensis Thunb.....LC
cephalotes Thunb.....LC
dregeanus Kunth subsp. dregeanus....LC
effusus L.....LC
exsertus Buchenau....LC
inflexus L.....LC
kraussii Hochst. subsp. kraussii....LC
lomatophyllus Spreng.....LC
obliquus Adamson....DDD
oxycarpus E.Mey. ex Kunth....LC
pictus Steud.....DDT
punctorius L.f.....LC
rigidus Desf.....LC
rupestris Kunth....LC
scabriusculus Kunth....LC
stenopetalus Adamson....LC

Justicia, 217
anagalloides (Nees) T.Anderson....LC
betonica L.....LC
bolusii C.B.Clarke....Rare
campylostemon (Nees) T.Anderson....LC
capensis Thunb.....LC
cuneata Vahl subsp. cuneata....LC
cuneata Vahl subsp. latifolia (Nees) Immelman....LC
exigua S.Moore....LC
flava (Vahl) Vahl....LC
glabra K.D.Koenig ex Roxb....LC
guerkeana Schinz....LC
heterocarpa T.Anderson subsp. dinteri (S.Moore) Hedrén....LC
matammensis (Schweinf.) Oliv.....LC
minima A.Meeuse....Rare
montis-salinarum A.Meeuse....Rare
odora (Forssk.) Vahl....LC
orchioides L.f. subsp. glabrata Immelman....LC
orchioides L.f. subsp. orchioides....LC
petiolaris (Nees) T.Anderson subsp. bowiei (C.B.Clarke) Immelman....LC
petiolaris (Nees) T.Anderson subsp. incerta (C.B.Clarke) Immelman....LC
petiolaris (Nees) T.Anderson subsp. petiolaris....LC
protracta (Nees) T.Anderson subsp. protracta....LC
protracta (Nees) T.Anderson subsp. rhodesiana (S.Moore) Immelman....LC
puberula Immelman....LC
thymifolia (Nees) C.B.Clarke....LC

Juttadinteria
albata (L.Bolus) L.Bolus....LC
attenuata Walgate....LC
deserticola (Marloth) Schwantes....LC

K

Kalanchoe, 310
alticola Compton....DDD
brachyloba Welw. ex Britten....LC
crenata (Andrews) Haw.....LC
crundallii I.Verd.....Rare
lanceolata (Forssk.) Pers....LC
longiflora Schltr. ex J.M.Wood....LC
luciae Raym.-Hamet subsp. luciae....LC
luciae Raym.-Hamet subsp. montana (Compton) Toelken....LC
neglecta Toelken....LC
paniculata Harv.....LC
rotundifolia (Haw.) Haw.....LC
sexangularis N.E.Br. var. sexangularis....LC
thyrsiflora Harv.....LC

Kanahia
laniflora (Forssk.) R.Br.....LC

Karomia
speciosa (Hutch. & Corbishley) R.Fern.....LC

Karroochloa
curva (Nees) Conert & Türpe....LC
purpurea (L.f.) Conert & Türpe....LC
schismoides (Stapf ex Conert) Conert & Türpe....LC
tenella (Nees) Conert & Türpe....LC

Kedrostis
africana (L.) Cogn.....LC
capensis (Sond.) A.Meeuse....LC
crassirostrata Bremek.....LC
foetidissima (Jacq.) Cogn.....LC
hirtella (Naudin) Cogn.....LC
leloja (J.F.Gmel.) C.Jeffrey....LC
limpopoensis C.Jeffrey....LC
nana (Lam.) Cogn. var. nana....LC
nana (Lam.) Cogn. var. schlechteri (Cogn.) A.Meeuse....LC
nana (Lam.) Cogn. var. zeyheri (Schrad.) A.Meeuse....LC
psammophylla Bruyns....LC

Keetia
gueinzii (Sond.) Bridson....LC

Khadia, 431
acutipetala (N.E.Br.) N.E.Br.....LC
alticola Chess. & H.E.K.Hartmann....Rare
beswickii (L.Bolus) N.E.Br.....VU
borealis L.Bolus....Rare
carolinensis (L.Bolus) L.Bolus....VU
media P.Winter & N.Hahn....LC

Kigelia
africana (Lam.) Benth.....LC

Kiggelaria
africana L.....LC

Kirkia
acuminata Oliv.....LC
wilmsii Engl.....LC

Kissenia
capensis Endl.....LC

Klattia, 160
flava (G.J.Lewis) Goldblatt....VU
partita Baker....NT
stokoei L.Guthrie....EN

Kleinia
cephalophora Compton....LC
fulgens Hook.f.....LC
galpinii Hook.f.....LC
longiflora DC.....LC
stapeliiformis (E.Phillips) Stapf....LC

Kniphofia, 100
acraea Codd....Rare
albescens Codd....LC
albomontana Baijnath....LC
angustifolia (Baker) Codd....LC
baurii Baker....LC
brachystachya (Zahlbr.) Codd....LC
breviflora Baker....LC
bruceae (Codd) Codd....LC
buchananii Baker....LC
caulescens Baker....LC
citrina Baker....LC
coddiana Cufod.....NT
coralligemma E.A.Bruce....LC
crassifolia Baker....CR PE
drepanophylla Baker....VU
ensifolia Baker subsp. autumnalis Codd....EN
ensifolia Baker subsp. ensifolia....LC
evansii Baker....Rare
fibrosa Baker....LC
flammula Codd....EN
fluviatilis Codd....LC
galpinii Baker....LC
gracilis Baker....LC
hirsuta Codd....LC
ichopensis Schinz var. aciformis Codd....DDT
ichopensis Schinz var. ichopensis....LC
latifolia Codd....EN
laxiflora Kunth....LC
leucocephala Baijnath....CR
linearifolia Baker....LC
littoralis Codd....NT
multiflora J.M.Wood & M.S.Evans....LC
northiae Baker....LC
parviflora Kunth....LC
pauciflora Baker....CR
porphyrantha Baker....LC
rigidifolia E.A.Bruce....LC
ritualis Codd....LC
rooperi (T.Moore) Lem.....LC
sarmentosa (Andrews) Kunth....LC
splendida E.A.Bruce....LC
stricta Codd....LC
tabularis Marloth....LC
thodei Baker....LC
triangularis Kunth subsp. obtusiloba (A.Berger) Codd....Rare
triangularis Kunth subsp. triangularis....LC
typhoides Codd....NT
tysonii Baker subsp. lebomboensis Codd....LC
tysonii Baker subsp. tysonii....LC
uvaria (L.) Oken....LC

Knowltonia, 507
anemonoides H.Rasm. subsp. anemonoides....LC
anemonoides H.Rasm. subsp. tenuis H.Rasm.....LC
bracteata Harv. ex J.Zahlbr.....VU
brevistylis Szyszyl.....LC
capensis (L.) Huth....LC
cordata H.Rasm....LC
filia (L.f.) T.Durand & Schinz subsp. filia....LC
filia (L.f.) T.Durand & Schinz subsp. scaposa H.Rasm....LC
transvaalensis Szyszyl. var. filifolia H.Rasm....VU
transvaalensis Szyszyl. var. pottiana (Burtt Davy) H.Rasm....DDT
transvaalensis Szyszyl. var. transvaalensis....LC
vesicatoria (L.f.) Sims subsp. grossa H.Rasm....LC
vesicatoria (L.f.) Sims subsp. humilis H.Rasm.....LC
vesicatoria (L.f.) Sims subsp. vesicatoria....LC

Koeleria
capensis (Steud.) Nees....LC

Koenigia, 464
sp. nov. (*Helme 3468* NBG)....EN

Kogelbergia, 555
phylicoides (A.DC.) Rourke....LC
verticillata (Eckl. & Zeyh.) Rourke....Rare

Kohautia
amatymbica Eckl. & Zeyh.....LC
aspera (Roth) Bremek.....LC
caespitosa Schnizl. subsp. brachyloba (Sond.) D.Mantell....LC
cynanchica DC.....LC
latibrachiata Bremek.....LC
longifolia Klotzsch var. longifolia....LC
microflora D.Mantell....LC
subverticillata (K.Schum.) D.Mantell subsp. subverticillata....LC
virgata (Willd.) Bremek.....LC

Kotschya
parvifolia (Burtt Davy) Verdc.....LC
thymodora (Baker f.) Wild subsp. thymodora....LC

Krauseola
mosambicina (Moss) Pax & K.Hoffm.....LC

Kraussia
floribunda Harv.....LC

Kyllinga
alata Nees....LC
alba Nees....LC
brevifolia Rottb.....LC
elatior Kunth....LC
erecta Schumach. var. erecta....LC

melanosperma Nees LC
nemoralis (G.Forst. & J.R.Forst.) Dandy ex Hutch. & Dalziel LC
odorata Vahl LC
pauciflora Ridl. LC
polyphylla Willd. ex Kunth LC
pulchella Kunth LC

Kyllingiella
microcephala (Steud.) R.W.Haines & Lye LC

Kyphocarpa
angustifolia (Moq.) Lopr. LC
cruciata (Schinz) Schinz LC
trichinoides (Fenzl) Lopr. LC

L

Lablab
purpureus (L.) Sweet subsp. uncinatus Verdc. LC

Lachenalia, 116
alba W.F.Barker ex G.D.Duncan ....VU
algoensis Schönland LC
aloides (L.f.) Engl. var. aloides LC
aloides (L.f.) Engl. var. aurea (Lindl.) Engl. LC
aloides (L.f.) Engl. var. quadricolor (Jacq.) Engl. LC
aloides (L.f.) Engl. var. vanzyliae W.F.Barker LC
ameliae W.F.Barker ....NT
angelica W.F.Barker ....VU
anguinea Sweet LC
arbuthnotiae W.F.Barker ....CR
attenuata W.F.Barker ex G.D.Duncan LC
aurioliae G.D.Duncan LC
bachmannii Baker ....EN
barkeriana U.Müll.-Doblies, B.Nord. & D.Müll.-Doblies ....Rare
bolusii W.F.Barker LC
bowkeri Baker LC
buchubergensis Dinter ....Rare
bulbifera (Cirillo) Engl. LC
campanulata Baker LC
capensis W.F.Barker ....VU
carnosa Baker LC
cernua G.D.Duncan LC
comptonii W.F.Barker LC
concordiana Schltr. ex W.F.Barker ....Rare
congesta W.F.Barker ....Rare
contaminata Aiton ....NT
convallarioides Baker ....CR
corymbosa (L.) J.C.Manning & Goldblatt ....VU
dasybotrya Diels LC
dehoopensis W.F.Barker ....VU
doleritica G.D.Duncan ....VU
duncanii W.F.Barker ....VU
elegans W.F.Barker var. elegans LC
elegans W.F.Barker var. flava W.F.Barker LC
elegans W.F.Barker var. membranacea W.F.Barker LC
elegans W.F.Barker var. suaveolens W.F.Barker LC
ensifolia (Thunb.) J.C.Manning & Goldblatt LC
esterhuysenae W.F.Barker ....Rare
fistulosa Baker LC
framesii W.F.Barker LC
gillettii W.F.Barker ....EN
glaucophylla W.F.Barker LC
haarlemensis Fourc. ....VU
hirta (Thunb.) Thunb. var. exserta W.F.Barker LC
hirta (Thunb.) Thunb. var. hirta LC
inconspicua G.D.Duncan LC
isopetala Jacq. LC
juncifolia Baker var. campanulata W.F.Barker LC
juncifolia Baker var. juncifolia LC
karooica W.F.Barker ex G.D.Duncan LC
kliprandensis W.F.Barker ....Rare
lactosa G.D.Duncan ....EN
latimerae W.F.Barker LC
leipoldtii G.D.Duncan ....VU
leomontana W.F.Barker ....Critically Rare
liliflora Jacq. ....EN
longibracteata E.Phillips ....Declining
longituba (A.M.van der Merwe) J.C.Manning & Goldblatt LC
lutea G.D.Duncan LC
lutzeyeri G.D.Duncan ....VU
macgregoriorum W.F.Barker ....VU
margaretae W.F.Barker ....VU
marginata W.F.Barker subsp. marginata LC
marginata W.F.Barker subsp. neglecta Schltr. ex G.D.Duncan LC
marlothii W.F.Barker ex G.D.Duncan LC
martinae W.F.Barker ....VU
mathewsii W.F.Barker ....CR
maughanii (W.F.Barker) J.C.Manning & Goldblatt LC
maximiliani Schltr. ex W.F.Barker ....Rare
mediana Jacq. var. mediana ....VU
mediana Jacq. var. rogersii (Baker) W.F.Barker ....EN
minima W.F.Barker ....VU
moniliformis W.F.Barker ....CR
montana Schltr. ex W.F.Barker LC
muirii W.F.Barker ....VU
multifolia W.F.Barker LC
mutabilis Sweet LC
namaquensis Schltr. ex W.F.Barker LC
nardousbergensis G.D.Duncan LC
neilii W.F.Barker ex G.D.Duncan ....EN
nervosa Ker Gawl ....EN
nordenstamii W.F.Barker ....Rare
obscura Schltr. ex G.D.Duncan LC
orchioides (L.) Aiton var. glaucina (Jacq.) W.F.Barker LC
orchioides (L.) Aiton var. orchioides LC
orthopetala Jacq. ....VU
pallida Aiton ....Declining
patula Jacq. LC
paucifolia (W.F.Barker) J.C.Manning & Goldblatt ....EN
peersii Marloth ex W.F.Barker ....VU
perryae G.D.Duncan LC
physocaulos W.F.Barker ....EN
polyphylla Baker ....EN
polypodantha Schltr. ex W.F.Barker ....Rare
purpureo-caerulea Jacq. ....CR
pusilla Jacq. LC
pustulata Jacq. ....NT
reflexa Thunb. ....VU
rosea Andrews LC
rubida Jacq. var. punctata (Jacq.) Baker LC
rubida Jacq. var. rubida LC
rubida Jacq. var. tigrina (Jacq.) Baker LC
salteri W.F.Barker ....EN
sargeantii W.F.Barker ....VU
schelpei W.F.Barker ....VU
splendida Diels LC
stayneri W.F.Barker ....EN
thomasiae W.F.Barker ex G.D.Duncan ....VU
trichophylla Baker LC
undulata Masson ex Baker LC
unicolor Jacq. LC
unifolia Jacq. var. schlechteri (Baker) W.F.Barker LC
unifolia Jacq. var. unifolia LC
unifolia Jacq. var. wrightii Baker LC
valeriae G.D.Duncan ....Rare
variegata W.F.Barker LC
ventricosa Schltr. ex W.F.Barker LC
verticillata W.F.Barker ....Rare
violacea Jacq. var. glauca W.F.Barker LC
violacea Jacq. var. violacea LC
viridiflora W.F.Barker ....CR
whitehillensis W.F.Barker LC
xerophila Schltr. ex G.D.Duncan LC
youngii Baker LC
zebrina W.F.Barker LC
zeyheri Baker LC

Lachnaea, 556
alpina (Eckl. & Zeyh.) Meisn. ....Rare
aurea (Eckl. & Zeyh.) Meisn. ....VU
axillaris Meisn. ....NT
burchellii Meisn. LC
capitata (L.) Crantz ....VU
densiflora Meisn. ....NT
diosmoides Meisn. LC
elsieae Beyers LC
ericoides Meisn. LC
eriocephala L. LC
filamentosa Meisn. LC
filicaulis (Meisn.) Beyers ....NT
funicaulis Schinz ....NT
globulifera Meisn. subsp. globulifera LC
globulifera Meisn. subsp. incana Beyers LC
glomerata Fourc. LC
gracilis Meisn. LC
grandiflora (L.f.) Baill. ....VU
greytonensis Beyers ....VU
laniflora (C.H.Wright) Bond LC
laxa (C.H.Wright) Beyers ....NT
leipoldtii Beyers ....VU
macrantha Meisn. LC
marlothii Schltr. ....Rare
montana Beyers LC
naviculifolia Compton LC
nervosa (Thunb.) Meisn. LC
oliverorum Beyers ....VU
pedicellata Beyers ....Rare
pendula Beyers ....VU
penicillata Meisn. LC
pomposa Beyers LC
pudens Beyers ....Rare
pusilla Beyers ....VU
rupestris Beyers ....VU
ruscifolia Compton LC
sociorum Beyers LC
stokoei Beyers ....CR
striata (Poir.) Meisn. ....Rare
uniflora (L.) Crantz ....VU
villosa Beyers LC

Lachnospermum
fasciculatum (Thunb.) Baill. LC
imbricatum (P.J.Bergius) Hilliard LC
umbellatum (L.f.) Pillans LC

Lachnostylis, 456
bilocularis R.A.Dyer LC
hirta (L.f.) Müll.Arg. LC
sp. nov. (*Meyer 1804, 1805* PRE) ....VU

Lactuca
dregeana DC. LC
inermis Forssk. LC
tysonii (E.Phillips) C.Jeffrey LC

Laevicarpa, 262
sp. nov. (*Koekemoer 486* PRE) ....Critically Rare

Lagarosiphon
cordofanus Casp. LC
major (Ridl.) Moss ex Wager LC
muscoides Harv. LC
verticillifolius Oberm. LC

Lagenaria
siceraria (Molina) Standl. LC
sphaerica (Sond.) Naudin LC

Laggera
crispata (Vahl) Hepper & J.R.I.Wood LC
decurrens (Vahl) Hepper & J.R.I.Wood LC

Lagynias
dryadum (S.Moore) Robyns LC
lasiantha (Sond.) Bullock LC
monteiroi (Oliv.) Bridson LC

Lampranthus, 431
acrosepalus (L.Bolus) L.Bolus ....VU
acutifolius (L.Bolus) N.E.Br. ....DDT
aduncus (Haw.) N.E.Br. ....DDT
aestivus (L.Bolus) L.Bolus ....DDT
affinis L.Bolus ....DDT
algoensis L.Bolus ....DDT
altistylus N.E.Br. ....DDT
amabilis L.Bolus ....EN
amoenus (Salm-Dyck ex DC.) N.E.Br. ....EN
antemeridianus (L.Bolus) L.Bolus LC
antonii L.Bolus ....CR
arbuthnotiae (L.Bolus) L.Bolus ....DDT
arenosus (L.Bolus) L.Bolus ....DDT
argillosus L.Bolus ....DDT
aureus (L.) N.E.Br. ....EN
austricola (L.Bolus) L.Bolus ....DDT
baylissii L.Bolus ....DDT
berghiae (L.Bolus) L.Bolus ....DDT
bicolor (L.) N.E.Br. ....VU
blandus (Haw.) Schwantes ....DDT
brachyandrus (L.Bolus) N.E.Br. ....DDT
brevistaminus (L.Bolus) L.Bolus ....DDT
brownii (Hook.f.) N.E.Br. ....DDD
caespitosus (L.Bolus) N.E.Br. ....DDT
calcaratus (Wolley-Dod) N.E.Br. ....DDT
candidus L.Bolus ....DDT
capillaceus (L.Bolus) N.E.Br. LC
caudatus L.Bolus ....EN
ceriseus (L.Bolus) L.Bolus ....VU
citrinus (L.Bolus) L.Bolus ....DDT
coccineus (Haw.) N.E.Br. ....CR
conspicuus (Haw.) N.E.Br. ....DDT

coralliflorus (Salm-Dyck) Schwantes LC
creber L.Bolus .....DDT
curviflorus (Haw.) H.E.K.Hartmann .....DDD
curvifolius (Haw.) N.E.Br. .....VU
cyathiformis (L.Bolus) N.E.Br. .....DDT
debilis (Haw.) N.E.Br. .....EN
deflexus (Aiton) N.E.Br. .....DDT
densifolius (L.Bolus) L.Bolus .....DDT
densipetalus (L.Bolus) L.Bolus.....LC
dependens (L.Bolus) L.Bolus .....DDT
diffusus (L.Bolus) N.E.Br. LC
dilutus N.E.Br......**EN**
disgregus (N.E.Br.) N.E.Br. LC
diutinus (L.Bolus) N.E.Br......**EN**
dregeanus (Sond.) N.E.Br......**VU**
dubitans (L.Bolus) L.Bolus.....**DDD**
dulcis (L.Bolus) L.Bolus.....DDT
dyckii (A.Berger) N.E.Br. .....DDT
egregius (L.Bolus) L.Bolus .....DDT
elegans (Jacq.) Schwantes LC
emarginatoides (Haw.) N.E.Br.....DDT
emarginatus (L.) N.E.Br.....LC
ernestii (L.Bolus) L.Bolus.....DDT
esterhuyseniae L.Bolus LC
eximius L.Bolus.....LC
explanatus (L.Bolus) N.E.Br......**EN**
falcatus (L.) N.E.Br. .....DDT
falciformis (Haw.) N.E.Br.....LC
fergusoniae (L.Bolus) L.Bolus .....**VU**
filicaulis (Haw.) N.E.Br......**VU**
flexifolius (Haw.) N.E.Br. .....DDT
flexilis (Haw.) N.E.Br. .....DDT
foliosus L.Bolus .....**EN**
formosus (Haw.) N.E.Br.....DDT
framesii (L.Bolus) N.E.Br. .....DDT
fugitans L.Bolus.....**VU**
furvus (L.Bolus) N.E.Br.....LC
galpiniae (L.Bolus) L.Bolus .....DDT
glaucoides (Haw.) N.E.Br.....LC
glaucus (L.) N.E.Br......**VU**
globosus (L.Bolus) L.Bolus.....DDT
glomeratus (L.) N.E.Br......**EN**
godmaniae (L.Bolus) L.Bolus LC
gracilipes (L.Bolus) N.E.Br......**Rare**
hallii L.Bolus.....**VU**
haworthii (Haw.) N.E.Br. LC
hoerleinianus (Dinter) Friedrich.....LC
holensis L.Bolus.....**VU**
hollandii (L.Bolus) L.Bolus.....LC
hurlingii (L.Bolus) L.Bolus .....DDT
imbricans (Haw.) N.E.Br. .....**DDD**
immelmaniae (L.Bolus) N.E.Br......**EN**
inaequalis (Haw.) N.E.Br......**DDD**
inconspicuus (Haw.) Schwantes .....**DDD**
incurvus (Haw.) Schwantes.....DDT
intervallaris L.Bolus .....**DDD**
laetus (L.Bolus) L.Bolus .....DDT
lavisii (L.Bolus) L.Bolus.....**DDD**
laxifolius (L.Bolus) N.E.Br.....DDT
leightoniae (L.Bolus) L.Bolus.....DDT
leipoldtii (L.Bolus) L.Bolus .....DDT
leptaleon (Haw.) N.E.Br......**EN**
leptosepalus (L.Bolus) L.Bolus.....DDT
lewisiae (L.Bolus) L.Bolus .....DDT
liberalis (L.Bolus) L.Bolus .....DDT
littlewoodii L.Bolus.....DDT
longistamineus (L.Bolus) N.E.Br.....DDT
macrocarpus (A.Berger) N.E.Br. .....DDT
macrosepalus (L.Bolus) L.Bolus .....DDT
macrostigma L.Bolus.....DDT
magnificus (L.Bolus) N.E.Br.....DDT
marcidulus N.E.Br.....DDT
martleyi (L.Bolus) L.Bolus.....DDT
maturus N.E.Br. .....DDT
matutinus (L.Bolus) N.E.Br.....DDT
microsepalus L.Bolus .....DDT
microstigma (L.Bolus) N.E.Br. .....DDT
middlemostii (L.Bolus) L.Bolus.....DDT
multiradiatus (Jacq.) N.E.Br. LC
multiseriatus (L.Bolus) N.E.Br.....DDT
mutans (L.Bolus) N.E.Br. .....DDT
mutatus (G.D.Rowley) H.E.K.Hartmann.....LC
nelii L.Bolus .....DDT
neostayneri L.Bolus.....DDT
obconicus (L.Bolus) L.Bolus.....**DDD**
occultans L.Bolus .....DDT
otzenianus (Dinter) Friedrich.....LC
paarlensis L.Bolus .....DDT
pakhuisensis (L.Bolus) L.Bolus .....**DDD**
palustris (L.Bolus) L.Bolus .....DDT
parcus N.E.Br.....DDT
pauciflorus (L.Bolus) N.E.Br......**EN**
paucifolius (L.Bolus) N.E.Br. .....DDT
peacockiae (L.Bolus) L.Bolus .....**VU**
peersii (L.Bolus) N.E.Br. .....**DDD**
perreptans L.Bolus .....DDT
plautus N.E.Br.....DDT
plenus (L.Bolus) L.Bolus .....DDT
pocockiae (L.Bolus) N.E.Br.....LC
polyanthon (Haw.) N.E.Br. .....DDT
praecipitatus (L.Bolus) L.Bolus.....DDT
procumbens Klak .....**VU**
productus (Haw.) N.E.Br. LC
profundus (L.Bolus) H.E.K.Hartmann.....**EN**
prominulus (L.Bolus) L.Bolus.....DDT
promontorii (L.Bolus) N.E.Br. .....**Rare**
proximus L.Bolus .....DDT
purpureus L.Bolus .....**DDD**
rabiesbergensis (L.Bolus) L.Bolus.....DDT
recurvus (L.Bolus) Schwantes.....DDT
reptans (Aiton) N.E.Br......**EN**
roseus (Willd.) Schwantes.....DDT
rubroluteus (L.Bolus) L.Bolus .....DDT
rupestris (L.Bolus) N.E.Br......**CR**
rustii (A.Berger) N.E.Br. .....**DDD**
salicola (L.Bolus) L.Bolus .....DDT
salteri (L.Bolus) L.Bolus .....DDT
saturatus (L.Bolus) N.E.Br. .....DDT
sauerae (L.Bolus) L.Bolus.....DDT
scaber (L.) N.E.Br......**EN**
schlechteri (Zahlbr.) L.Bolus .....**CR**
serpens (L.Bolus) L.Bolus .....DDT
sociorum (L.Bolus) N.E.Br. .....**VU**
sparsiflorus L.Bolus.....DDT
spectabilis (Haw.) N.E.Br.....LC
spiniformis (Haw.) N.E.Br.....LC
staminodiosus (L.Bolus) Schwantes .....**DDD**
stanfordiae L.Bolus.....**EN**
stayneri (L.Bolus) N.E.Br. LC
stenopetalus (L.Bolus) N.E.Br. .....**VU**
stenus (Haw.) N.E.Br......**EN**
stephanii (Schwantes) Schwantes .....**DDD**
sternens L.Bolus.....DDT
stipulaceus (L.) N.E.Br.....LC
suavissimus (L.Bolus) L.Bolus .....DDT
subaequalis (L.Bolus) L.Bolus .....**DDD**
sublaxus (L.Bolus) L.Bolus .....**DDD**
subrotundus L.Bolus .....DDT
subtruncatus L.Bolus.....DDT
swartbergensis (L.Bolus) N.E.Br.....LC
swartkopensis Strohschn.....DDT
tegens (F.Muell.) N.E.Br. .....DDT
tenuifolius (L.) N.E.Br......**CR**
tenuis L.Bolus.....DDT
tulbaghensis (A.Berger) N.E.Br. .....DDT
turbinatus (Jacq.) N.E.Br. LC
uniflorus (L.Bolus) L.Bolus.....LC
vallis-gratiae (Schltr. & A.Berger) N.E.Br. LC
vanheerdei L.Bolus.....DDT
vanputtenii (L.Bolus) N.E.Br.....DDT
vanzijliae (L.Bolus) N.E.Br......**EX**
variabilis (Haw.) N.E.Br. .....DDT
verecundus (L.Bolus) N.E.Br......**DDD**
vernalis (L.Bolus) L.Bolus.....**NT**
villiersii (L.Bolus) L.Bolus .....DDT
violaceus (DC.) Schwantes in H.Jacobsen.....DDT
virgatus L.Bolus.....DDT
walgateae L.Bolus .....DDT
watermeyeri (L.Bolus) N.E.Br.....LC
woodburniae (L.Bolus) N.E.Br......**DDD**
wordsworthiae (L.Bolus) N.E.Br......**DDD**
zeyheri (Salm-Dyck) N.E.Br. .....**DDD**

Lamprocephalus, 262
montanus B.Nord. .....**Rare**

Lanaria
lanata (L.) T.Durand & Schinz LC

Landolphia
kirkii Dyer ex Hook.f.....LC

Langebergia
canescens (DC.) Anderb. LC

Lannea
discolor (Sond.) Engl.....LC
edulis (Sond.) Engl. var. edulis LC
gossweileri Exell & Mendonça subsp. tomentella (R. & A.Fern.) J.B.Gillett.....LC
schweinfurthii (Engl.) Engl. var. stuhlmannii (Engl.) Kokwaro.....LC

Lantana
mearnsii Moldenke var. latibracteolata Moldenke.....LC
rugosa Thunb.....LC

Lapeirousia, 160
anceps (L.f.) Ker Gawl.....LC
arenicola Schltr. LC
azurea (Eckl. ex Baker) Goldblatt.....**EN**
bainesii Baker.....LC
barklyi Baker LC
corymbosa (L.) Ker Gawl. .....Declining
divaricata Baker LC
dolomitica Dinter subsp. dolomitica LC
dolomitica Dinter subsp. lewisiana (B.Nord.) Goldblatt .....**Rare**
exilis Goldblatt.....LC
fabricii (D.Delaroche) Ker Gawl.....LC
falcata (L.f.) Ker Gawl. LC
fastigiata (Lam.) Ker Gawl. .....**VU**
jacquinii N.E.Br.....LC
littoralis Baker subsp. caudata (Schinz) Goldblatt LC
littoralis Baker subsp. littoralis.....LC
macrospatha Baker LC
masukuensis Vaupel & Schltr. LC
micrantha (E.Mey. ex Klatt) Baker LC
montana Klatt LC
neglecta Goldblatt LC
oreogena Schltr. ex Goldblatt LC
plicata (Jacq.) Diels subsp. effurcata (G.J.Lewis) Goldblatt.....LC
plicata (Jacq.) Diels subsp. longifolia Goldblatt LC
plicata (Jacq.) Diels subsp. plicata.....LC
pyramidalis (Lam.) Goldblatt subsp. pyramidalis ..LC
pyramidalis (Lam.) Goldblatt subsp. regalis Goldblatt & J.C.Manning LC
sandersonii Baker LC
silenoides (Jacq.) Ker Gawl.....LC
simulans Goldblatt & J.C.Manning.....**VU**
spinosa (Goldblatt) Goldblatt & J.C.Manning LC
tenuis (Goldblatt) Goldblatt & J.C.Manning..... **Rare**
verecunda Goldblatt.....**VU**
violacea Goldblatt .....**NT**

Lapidaria
margaretae (Schwantes) Dinter & Schwantes LC

Laportea
alatipes Hook.f.....LC
grossa (Wedd.) Chew LC
peduncularis (Wedd.) Chew subsp. latidens Friis LC
peduncularis (Wedd.) Chew subsp. peduncularis LC

Lappula
capensis (A.DC.) Gürke.....LC

Larryleachia
cactiformis (Hook.) Plowes LC
cactiformis (Hook.) Plowes var. felina (D.T.Cole) Bruyns LC
dinteri (A.Berger) Plowes LC
marlothii (N.E.Br.) Plowes.....LC
perlata (Dinter) Plowes LC
picta (N.E.Br.) Plowes LC
similis (N.E.Br.) Plowes .....DDT

Lasiochloa
alopecuroides Hack. LC

Lasiodiscus
pervillei Baill. subsp. pervillei.....LC

Lasiopogon, 262
brachypterus O.Hoffm. ex Zahlbr. LC
debilis (Thunb.) Hilliard LC
glomerulatus (Harv.) Hilliard LC
micropoides DC. LC
minutus (B.Nord.) Hilliard & B.L.Burtt.....**VU**
muscoides (Desf.) DC. LC
ponticulus Hilliard .....**Rare**

Lasiospermum
bipinnatum (Thunb.) Druce.....LC
brachyglossum DC. LC
pedunculare Lag. LC
poterioides Hutch.....LC

Launaea
intybacea (Jacq.) Beauverd LC

nana (Baker) Chiov. LC
rarifolia (Oliv. & Hiern) Boulos var. rarifolia LC
sarmentosa (Willd.) Sch.Bip. ex Kuntze LC

Laurembergia
repens (L.) P.J.Bergius subsp. brachypoda (Welw. ex Hiern) Oberm. LC

Lauridia
reticulata Eckl. & Zeyh. LC
tetragona (L.f.) R.H.Archer LC

Laurophyllus
capensis Thunb. LC

Lebeckia, 374
acanthoclada Dinter LC
ambigua E.Mey. LC
bowieana Benth. ....CR
brevicarpa M.M.le Roux & B.-E.van Wyk ....NT
brevipes M.M.le Roux & B.-E.van Wyk LC
cinerea E.Mey. LC
contaminata (L.) Thunb. ....DDT
cytisoides Thunb. LC
fasciculata Benth. ....CR
gracilis Eckl. & Zeyh. ....EN
grandiflora Benth. ....Rare
halenbergensis Merxm. & A.Schreib. LC
inflata Bolus LC
leipoldtiana Schltr. ex R.Dahlgren LC
leptophylla Benth. LC
linearifolia E.Mey. LC
longipes Bolus LC
lotonoides Schltr. ....NT
macrantha Harv. LC
melilotoides R.Dahlgren ....VU
meyeriana Eckl. & Zeyh. ....EN
mucronata Benth. LC
multiflora E.Mey. LC
pauciflora Eckl. & Zeyh. LC
plukenetiana E.Mey. ....EN
psiloloba Walp. LC
pungens Thunb. LC
sepiaria Thunb. LC
sericea Thunb. LC
sessilifolia (Eckl. & Zeyh.) Benth. LC
simsiana Eckl. & Zeyh. LC
spinescens Harv. LC
uniflora B.-E.van Wyk & M.M.le Roux ....Rare
wrightii (Harv.) Bolus LC
zeyheri M.M.le Roux & B.-E.van Wyk ....CR PE

Ledebouria, 120
apertiflora (Baker) Jessop LC
atrobrunnea S.Venter ....VU
concolor (Baker) Jessop LC
cooperi (Hook.f.) Jessop LC
cremnophila S.Venter & Van Jaarsv. ....Rare
crispa S.Venter ....EN
dolomiticola S.Venter ....VU
ensifolia (Eckl.) S.Venter & T.J.Edwards LC
floribunda (Baker) Jessop LC
galpinii (Baker) S.Venter ....EN
graminifolia (Baker) Jessop LC
hypoxidioides (Schönland) Jessop LC
inquinata (C.A.Sm.) Jessop LC
lepida (N.E.Br.) S.Venter ....Rare
luteola Jessop LC
macowanii (Baker) S.Venter LC
marginata (Baker) Jessop LC
mokobulanensis A.J.Hankey & T.J.Edwards ....VU
ovalifolia (Schrad.) Jessop LC
ovatifolia (Baker) Jessop LC
parvifolia S.Venter ....DDD
revoluta (L.f.) Jessop LC
socialis (Baker) Jessop LC
undulata (Jacq.) Jessop LC
venteri Van Jaarsv. & A.E.van Wyk LC
viscosa Jessop LC

Leersia
denudata Launert LC
hexandra Sw. LC

Leidesia
procumbens (L.) Prain LC

Leipoldtia, 437
alborosea (L.Bolus) H.E.K.Hartmann & Stüber LC
calandra (L.Bolus) L.Bolus LC
compacta L.Bolus LC
frutescens (L.Bolus) H.E.K.Hartmann ....VU
klaverensis L.Bolus ....EN
laxa L.Bolus LC
lunata H.E.K.Hartmann & S.Rust LC
rosea L.Bolus LC
schultzei (Schltr. & Diels) Friedrich LC
uniflora L.Bolus LC
weigangiana (Dinter) Dinter & Schwantes subsp. grandifolia (L.Bolus) H.E.K.Hartmann & Rust LC
weigangiana (Dinter) Dinter & Schwantes subsp. littlewoodii (L.Bolus) H.E.K.Hartmann & Rust LC
weigangiana (Dinter) Dinter & Schwantes subsp. weigangiana LC

Lemna
aequinoctialis Welw. LC
gibba L. LC
minor L. LC

Leonotis
dubia E.Mey. LC
intermedia Lindl. LC
leonurus (L.) R.Br. LC
nepetifolia (L.) R.Br. LC
ocymifolia (Burm.f.) Iwarsson LC
randii S.Moore LC
schinzii Gürke LC

Lepidagathis
scabra C.B.Clarke LC

Lepidium, 289
africanum (Burm.f.) DC. subsp. africanum LC
africanum (Burm.f.) DC. subsp. divaricatum (Aiton) Jonsell LC
basuticum Marais LC
bipinnatum Thunb. LC
capense Thunb. LC
desertorum Eckl. & Zeyh. LC
ecklonii Schrad. LC
flexuosum Thunb. ....DDT
mossii Thell. ....DDD
myriocarpum Sond. LC
pinnatum Thunb. LC
schinzii Thell. LC
schlechteri Thell. LC
suluense Marais LC
transvaalense Marais LC
trifurcum Sond. LC

Lepidostephium
asteroides (Bolus & Schltr.) Kroner LC
denticulatum Oliv. LC

Lepisorus
excavatus (Bory ex Willd.) Ching LC
schraderi (Mett.) Ching LC

Leptactina
delagoensis K.Schum. subsp. delagoensis LC

Leptocarydion
vulpiastrum (De Not.) Stapf LC

Leptochloa
chinensis (L.) Nees LC
eleusine (Nees) Cope & N.Snow LC
fusca (L.) Kunth LC
panicea (Retz.) Ohwi LC
uniflora Hochst. ex A.Rich. LC

Lepturus
repens (G.Forst.) R.Br. LC

Lessertia, 375
affinis Burtt Davy LC
annularis Burch. LC
argentea Harv. LC
benguellensis Baker f. LC
brachypus Harv. LC
brachystachya DC. LC
candida E.Mey. LC
capensis (P.J.Bergius) Druce LC
capitata E.Mey. LC
carnosa Eckl. & Zeyh. LC
contracta M.Balkwill LC
depressa Harv. LC
diffusa R.Br. LC
dykei L.Bolus ....DDD
excisa DC. LC
falciformis DC. LC
flanaganii L.Bolus LC
flexuosa E.Mey. LC
fruticosa Lindl. LC
globosa L.Bolus ....DDT
harveyana L.Bolus LC
herbacea (L.) Druce LC
incana Schinz LC
inflata Harv. LC
ingeliensis M.Balkwill LC
kensitii L.Bolus ....DDT
lanata Harv. ....EN
macroflora M.Balkwill LC
macrostachya DC. var. macrostachya LC
margaritacea E.Mey. LC
microcarpa E.Mey. ....DDT
miniata T.M.Salter LC
mossii R.G.N.Young ....DDT
muricata T.M.Salter ....DDT
pappeana Harv. LC
parviflora Harv. LC
pauciflora Harv. var. pauciflora LC
pauciflora Harv. var. schlechteri L.Bolus ....DDT
perennans (Jacq.) DC. var. perennans LC
perennans (Jacq.) DC. var. polystachya (Harv.) L.Bolus LC
perennans (Jacq.) DC. var. sericea L.Bolus LC
phillipsiana Burtt Davy ....DDT
physodes Eckl. & Zeyh. LC
prostata DC. LC
rigida E.Mey. LC
sneeuwbergensis Germish. LC
spinescens E.Mey. LC
stenoloba E.Mey. LC
stipulata Baker f. ....DDT
stricta L.Bolus LC
tenuifolia E.Mey. ....DDT
thodei L.Bolus LC
tomentosa DC. LC

Leucadendron, 467
album (Thunb.) Fourc. LC
arcuatum (Lam.) I.Williams LC
argenteum (L.) R.Br. ....EN
barkerae I.Williams LC
bonum I.Williams ....CR
brunioides Meisn. var. brunioides LC
brunioides Meisn. var. flumenlupinum I.Williams ....CR
burchellii I.Williams ....NT
cadens I.Williams ....Rare
chamelaea (Lam.) I.Williams ....CR
cinereum (Sol. ex Aiton) R.Br. ....VU
comosum (Thunb.) R.Br. subsp. comosum LC
comosum (Thunb.) R.Br. subsp. homaeophyllum (Meisn.) I.Williams ....CR
concavum I.Williams ....EN
conicum (Lam.) I.Williams ....NT
coniferum (L.) Meisn. ....VU
cordatum E.Phillips ....Rare
coriaceum E.Phillips & Hutch. ....EN
corymbosum P.J.Bergius ....VU
crassulaefolium (Salisb. ex Knight) I.Williams ....NT
cryptocephalum Guthrie ....CR
daphnoides (Thunb.) Meisn. ....EN
diemontianum I.Williams ....EN
discolor E.Phillips & Hutch. ....VU
dregei E.Mey. ex Meisn. ....EN
dubium (H.Buek ex Meisn.) E.Phillips & Hutch. LC
elimense E.Phillips subsp. elimense ....EN
elimense E.Phillips subsp. nov. (*Protea Atlas: AGRY206712* NBG) ....CR
elimense E.Phillips subsp. salteri I.Williams ....CR
elimense E.Phillips subsp. vyeboomense I.Williams ....CR
ericifolium R.Br. LC
eucalyptifolium H.Buek ex Meisn. LC
flexuosum I.Williams ....CR
floridum R.Br. ....CR
foedum I.Williams ....VU
galpinii E.Phillips & Hutch. ....VU
gandogeri Schinz ex Gand. LC
glaberrimum (Schltr.) Compton subsp. erubescens I.Williams LC
glaberrimum (Schltr.) Compton subsp. glaberrimum LC
globosum (Kenn. ex Andrews) I.Williams ....CR
grandiflorum (Salisb.) R.Br. ....EX
gydoense I.Williams ....EN
immoderatum Rourke ....CR
lanigerum H.Buek ex Meisn. var. laevigatum Meisn. ....CR
lanigerum H.Buek ex Meisn. var. lanigerum ....EN
laureolum (Lam.) Fourc. LC
laxum I.Williams ....EN

levisanus (L.) P.J.Bergius ... CR
linifolium (Jacq.) R.Br. ... VU
loeriense I.Williams ... LC
loranthifolium (Salisb. ex Knight) I.Williams ... NT
macowanii E.Phillips ... CR
meridianum I.Williams ... LC
meyerianum H.Buek ex E.Phillips & Hutch. ... EN
microcephalum (Gand.) Gand. & Schinz ... LC
modestum I.Williams ... EN
muirii E.Phillips ... LC
nervosum E.Phillips & Hutch. ... NT
nitidum H.Buek ex Meisn. ... LC
nobile I.Williams ... LC
olens I.Williams ... NT
orientale I.Williams ... EN
osbornei Rourke ... LC
platyspermum R.Br. ... VU
pondoense A.E.van Wyk ... VU
procerum (Salisb. ex Knight) I.Williams ... VU
pubescens R.Br. ... LC
pubibracteolatum I.Williams ... NT
radiatum E.Phillips & Hutch. ... EN
remotum I.Williams ... EN
roodii E.Phillips ... EN
rourkei I.Williams ... LC
rubrum Burm.f. ... LC
salicifolium (Salisb.) I.Williams ... LC
salignum P.J.Bergius ... LC
sericeum (Thunb.) R.Br. ... CR
sessile R.Br. ... NT
sheilae I.Williams ... VU
singulare I.Williams ... VU
sorocephalodes E.Phillips & Hutch. ... NT
sp. nov. (*Acocks 23716* NBG) ... CR
spirale (Salisb. ex Knight) I.Williams ... EX
spissifolium (Salisb. ex Knight) I.Williams subsp. fragrans I.Williams ... LC
spissifolium (Salisb. ex Knight) I.Williams subsp. natalense (Thode & Gilg) I.Williams ... NT
spissifolium (Salisb. ex Knight) I.Williams subsp. oribinum I.Williams ... VU
spissifolium (Salisb. ex Knight) I.Williams subsp. phillipsii (Hutch.) I.Williams ... LC
spissifolium (Salisb. ex Knight) I.Williams subsp. spissifolium ... LC
stellare (Sims) Sweet ... CR
stelligerum I.Williams ... CR
strobilinum (L.) Druce ... NT
teretifolium (Andrews) I.Williams ... NT
thymifolium (Salisb. ex Knight) I.Williams ... CR
tinctum I.Williams ... NT
tradouwense I.Williams ... CR
uliginosum R.Br. subsp. glabratum I.Williams ... Rare
uliginosum R.Br. subsp. uliginosum ... LC
verticillatum (Thunb.) Meisn. ... CR
xanthoconus (Kuntze) K.Schum. ... LC

Leucas
capensis (Benth.) Engl. ... LC
glabrata (Vahl) Sm. var. glabrata ... LC
glabrata (Vahl) Sm. var. linearis Codd ... LC
lavandulifolia Sm. ... LC
martinicensis (Jacq.) R.Br. ... LC
neuflizeana Courbon ... LC
sexdentata Skan ... LC

Leucophrys
mesocoma (Nees) Rendle ... LC

Leucoptera, 262
nodosa (Thunb.) B.Nord. ... VU
oppositifolia B.Nord. ... Rare
subcarnosa B.Nord. ... Rare

Leucosidea
sericea Eckl. & Zeyh. ... LC

Leucospermum, 477
arenarium Rycroft ... CR
bolusii Gand. ... NT
calligerum (Salisb. ex Knight) Rourke ... LC
catherinae Compton ... EN
conocarpodendron (L.) H.Buek subsp. conocarpodendron ... EN
conocarpodendron (L.) H.Buek subsp. viridum Rourke ... NT
cordatum E.Phillips ... EN
cordifolium (Salisb. ex Knight) Fourc. ... NT
cuneiforme (Burm.f.) Rourke ... LC
erubescens Rourke ... Rare
formosum (Andrews) Sweet ... EN
fulgens Rourke ... CR
gerrardii Stapf ... NT
glabrum E.Phillips ... EN
gracile (Salisb. ex Knight) Rourke ... NT
grandiflorum (Salisb.) R.Br. ... EN
gueinzii Meisn. ... EN
hamatum Rourke ... EN
harpagonatum Rourke ... CR
heterophyllum (Thunb.) Rourke ... EN
hypophyllocarpodendron (L.) Druce subsp. canaliculatum (H.Buek ex Meisn.) Rourke ... VU
hypophyllocarpodendron (L.) Druce subsp. hypophyllocarpodendron ... VU
innovans Rourke ... EN
lineare R.Br. ... VU
muirii E.Phillips ... EN
mundii Meisn. ... Rare
oleifolium (P.J.Bergius) R.Br. ... LC
parile (Salisb. ex Knight) Sweet ... EN
patersonii E.Phillips ... VU
pedunculatum Klotzsch ... LC
pluridens Rourke ... NT
praecox Rourke ... VU
praemorsum (Meisn.) E.Phillips ... VU
profugum Rourke ... EN
prostratum (Thunb.) Stapf ... VU
reflexum H.Buek ex Meisn. ... NT
rodolentum (Salisb. ex Knight) Rourke ... VU
royenifolium (Salisb. ex Knight) Stapf ... LC
saxatile (Salisb. ex Knight) Rourke ... EN
saxosum S.Moore ... EN
secundifolium Rourke ... Rare
spathulatum R.Br. ... NT
tomentosum (Thunb.) R.Br. ... VU
tottum (L.) R.Br. var. glabrum E.Phillips ... CR
tottum (L.) R.Br. var. tottum ... NT
truncatulum (Salisb. ex Knight) Rourke ... NT
truncatum (H.Buek ex Meisn.) Rourke ... LC
utriculosum Rourke ... LC
vestitum (Lam.) Rourke ... NT
winteri Rourke ... NT
wittebergense Compton ... LC

Leucosphaera
bainesii (Hook.f.) Gilg ... LC

Leysera
gnaphalodes (L.) L. ... LC
tenella DC. ... LC

Lichtensteinia
interrupta (Thunb.) Sond. ... LC
lacera Cham. & Schltdl. ... LC
latifolia Eckl. & Zeyh. ... LC
obscura (Spreng.) Koso-Pol. ... LC
trifida Cham. & Schltdl. var. palmata (DC.) Sond. ... LC
trifida Cham. & Schltdl. var. pinnatifida Sond. ... LC
trifida Cham. & Schltdl. var. trifida ... LC

Lidbeckia, 262
pectinata P.J.Bergius ... Rare
quinqueloba (L.f.) Cass. ... LC
sp. nov. (*Helme 2698* NBG) ... EN

Limeum
aethiopicum Burm.f. var. fluviale (Eckl. & Zeyh.) Friedrich ... LC
aethiopicum Burm.f. var. intermedium Friedrich ... LC
aethiopicum Burm.f. var. lanceolatum Friedrich ... LC
africanum L. subsp. africanum ... LC
africanum L. subsp. canescens (E.Mey. ex Fenzl) Friedrich ... LC
arenicolum G.Schellenb. ... LC
argute-carinatum Wawra ex Wawra & Peyr. var. argute-carinatum ... LC
deserticolum Dinter & G.Schellenb. ... LC
dinteri G.Schellenb. ... LC
fenestratum (Fenzl) Heimerl var. fenestratum ... LC
humifusum Friedrich ... LC
myosotis H.Walter var. confusum Friedrich ... LC
myosotis H.Walter var. myosotis ... LC
pauciflorum Moq. ... LC
pterocarpum (J.Gay) Heimerl var. pterocarpum ... LC
rhombifolium G.Schellenb. ... LC
subnudum Friedrich ... LC
sulcatum (Klotzsch) Hutch. var. scabridum (Klotzsch) Friedrich ... LC
sulcatum (Klotzsch) Hutch. var. sulcatum ... LC
telephioides E.Mey. ex Fenzl var. schlechteri (G.Schellenb.) Friedrich ... DDT
telephioides E.Mey. ex Fenzl var. telephioides ... LC
viscosum (J.Gay) Fenzl subsp. nummulifolium (H.Walter) Friedrich ... LC
viscosum (J.Gay) Fenzl subsp. transvaalense Friedrich ... LC
viscosum (J.Gay) Fenzl subsp. viscosum var. dubium Friedrich ... LC
viscosum (J.Gay) Fenzl subsp. viscosum var. glomeratum (Eckl. & Zeyh.) Friedrich ... LC
viscosum (J.Gay) Fenzl subsp. viscosum var. kraussii Friedrich ... LC
viscosum (J.Gay) Fenzl subsp. viscosum var. macrocarpum Friedrich ... LC
viscosum (J.Gay) Fenzl subsp. viscosum var. viscosum ... LC

Limnophila
indica (L.) Druce ... LC

Limnophyton
obtusifolium (L.) Miq. ... LC

Limonium, 459
acuminatum L.Bolus ... VU
anthericoides (Schltr.) R.A.Dyer ... EN
decumbens (Boiss.) Kuntze ... DDD
depauperatum (Boiss.) R.A.Dyer ... EN
dregeanum (C.Presl) Kuntze ... LC
equisetinum (Boiss.) R.A.Dyer ... LC
kraussianum (Buchinger ex Boiss.) Kuntze ... LC
linifolium (L.f.) Kuntze var. linifolium ... LC
linifolium (L.f.) Kuntze var. maritimum (Eckl. & Zeyh. ex Boiss.) R.A.Dyer ... LC
scabrum (Thunb.) Kuntze var. avenaceum (C.H.Wright) R.A.Dyer ... LC
scabrum (Thunb.) Kuntze var. corymbulosum (Boiss.) R.A.Dyer ... DDT
scabrum (Thunb.) Kuntze var. scabrum ... LC

Limosella
africana Glück var. africana ... LC
africana Glück var. macrosperma Glück ... LC
australis R.Br. ... LC
grandiflora Benth. ... LC
inflata Hilliard & B.L.Burtt ... LC
longiflora Kuntze ... LC
maior Diels ... LC
pretoriensis Suess. ... DDT
vesiculosa Hilliard & B.L.Burtt ... LC

Linconia, 289
alopecuroidea L. ... EN
cuspidata (Thunb.) Sw. ... LC
ericoides Oliv. ... CR

Lindernia
bolusii (Hiern) Eb.Fisch. ... LC
conferta (Hiern) Philcox ... LC
monroi (S.Moore) Eb.Fisch. ... LC
nana (Engl.) Roessler ... LC
parviflora (Roxb.) Haines ... LC
pulchella (Skan) Philcox ... LC
wilmsii (Engl. & Diels) Philcox ... LC

Lindsaea
ensifolia Sw. subsp. ensifolia ... LC

Lintonia
nutans Stapf ... LC

Linum
acuticarpum C.M.Rogers ... LC
adustum E.Mey. ex Planch. ... LC
aethiopicum Thunb. ... LC
africanum L. ... LC
brevistylum C.M.Rogers ... LC
comptonii C.M.Rogers ... LC
esterhuyseniae C.M.Rogers ... LC
gracile Planch. ... LC
heterostylum C.M.Rogers ... LC
pungens Planch. ... LC
quadrifolium L. ... LC
thesioides Bartl. ... LC
thunbergii Eckl. & Zeyh. ... LC
villosum C.M.Rogers ... LC

Liparia, 375
angustifolia (Eckl. & Zeyh.) A.L.Schutte ... EN
bonaespei A.L.Schutte ... EN
boucheri (E.G.H.Oliv. & Fellingham) A.L.Schutte ... EN
calycina (L.Bolus) A.L.Schutte ... Rare
capitata Thunb. ... Rare

confusa A.L.Schutte ... **Rare**
congesta A.L.Schutte ... **VU**
genistoides (Lam.) A.L.Schutte ... **EN**
graminifolia L. ... **EX**
hirsuta Thunb. ... LC
laevigata (L.) Thunb. ... **VU**
latifolia (Benth.) A.L.Schutte ... LC
myrtifolia Thunb. ... LC
parva Vogel ex Walp. ... **VU**
racemosa A.L.Schutte ... **Rare**
rafnioides A.L.Schutte ... **VU**
splendens (Burm.f.) Bos & de Wit subsp. comantha (Eckl. & Zeyh.) Bos & De Wit ... LC
splendens (Burm.f.) Bos & de Wit subsp. splendens ... **VU**
striata A.L.Schutte ... **EN**
umbellifera Thunb. ... LC
vestita Thunb. ... LC

Liparis
bowkeri Harv. ... LC
capensis Lindl. ... LC
deistelii Schltr. ... LC
remota J.L.Stewart & Schelpe ... LC

Lipocarpha
chinensis (Osbeck) Kern ... LC
hemisphaerica (Roth) Goetgh. ... LC
micrantha (Vahl) G.C.Tucker ... LC
nana (A.Rich.) Cherm. ... LC
rehmannii (Ridl.) Goetgh. ... LC

Lippia
javanica (Burm.f.) Spreng. ... LC
pretoriensis H.Pearson ... LC
rehmannii H.Pearson ... LC
scaberrima Sond. ... LC
wilmsii H.Pearson ... LC

Lithops, 437
aucampiae L.Bolus subsp. aucampiae ... LC
aucampiae L.Bolus subsp. euniceae (de Boer) D.T.Cole ... **VU**
bromfieldii L.Bolus ... LC
coleorum S.A.Hammer & Uijs ... **VU**
comptonii L.Bolus ... LC
dinteri Schwantes subsp. frederici (D.T.Cole) D.T.Cole ... **VU**
divergens L.Bolus ... **NT**
dorotheae Nel ... **EN**
fulviceps (N.E.Br.) N.E.Br. ... LC
geyeri Nel ... **Rare**
hallii de Boer ... LC
helmutii L.Bolus ... **VU**
herrei L.Bolus ... LC
hookeri (A.Berger) Schwantes ... LC
julii (Dinter & Schwantes) N.E.Br. subsp. fulleri (N.E.Br.) B.Fearn ... LC
lesliei (N.E.Br.) N.E.Br. subsp. burchellii D.T.Cole **NT**
lesliei (N.E.Br.) N.E.Br. subsp. lesliei ... **NT**
localis (N.E.Br.) Schwantes ... LC
marmorata (N.E.Br.) N.E.Br. ... LC
meyeri L.Bolus ... **VU**
naureeniae D.T.Cole ... **VU**
olivacea L.Bolus ... **VU**
otzeniana Nel ... **VU**
salicola L.Bolus ... LC
verruculosa Nel ... LC
villetii L.Bolus subsp. deboeri (Schwantes) D.T.Cole ... LC
villetii L.Bolus subsp. kennedyi (de Boer) D.T.Cole ... LC
villetii L.Bolus subsp. villetii ... LC
viridis H.A.Lückh. ... **VU**

Lithospermum
affine A.DC. ... LC
afromontanum Weim. ... LC
cinereum A.DC. ... LC
diversifolium A.DC. ... LC
flexuosum Lehm. ... DDT
hirsutum E.Mey. ex A.DC. ... LC
papillosum Thunb. ... LC
scabrum Thunb. ... LC

Litogyne
gariepina (DC.) Anderb. ... LC

Littonia see **Gloriosa**

Lobelia, 404
anceps L.f. ... LC
angolensis Engl. & Diels ... LC
aquaemontis E.Wimm. ... LC
ardisiandroides Schltr. ... **Rare**
barkerae E.Wimm. ... **CR PE**
boivinii Sond. ... LC
capillifolia (C.Presl) A.DC. ... LC
chamaedryfolia (C.Presl) A.DC. ... LC
chamaepitys Lam. var. ceratophylla (C.Presl) E.Wimm. ... LC
chamaepitys Lam. var. chamaepitys ... LC
cochlearifolia Diels ... LC
comosa L. var. comosa ... LC
comosa L. var. foliosa E.Wimm. ... LC
comosa L. var. microdon (C.Presl) E.Wimm. ... LC
comosa L. var. secundata (Sond.) E.Wimm. ... LC
comptonii E.Wimm. ... **Rare**
corniculata Thulin ... DDT
coronopifolia L. ... LC
cuneifolia Link & Otto var. ananda E.Wimm. ... LC
cuneifolia Link & Otto var. cuneifolia ... LC
cuneifolia Link & Otto var. hirsuta (C.Presl) E.Wimm. ... LC
cyphioides Harv. ... DDT
dasyphylla E.Wimm. ... **DDD**
decurrentifolia (Kuntze) K.Schum. ... DDT
dichroma Schltr. ... DDT
dregeana (C.Presl) A.DC. ... LC
eckloniana (C.Presl) A.DC. ... **Rare**
erinus L. ... LC
eurypoda E.Wimm. var. eurypoda ... LC
eurypoda E.Wimm. var. fissurarum E.Wimm. . **Rare**
flaccida (C.Presl) A.DC. subsp. flaccida ... LC
flaccida (C.Presl) A.DC. subsp. mossiana (R.D.Good) Thulin ... LC
galpinii Schltr. ... LC
goetzei Diels ... LC
hypsibata E.Wimm. ... **Rare**
jasionoides (A.DC.) E.Wimm. var. jasionoides ... LC
jasionoides (A.DC.) E.Wimm. var. sparsiflora (Sond.) E.Wimm. ... LC
laurentioides Schltr. ... **DDD**
laxa MacOwan ... LC
limosa (Adamson) E.Wimm. ... DDT
linearis Thunb. ... LC
lobata E.Wimm. ... LC
malowensis E.Wimm. ... LC
muscoides Cham. ... **Rare**
neglecta Roem. & Schult. ... LC
nugax E.Wimm. ... **DDD**
patula L.f. ... LC
pinifolia L. ... LC
preslii A.DC. ... LC
pteropoda (C.Presl) A.DC. ... LC
pubescens Dryand. ex Aiton var. holopsida E.Wimm. ... LC
pubescens Dryand. ex Aiton var. incisa (C.Presl) Sond. ... LC
pubescens Dryand. ex Aiton var. jaquiniana Sond. ... LC
pubescens Dryand. ex Aiton var. pubescens ... LC
pubescens Dryand. ex Aiton var. rotundifolia E.Wimm. ... LC
quadrisepala (R.D.Good) E.Wimm. ... DDT
setacea Thunb. var. dissectifolia E.Wimm. ... LC
setacea Thunb. var. setacea ... LC
sp. nov. (*Gillett MC 666* BOL) ... LC
stenosiphon (Adamson) E.Wimm. ... LC
thermalis Thunb. ... LC
tomentosa L.f. ... LC
trullifolia Hemsl. subsp. delicatula (Compton) Thulin ... **Rare**
valida L.Bolus ... **VU**
vanreenensis (Kuntze) K.Schum. ... LC
zwartkopensis E.Wimm. ... **CR PE**

Lobostemon, 286
argenteus (P.J.Bergius) H.Buek ... LC
belliformis M.H.Buys ... **CR**
capitatus (L.) H.Buek ... **VU**
collinus Schltr. ex C.H.Wright ... **EN**
curvifolius H.Buek ... LC
daltonii M.H.Buys ... **EN**
decorus Levyns ... LC
echioides Lehm. ... LC
fruticosus (L.) H.Buek ... LC
glaber (Vahl) H.Buek ... LC
glaucophyllus (Jacq.) H.Buek ... LC
gracilis Levyns ... **NT**
horridus Levyns ... Thr*
hottentoticus Levyns ... **EN**
laevigatus (L.) H.Buek ... LC
lucidus (Lehm.) H.Buek ... **VU**
marlothii Levyns ... LC
montanus H.Buek ... LC
muirii Levyns ... **Rare**
oederiaefolius A.DC. ... LC
paniculatus (Thunb.) H.Buek ... LC
paniculiformis A.DC. ... LC
pearsonii Levyns ... LC
regulareflorus (Ker Gawl.) M.H.Buys ... **VU**
sanguineus Schltr. ... **VU**
stachydeus A.DC. ... LC
strigosus (Lehm.) H.Buek ... LC
trichotomus (Thunb.) DC. ... LC
trigonus (Thunb.) H.Buek ... LC

Loeseneriella
africana (Willd.) N.Hallé var. richardiana (Cambess.) N.Hallé ... LC
crenata (Klotzsch) R.Wilczek ex N.Hallé var. crenata ... LC

Lonchostoma, 290
esterhuyseniae Strid ... **EN**
monogynum (Vahl) Pillans ... LC
myrtoides (Vahl) Pillans ... **VU**
pentandrum (Thunb.) Druce ... LC
purpureum Pillans ... **Rare**

Lophacme
digitata Stapf ... LC

Lophiocarpus
latifolius Nowicke ... LC
polystachyus Turcz. ... LC
tenuissimus Hook.f. ... LC

Lopholaena, 262
cneorifolia (DC.) S.Moore ... LC
coriifolia (Sond.) E.Phillips & C.A.Sm. ... LC
disticha (N.E.Br.) S.Moore ... LC
dregeana DC. ... LC
festiva Brusse ... LC
longipes (Harv.) Thell. ... **DDD**
platyphylla Benth. ... LC
segmentata (Oliv.) S.Moore ... LC

Lotononis, 376
acocksii B.-E.van Wyk ... **EN**
acuminata Eckl. & Zeyh. ... **VU**
acuticarpa B.-E.van Wyk ... DDT
acutiflora Benth. ... **CR**
adpressa N.E.Br. subsp. adpressa ... LC
adpressa N.E.Br. subsp. leptantha B.-E.van Wyk ... DDT
affinis Burtt Davy ... DDT
alpina (Eckl. & Zeyh.) B.-E.van Wyk subsp. alpina ... DDT
alpina (Eckl. & Zeyh.) B.-E.van Wyk subsp. multiflora (Eckl. & Zeyh.) B.-E.van Wyk ... LC
amajubica (Burtt Davy) B.-E.van Wyk ... **Rare**
anthyllopsis B.-E.van Wyk ... **Rare**
arenicola Schltr. ... **Rare**
argentea Eckl. & Zeyh. ... **VU**
arida Dummer ... LC
azurea (Eckl. & Zeyh.) Benth. ... LC
azureoides B.-E.van Wyk ... **Rare**
bachmanniana Dummer ... **NT**
bainesii Baker ... LC
benthamiana Dummer ... LC
bolusii Dummer ... **CR PE**
brachyantha Harms ... LC
brevicaulis B.-E.van Wyk ... LC
burchellii Benth. ... LC
caerulescens (E.Mey.) B.-E.van Wyk ... LC
calycina (E.Mey.) Benth. ... LC
carinata (E.Mey.) Benth. ... LC
carnea B.-E.van Wyk ... **DDD**
carnosa (Eckl. & Zeyh.) Benth. subsp. carnosa ... LC
carnosa (Eckl. & Zeyh.) Benth. subsp. condensata (Harv.) B.-E.van Wyk ... **DDD**
carnosa (Eckl. & Zeyh.) Benth. subsp. latifolia B.-E.van Wyk ... **DDD**
complanata B.-E.van Wyk ... **EN**
comptonii B.-E.van Wyk ... **EN**
corymbosa (E.Mey.) Benth. ... LC
crumanina Burch. ex Benth. ... LC
curtii Harms ... LC
dahlgrenii B.-E.van Wyk ... **VU**

decumbens (Thunb.) B.-E.van Wyk subsp. decumbens....LC
decumbens (Thunb.) B.-E.van Wyk subsp. rehmannii (Dummer) B.-E.van Wyk....LC
densa (Thunb.) Harv. subsp. congesta B.-E.van Wyk....VU
densa (Thunb.) Harv. subsp. densa....VU
densa (Thunb.) Harv. subsp. gracilis (E.Mey.) B.-E.van Wyk....LC
densa (Thunb.) Harv. subsp. leucoclada (Schltr.) B.-E.van Wyk....DDT
dichiloides Sond.....CR PE
difformis B.-E.van Wyk....VU
digitata Harv. LC
dissitinodis B.-E.van Wyk....LC
divaricata (Eckl. & Zeyh.) Benth. LC
elongata (Thunb.) D.Dietr. ....EN
eriantha Benth. LC
eriocarpa (E.Mey.) B.-E.van Wyk....LC
esterhuyseniana B.-E.van Wyk ....Rare
exstipulata L.Bolus....EN
falcata (E.Mey.) Benth....LC
fastigiata (E.Mey.) B.-E.van Wyk....LC
filiformis B.-E.van Wyk....EN
foliosa Bolus LC
fruticoides B.-E.van Wyk....LC
furcata (Merxm. & A.Schreib.) A.Schreib.....LC
galpinii Dummer....LC
glabra (Thunb.) D.Dietr. LC
glabrescens (Dummer) B.-E.van Wyk ....DDD
globulosa B.-E.van Wyk....VU
gracilifolia B.-E.van Wyk ....EN
grandis Dummer & Jenn....LC
harveyi B.-E.van Wyk....DDD
hirsuta (Thunb.) D.Dietr. LC
holosericea (E.Mey.) B.-E.van Wyk ....DDT
involucrata (P.J.Bergius) Benth. subsp. bracteata B.-E.van Wyk....VU
involucrata (P.J.Bergius) Benth. subsp. digitata B.-E.van Wyk....VU
involucrata (P.J.Bergius) Benth. subsp. involucrata....LC
involucrata (P.J.Bergius) Benth. subsp. peduncularis (E.Mey.) B.-E.van Wyk....LC
jacottetii (Schinz) B.-E.van Wyk....LC
lamprifolia B.-E.van Wyk....CR
lanceolata (E.Mey.) Benth....LC
laticeps B.-E.van Wyk....Critically Rare
laxa Eckl. & Zeyh....LC
lenticula (E.Mey.) Benth. LC
leptoloba Bolus....LC
linearifolia B.-E.van Wyk....LC
listii Polhill LC
longicephala B.-E.van Wyk....LC
longiflora Bolus....LC
lotononoides (Scott-Elliot) B.-E.van Wyk LC
macrocarpa Eckl. & Zeyh. ....EN
macrosepala Conrath....LC
maculata Dummer....LC
magnifica B.-E.van Wyk....CR PE
marlothii Engl. LC
maximiliani Schltr. ex De Wild.....LC
meyeri (C.Presl) B.-E.van Wyk LC
micrantha Eckl. & Zeyh.....LC
minima B.-E.van Wyk ....DDT
minor Dummer & Jenn....Rare
mollis (E.Mey.) Benth....VU
monophylla Harv. ....CR
mucronata Conrath....LC
nutans B.-E.van Wyk....VU
oligocephala B.-E.van Wyk....DDD
oxyptera (E.Mey.) Benth.....LC
pallens (Eckl. & Zeyh.) Benth. ....DDD
pariflora N.E.Br.....Critically Rare
parviflora (P.J.Bergius) D.Dietr.....LC
pentaphylla (E.Mey.) Benth. LC
perplexa (E.Mey.) Eckl. & Zeyh. ....DDD
platycarpa (Viv.) Pic.Serm.....LC
plicata B.-E.van Wyk....VU
polycephala Benth....EN
pottiae Burtt Davy LC
procumbens Bolus LC
prolifera (E.Mey.) B.-E.van Wyk LC
prostrata (L.) Benth. ....NT
pulchella (E.Mey.) B.-E.van Wyk LC
pulchra Dummer....LC
pumila Eckl. & Zeyh.....LC
pungens Eckl. & Zeyh. LC
purpurescens B.-E.van Wyk.... Rare
pusilla Dummer....LC
quinata (Thunb.) Benth. LC
rabenaviana Dinter & Harms....LC
racemiflora B.-E.van Wyk.... CR PE
rigida (E.Mey.) Benth. ....VU
rosea Dummer LC
rostrata Benth. subsp. brachybotrys B.-E.van Wyk....LC
rostrata Benth. subsp. namaquensis (Bolus) B.-E.van Wyk....LC
rostrata Benth. subsp. rostrata LC
sabulosa T.M.Salter....LC
sericophylla Benth. LC
solitudinis Dummer LC
sparsiflora (E.Mey.) B.-E.van Wyk....LC
stenophylla (Eckl. & Zeyh.) B.-E.van Wyk....LC
stipulosa Baker f. LC
stricta (Eckl. & Zeyh.) B.-E.van Wyk LC
strigillosa (Merxm. & A.Schreib.) A.Schreib. LC
subulata B.-E.van Wyk....LC
sutherlandii Dummer....DDT
tenella (E.Mey.) Eckl. & Zeyh.....LC
trichodes (E.Mey.) B.-E.van Wyk....VU
umbellata (L.) Benth.....LC
varia (E.Mey.) Steud....LC
venosa B.-E.van Wyk....VU
viborgioides Benth. ....EN
villosa (E.Mey.) Steud....VU
viminea (E.Mey.) B.-E.van Wyk LC
virgata B.-E.van Wyk .... Rare
wilmsii Dummer....LC

Lotus
discolor E.Mey. subsp. discolor....LC
namulensis Brand....LC

Loudetia
densispica (Rendle) C.E.Hubb. LC
filifolia Schweick.....LC
flavida (Stapf) C.E.Hubb. LC
pedicellata (Stent) Chippind. LC
simplex (Nees) C.E.Hubb.....LC

Loxogramme
abyssinica (Baker) M.G.Price LC

Loxostylis, 219
alata A.Spreng. ex Rchb. ....Declining

Ludwigia
abyssinica A.Rich....LC
adscendens (L.) Hara subsp. diffusa (Forssk.) P.H.Raven LC
leptocarpa (Nutt.) Hara LC
octovalvis (Jacq.) P.H.Raven....LC

Lumnitzera
racemosa Willd. var. racemosa LC

Luzula
africana Drège ex Steud....LC

Lycium
acutifolium E.Mey. ex Dunal LC
afrum L....LC
amoenum Dammer LC
arenicolum Miers LC
bosciifolium Schinz....LC
cinereum Thunb....LC
ferocissimum Miers....LC
gariepense A.M.Venter....LC
grandicalyx A.M.Venter & H.J.T.Venter....LC
hirsutum Dunal LC
horridum Thunb. LC
mascarenense A.M.Venter & A.J.Scott....LC
oxycarpum Dunal....LC
pilifolium C.H.Wright....LC
pumilum Dammer....LC
schizocalyx C.H.Wright LC
shawii Roem. & Schult. LC
tenue Willd. LC
tetrandrum Thunb. LC
villosum Schinz LC

Lycopodiella
caroliniana (L.) Pic.Serm.....LC
cernua (L.) Pic.Serm. LC
sarcocaulon (A.Br. & Welw. ex Kuhn) Pic.Serm.....LC

Lycopodium
clavatum L....LC
zanclophyllum J.H.Wilce LC

Lydenburgia, 299
abbottii (A.E.van Wyk & M.Prins) Steenkamp, A.E.van Wyk & M.Prins....EN
cassinoides N.Robson....NT

Lygodium
microphyllum (Cav.) R.Br. LC

Lyperia, 545
antirrhinoides (L.f.) Hilliard....LC
formosa Hilliard ....VU
lychnidea (L.) Druce LC
tenuiflora Benth.....LC
tristis (L.f.) Benth....LC
violacea (Link ex Jaroscz) Benth.....LC

Lysimachia
nutans Nees LC
ruhmeriana Vatke....LC

M

Macaranga
capensis (Baill.) Benth. ex Sim var. capensis LC

Machairophyllum, 438
albidum (L.) Schwantes LC
bijliae (N.E.Br.) L.Bolus LC
brevifolium L.Bolus ....VU
stayneri L.Bolus ....Critically Rare

Mackaya
bella Harv. LC

Macledium, 262
latifolium (DC.) S.Ortíz....LC
pretoriense (C.A.Sm.) S.Ortíz .... EX
relhanioides (Less.) S.Ortíz LC
speciosum (DC.) S.Ortíz LC
spinosum (L.) S.Ortíz....LC
zeyheri (Sond.) S.Ortíz subsp. argyrophyllum (Oliv.) S.Ortíz....LC
zeyheri (Sond.) S.Ortíz subsp. thyrsiflorum (Klatt) Netnou ....Thr*
zeyheri (Sond.) S.Ortíz subsp. zeyheri....LC

Maclura
africana (Bureau) Corner LC

Macowania, 263
conferta (Benth.) E.Phillips ....DDD
corymbosa M.D.Hend. LC
deflexa Hilliard & B.L.Burtt .... Rare
glandulosa N.E.Br. LC
hamata Hilliard & B.L.Burtt .... Rare
pinifolia (N.E.Br.) Kroner LC
pulvinaris N.E.Br.....LC
revoluta Oliv. ....DDD
sororis Compton....LC
tenuifolia M.D.Hend. LC

Macrostylis, 534
barbigera (L.f.) Bartl. & H.L.Wendl. .... Rare
cassiopoides (Turcz.) I.Williams subsp. cassiopoides ....EN
cassiopoides (Turcz.) I.Williams subsp. dregeana (Sond.) I.Williams ....EN
cauliflora I.Williams....EN
crassifolia Sond. ....VU
decipiens E.Mey. ex Sond. LC
hirta E.Mey. ex Sond....EN
ramulosa I.Williams ....VU
squarrosa Bartl. & H.L.Wendl.....LC
tenuis E.Mey. ex Sond.....LC
villosa (Thunb.) Sond. subsp. minor I.Williams ....EX
villosa (Thunb.) Sond. subsp. villosa....EN

Macrotyloma, 380
axillare (E.Mey.) Verdc. var. axillare LC
axillare (E.Mey.) Verdc. var. glabrum (E.Mey.) Verdc.....LC
coddii Verdc....VU
maranguense (Taub.) Verdc.....LC
uniflorum (Lam.) Verdc. var. stenocarpum (Brenan) Verdc.....LC

Maerua
angolensis DC. subsp. angolensis LC
brevipetiolata Killick....LC
cafra (DC.) Pax....LC
decumbens (Brongn.) De Wolf LC
gilgii Schinz LC
juncea Pax subsp. crustata (Wild) Wild....LC
nervosa (Hochst.) Oliv. LC

parvifolia Pax LC
racemulosa (A.DC.) Gilg & Gilg-Ben. LC
rosmarinoides (Sond.) Gilg & Gilg-Ben LC
schinzii Pax LC

Maesa
alnifolia Harv. LC
lanceolata Forssk. LC

Mairia
coriacea Bolus LC
crenata (Thunb.) Nees LC
hirsuta DC. LC

Malephora
crassa (L.Bolus) H.Jacobsen & Schwantes LC
crocea (Jacq.) Schwantes LC
flavo-crocea (Haw.) H.Jacobsen & Schwantes LC
framesii (L.Bolus) H.Jacobsen & Schwantes LC
herrei (Schwantes) Schwantes LC
latipetala (L.Bolus) H.Jacobsen & Schwantes LC
lutea (Haw.) Schwantes LC
luteola (Haw.) Schwantes LC
mollis (Aiton) N.E.Br. LC
ochracea (A.Berger) H.E.K.Hartmann LC
pienaarii Van Jaarsv. LC
purpureo-crocea (Haw.) Schwantes LC
smithii (L.Bolus) H.E.K.Hartmann LC
thunbergii (Haw.) Schwantes LC
uitenhagensis (L.Bolus) H.Jacobsen & Schwantes LC
verruculoides (Sond.) Schwantes LC

Manilkara, 540
concolor (Harv.) Gerstner LC
discolor (Sond.) J.H.Hemsl. LC
mochisia (Baker) Dubard LC
nicholsonii A.E.van Wyk ..... EN

Manochlamys
albicans (Aiton) Aellen LC

Manulea, 546
acutiloba Hilliard ..... DDD
adenocalyx Hilliard LC
adenodes Hilliard ..... DDT
altissima L.f. subsp. altissima LC
altissima L.f. subsp. glabricaulis (Hiern) Hilliard LC
altissima L.f. subsp. longifolia (Benth.) Hilliard LC
androsacea E.Mey. ex Benth. LC
annua (Hiern) Hilliard ..... NT
arabidea Schltr. ex Hiern ..... DDD
aridicola Hilliard LC
augei (Hiern) Hilliard ..... EN
bellidifolia Benth. LC
buchneroides Hilliard & B.L.Burtt LC
burchellii Hiern LC
calciphila Hilliard LC
caledonica Hilliard ..... NT
cephalotes Thunb. LC
cheiranthus (L.) L. LC
chrysantha Hilliard LC
cinerea Hilliard ..... VU
corymbosa L.f. ..... VU
crassifolia Benth. subsp. crassifolia LC
crassifolia Benth. subsp. thodeana (Diels) Hilliard LC
decipiens Hilliard LC
derustiana Hilliard ..... VU
deserticola Hilliard ..... DDD
diandra Hilliard LC
dregei Hilliard & B.L.Burtt LC
exigua Hilliard ..... VU
flanaganii Hilliard ..... DDD
florifera Hilliard & B.L.Burtt ..... NT
fragrans Schltr. LC
gariepina Benth. LC
gariesiana Hilliard LC
glandulosa E.Phillips ..... NT
incana Thunb. ..... DDD
juncea Benth. ..... Rare
karrooica Hilliard LC
latiloba Hilliard LC
laxa Schltr. LC
leiostachys Benth. LC
leptosiphon Thell. ..... DDD
linearifolia Hilliard LC
minor Diels ..... DDD
minuscula Hilliard LC
montana Hilliard ..... Rare
multispicata Hilliard LC
nervosa E.Mey. ex Benth. LC
obovata Benth. LC
obtusa Hiern ..... DDT
ovatifolia Hilliard ..... Rare
paniculata Benth. LC
parviflora Benth. var. limonioides (Conrath) Hilliard LC
parviflora Benth. var. parviflora LC
paucibarbata Hilliard ..... Rare
pillansii Hilliard ..... EN
plurirosulata Hilliard LC
praeterita Hilliard ..... Thr*
psilostoma Hilliard ..... DDT
pusilla E.Mey. ex Benth. LC
ramulosa Hilliard ..... CR PE
rhodantha Hilliard subsp. aurantiaca Hilliard LC
rhodantha Hilliard subsp. rhodantha LC
rigida Benth. LC
robusta Pilg. LC
rubra (P.J.Bergius) L.f. LC
schaeferi Pilg. LC
silenoides E.Mey. ex Benth. LC
stellata Benth. ..... DDT
thyrsiflora L.f. LC
tomentosa (L.) L. LC
turritis Benth. LC
virgata Thunb. LC

Marasmodes, 263
dummeri Bolus ex Hutch. ..... EN
oligocephala DC. ..... CR
polycephala DC. LC
sp. nov. (*Manning 2747* PRE) ..... CR
sp. nov. (*Walton 273* NBG) ..... EN
undulata Compton ..... CR

Marattia
fraxinea Sm. LC

Margaritaria
discoidea (Baill.) G.L.Webster var. fagifolia (Pax) Radcl.-Sm. LC
discoidea (Baill.) G.L.Webster var. nitida (Pax) Radcl.-Sm. LC

Mariscus
aristatus (Rottb.) Cherm. var. atriceps (Kük.) Podlech LC
dregeanus Kunth LC
uitenhagensis Steud. LC

Markhamia
obtusifolia (Baker) Sprague LC
zanzibarica (Bojer ex DC.) K.Schum. LC

Marlothistella
stenophylla (L.Bolus) S.A.Hammer LC
uniondalensis Schwantes LC

Marsdenia
floribunda (E.Mey.) N.E.Br. LC
sylvestris (Retz.) P.I.Forst. LC

Marsilea, 54
aegyptiaca Willd. LC
apposita Launert LC
burchellii (Kunze) A.Braun LC
capensis A.Braun LC
coromandelina Willd. LC
ephippiocarpa Alston LC
farinosa Launert subsp. arrecta J.E.Burrows ..... VU
farinosa Launert subsp. farinosa LC
fenestrata Launert LC
macrocarpa C.Presl LC
minuta L. var. minuta LC
schelpeana Launert ..... VU
villifolia Bremek. & Oberm. ex Alston & Schelpe LC

Massonia
bifolia (Jacq.) J.C.Manning & Goldblatt LC
depressa Houtt. LC
echinata L.f. LC
jasminiflora Burch. ex Baker LC
pustulata Jacq. LC
pygmaea Kunth subsp. kamiesbergensis U. & D.Müll.-Doblies LC
pygmaea Kunth subsp. pygmaea LC
sessiliflora (Dinter) U. & D.Müll.-Doblies LC

Mastersiella
digitata (Thunb.) Gilg-Ben. LC
purpurea (Pillans) H.P.Linder LC
spathulata (Pillans) H.P.Linder LC

Matthiola
torulosa (Thunb.) DC. LC

Maurocenia
frangula Mill. LC

Maytenus, 299
abbottii A.E.van Wyk ..... EN
acuminata (L.f.) Loes. var. acuminata LC
albata (N.E.Br.) E.Schmidt bis & Jordaan LC
cordata (E.Mey. ex Sond.) Loes. LC
deflexa (Sprague) E.Schmidt bis & Jordaan LC
ilicina (Burch.) Loes. LC
lucida (L.) Loes. LC
monococca (Davison) Loes. LC
oleoides (Lam.) Loes. LC
oleosa A.E.van Wyk & R.H.Archer ..... Rare
peduncularis (Sond.) Loes. LC
procumbens (L.f.) Loes. LC
undata (Thunb.) Blakelock LC

Megalastrum
lanuginosum (Willd. ex Kaulf.) Holttum LC

Megalochlamys
hamata (Klotzsch) Vollesen LC
kenyensis Vollesen subsp. australis Vollesen LC
revoluta (Lindau) Vollesen subsp. cognata (N.E.Br.) Vollesen LC

Megaloprotachne
albescens C.E.Hubb. LC

Megastachya
mucronata (Poir.) P.Beauv. LC

Melanospermum, 547
foliosum (Benth.) Hilliard LC
italae Hilliard ..... VU
rudolfii Hilliard ..... DDT
rupestre (Hiern) Hilliard LC
swazicum Hilliard ..... Rare
transvaalense (Hiern) Hilliard LC

Melasma
scabrum P.J.Bergius var. ovatum (E.Mey. ex Benth.) Hiern LC
scabrum P.J.Bergius var. scabrum LC

Melasphaerula
ramosa (L.) N.E.Br. LC

Melhania, 407
acuminata Mast. var. acuminata LC
acuminata Mast. var. agnosta (K.Schum.) Wild LC
burchellii DC. LC
damarana Harv. LC
didyma Eckl. & Zeyh. LC
forbesii Planch. ex Mast. LC
integra I.Verd. LC
polygama I.Verd. ..... Rare
prostrata DC. LC
randii Baker f. LC
rehmannii Szyszyl. LC
suluensis Gerstner LC
transvaalensis Szyszyl. LC
virescens (K.Schum.) K.Schum. LC

Melianthus
comosus Vahl LC
dregeanus Sond. subsp. dregeanus LC
dregeanus Sond. subsp. insignis (Kuntze) S.A.Tansley LC
elongatus Wijnands LC
major L. LC
pectinatus Harv. subsp. gariepinus (Merxm. & Roessler) S.A.Tansley LC
pectinatus Harv. subsp. pectinatus LC
villosus Bolus LC

Melica
decumbens Thunb. LC
dendroides Lehm. var. speciosa Nees LC
racemosa Thunb. LC

Melinis
drakensbergensis (C.E.Hubb. & Schweick.) Clayton ..... DDT
longiseta (A.Rich.) Zizka subsp. bellespicata (Rendle) Zizka LC
macrochaeta Stapf & C.E.Hubb. LC
minutiflora P.Beauv. LC
nerviglumis (Franch.) Zizka LC
repens (Willd.) Zizka subsp. grandiflora (Hochst.) Zizka LC
repens (Willd.) Zizka subsp. repens LC
scabrida (K.Schum.) Hack. LC
subglabra Mez LC
tenuissima Stapf LC

Melolobium, 380
adenodes Eckl. & Zeyh. ... LC
aethiopicum (L.) Druce ... LC
alpinum Eckl. & Zeyh. ... LC
calycinum Benth. ... LC
candicans (E.Mey.) Eckl. & Zeyh. ... LC
canescens Benth. ... LC
exudans Harv. ... LC
humile Eckl. & Zeyh. ... LC
lampolobum (E.Mey.) Moteetee & B.-E.van Wyk ... LC
macrocalyx Dummer var. longifolium Dummer ... LC
macrocalyx Dummer var. macrocalyx ... LC
microphyllum (L.f.) Eckl. & Zeyh. ... LC
obcordatum Harv. ... LC
stipulatum (Thunb.) Harv. ... **VU**
subspicatum Conrath ... **VU**
wilmsii Harms ... LC

Melpomene
flabelliformis (Poir.) A.R.Sm. & R.C.Moran ... LC

Memecylon
bachmannii Engl. ... LC
natalense Markgr. ... LC

Menodora
africana Hook. ... LC
heterophylla Moric. ex DC. var. australis Steyerm. ... LC
juncea Harv. ... LC

Mentha
aquatica L. ... LC
longifolia (L.) Huds. subsp. capensis (Thunb.) Briq. ... LC
longifolia (L.) Huds. subsp. polyadena (Briq.) Briq. ... LC
longifolia (L.) Huds. subsp. wissii (Launert) Codd ... LC

Merciera, 292
azurea Schltr. ... **EN**
brevifolia A.DC. ... **EN**
eckloniana H.Buek ... LC
leptoloba A.DC. ... **NT**
tenuifolia (L.f.) A.DC. var. tenuifolia ... **VU**
tetraloba C.N.Cupido ... **EN**

Merremia, 300
kentrocaulos (C.B.Clarke) Rendle ... LC
malvaefolia Rendle ... **DDD**
palmata Hallier f. ... LC
pinnata (Hochst. ex Choisy) Hallier f. ... LC
pterygocaulos (Choisy) Hallier f. ... LC
verecunda Rendle ... LC

Merwilla, 123
dracomontana (Hilliard & B.L.Burtt) Speta ... LC
plumbea (Lindl.) Speta ... **NT**

Merxmuellera, 201
arundinacea (P.J.Bergius) Conert ... LC
aureocephala (J.G.Anderson) Conert ... LC
cincta (Nees) Conert subsp. cincta ... LC
cincta (Nees) Conert subsp. sericea N.P.Barker ... **VU**
davyi (C.E.Hubb.) Conert ... LC
decora (Nees) Conert ... LC
disticha (Nees) Conert ... LC
drakensbergensis (Schweick.) Conert ... LC
dura (Stapf) Conert ... LC
guillarmodiae Conert ... LC
lupulina (Thunb.) Conert ... LC
macowanii (Stapf) Conert ... LC
papposa (Nees) Conert ... **VU**
rufa (Nees) Conert ... LC
setacea N.P.Barker ... **Rare**
stereophylla (J.G.Anderson) Conert ... LC
stricta (Schrad.) Conert ... LC

Mesembryanthemum
aitonis Jacq. ... LC
barklyi N.E.Br. ... LC
cryptanthum Hook.f. ... LC
crystallinum L. ... LC
eurystigmatum Gerbaulet ... LC
excavatum L.Bolus ... LC
fastigiatum Thunb. ... LC
gariusanum Dinter ... LC
guerichianum Pax ... LC
hypertrophicum Dinter ... LC
inachabense Engl. ... LC
longistylum DC. ... LC
nodiflorum L. ... LC
pellitum Friedrich ... LC
stenandrum (L.Bolus) L.Bolus ... LC
subtruncatum L.Bolus ... LC

Mestoklema, 438
albanicum N.E.Br. ex Glen ... **NT**
arboriforme (Burch.) N.E.Br. ex Glen ... LC
copiosum N.E.Br. ex Glen ... LC
elatum N.E.Br. ex Glen ... LC
illepidum N.E.Br. ex Glen ... LC
tuberosum (L.) N.E.Br. ex Glen ... LC

Metalasia, 263
acuta P.O.Karis ... LC
adunca Less. ... **NT**
agathosmoides Pillans ... LC
albescens P.O.Karis ... **Rare**
alfredii Pillans ... **Rare**
aurea D.Don ... LC
bodkinii L.Bolus ... **VU**
brevifolia (Lam.) Levyns ... LC
calcicola P.O.Karis ... Thr*
capitata (Lam.) Less. ... **VU**
cephalotes (Thunb.) Less. ... LC
compacta Zeyh. ex Sch.Bip. ... LC
confusa Pillans ... LC
cymbifolia Harv. ... LC
densa (Lam.) P.O.Karis ... LC
distans (Schrank) DC. ... **CR**
divergens (Thunb.) D.Don subsp. divergens ... LC
divergens (Thunb.) D.Don subsp. fusca P.O.Karis ... LC
dregeana DC. ... LC
erectifolia Pillans ... **NT**
erubescens DC. ... LC
fastigiata (Thunb.) D.Don ... LC
galpinii L.Bolus ... **VU**
humilis P.O.Karis ... **Critically Rare**
inversa P.O.Karis ... LC
juniperoides Pillans ... **EN**
lichtensteinii Less. ... **Rare**
luteola P.O.Karis ... **EN**
massonii S.Moore ... LC
montana P.O.Karis ... **Rare**
muraltiifolia DC. ... LC
muricata (L.) D.Don ... LC
octoflora DC. ... **EN**
oligocephala P.O.Karis ... **Critically Rare**
pallida Bolus ... LC
phillipsii L.Bolus subsp. incurva (Pillans) P.O.Karis ... LC
phillipsii L.Bolus subsp. phillipsii ... **Rare**
plicata P.O.Karis ... **EN**
pulchella (Cass.) P.O.Karis ... Thr*
pulcherrima Less. ... LC
pungens D.Don ... LC
quinqueflora DC. ... LC
rhoderoides T.M.Salter ... **Rare**
riparia T.M.Salter ... LC
rogersii S.Moore ... LC
seriphiifolia DC. ... **VU**
serrata P.O.Karis ... LC
serrulata P.O.Karis ... **Rare**
strictifolia Bolus ... LC
tenuifolia DC. ... **VU**
tenuis P.O.Karis ... **VU**
tricolor Pillans ... **Critically Rare**
trivialis P.O.Karis ... LC
umbelliformis P.O.Karis ... **VU**

Metarungia, 217
galpinii (Baden) Baden ... **EN**
longistrobus (C.B.Clarke) Baden ... LC
pubinervia (T.Anderson) Baden ... LC

Metrosideros
angustifolia (L.) Sm. ... LC

Meyerophytum, 438
globosum (L.Bolus) Ihlenf. ... **VU**
meyeri (Schwantes) Schwantes ... LC

Micranthus
alopecuroides (L.) Rothm. ... LC
junceus (Baker) N.E.Br. ... LC
tubulosus (Burm.) N.E.Br. ... LC

Microcharis
disjuncta (J.B.Gillett) Schrire var. disjuncta ... LC
galpinii N.E.Br. ... LC
latifolia Benth. ... LC

Microchloa
caffra Nees ... LC
kunthii Desv. ... LC

Micrococca
capensis (Baill.) Prain ... LC

Microcodon
glomeratum A.DC. ... LC
lineare (L.f.) H.Buek ... LC
sparsiflorum A.DC. ... LC

Microcoelia, 196
exilis Lindl. ... LC
obovata Summerh. ... **DDD**

Microdon, 547
capitatus (P.J.Bergius) Levyns ... **EN**
dubius (L.) Hilliard ... LC
linearis Choisy ... Thr*
nitidus (E.Mey.) Hilliard ... **Rare**
orbicularis Choisy ... **NT**
parviflorus (P.J.Bergius) Hilliard ... LC
polygaloides (L.f.) Druce ... LC

Microglossa
caffrorum (Less.) Grau ... LC
mespilifolia (Less.) B.L.Rob. ... LC

Microgramma
mauritiana (Willd.) Tardieu ... LC

Microlepia
speluncae (L.) T.Moore ... LC

Microloma
armatum (Thunb.) Schltr. var. armatum ... LC
armatum (Thunb.) Schltr. var. burchellii (N.E.Br.) Bruyns ... LC
calycinum E.Mey. ... LC
incanum Decne. ... LC
longitubum Schltr. ... LC
namaquense Bolus ... LC
poicilanthum H.Huber ... LC
sagittatum (L.) R.Br. ... LC
tenuifolium (L.) K.Schum. ... LC

Microsorum
pappei (Mett. ex Kuhn) Ching ... LC
punctatum (L.) Copel. ... LC
scolopendria (Burm.f.) Copel. ... LC

Microstegium
nudum (Trin.) A.Camus ... LC

Mikania
capensis DC. ... LC
natalensis DC. ... LC

Mikaniopsis
cissampelina (DC.) C.Jeffrey ... LC

Millettia
grandis (E.Mey.) Skeels ... LC
stuhlmannii Taub. ... LC

Mimetes, 483
arboreus Rourke ... **EN**
argenteus Salisb. ex Knight ... **EN**
capitulatus (L.) R.Br. ... **EN**
chrysanthus Rourke ... **VU**
cucullatus (L.) R.Br. ... LC
fimbriifolius Salisb. ex Knight ... **Rare**
hirtus (L.) Salisb. ex Knight ... **VU**
hottentoticus E.Phillips & Hutch. ... **CR**
palustris Salisb. ex Knight ... **CR**
pauciflorus R.Br. ... **VU**
saxatilis E.Phillips ... **EN**
splendidus Salisb. ex Knight ... **EN**
stokoei E.Phillips & Hutch. ... **CR**

Mimulus
gracilis R.Br. ... LC

Mimusops
caffra E.Mey. ex A.DC. ... LC
obovata Nees ex Sond. ... LC
obtusifolia Lam. ... LC
zeyheri Sond. ... LC

Miraglossum, 237
anomalum (N.E.Br.) Kupicha ... LC
davyi (N.E.Br.) Kupicha ... **VU**
laeve Kupicha ... Thr*
pilosum (Schltr.) Kupicha ... LC
pulchellum (Schltr.) Kupicha ... LC
superbum Kupicha ... LC
verticillare (Schltr.) Kupicha ... LC

Miscanthus
capensis (Nees) Andersson ... LC
junceus (Stapf) Pilg. ... LC

Mitriostigma
axillare Hochst. LC
Mitrophyllum, 438
abbreviatum L.Bolus ....**VU**
clivorum (N.E.Br.) Schwantes LC
dissitum (N.E.Br.) Schwantes....LC
grande N.E.Br. LC
mitratum (Marloth) Schwantes LC
roseum L.Bolus....**Rare**
Mniothamnea, 290
bullata Schltr. ....**CR**
callunoides (Oliv.) Nied. ....**VU**
Mohria
caffrorum (L.) Desv. LC
marginalis (Savigny) J.P.Roux....LC
nudiuscula J.P.Roux LC
rigida J.P.Roux LC
saxatilis J.P.Roux....LC
vestita Baker LC
Mollugo
cerviana (L.) Ser. ex DC. var. cerviana....LC
cerviana (L.) Ser. ex DC. var. spathulifolia Fenzl....LC
namaquensis Bolus LC
pusilla (Schltr.) Adamson....LC
tenella Bolus LC
Momordica
balsamina L. LC
boivinii Baill. LC
cardiospermoides Klotzsch....LC
foetida Schumach. LC
repens Bremek. LC
Monadenium
lugardiae N.E.Br.....LC
Monanthotaxis
caffra (Sond.) Verdc. LC
Mondia, 237
whitei (Hook.f.) Skeels....**EN**
Monechma, 217
acutum C.B.Clarke....LC
crassiusculum P.G.Mey. LC
debile (Forssk.) Nees....LC
distichotrichum (Lindau) P.G.Mey.....LC
divaricatum (Nees) C.B.Clarke....LC
foliosum C.B.Clarke....LC
genistifolium (Engl.) C.B.Clarke subsp. australe (P.G.Mey.) Munday....LC
incanum (Nees) C.B.Clarke....LC
leucoderme (Schinz) C.B.Clarke....LC
linaria C.B.Clarke....DDT
mollissimum (Nees) P.G.Mey.....LC
robustum Bond LC
saxatile Munday....**Rare**
spartioides (T.Anderson) C.B.Clarke....LC
Monilaria, 438
chrysoleuca (Schltr.) Schwantes....LC
moniliformis (Thunb.) Ihlenf. & S.Jörg. LC
obconica Ihlenf. & S.Jörg.....**VU**
pisiformis (Haw.) Schwantes ....**EN**
scutata (L.Bolus) Schwantes subsp. obovata Ihlenf. & S.Jörg.....LC
scutata (L.Bolus) Schwantes subsp. scutata LC
Monochoria
africana (Solms) N.E.Br. LC
Monoculus
hyoseroides (DC.) B.Nord.....LC
monstrosus (Burm.f.) B.Nord.....LC
Monocymbium
ceresiiforme (Nees) Stapf....LC
Monodora
junodii Engl. & Diels var. junodii LC
junodii Engl. & Diels var. macrantha Paiva.....LC
Monopsis, 405
acrodon E.Wimm. LC
alba Phillipson....LC
belliflora E.Wimm. LC
debilis (L.f.) C.Presl var. debilis....LC
debilis (L.f.) C.Presl var. depressa (L.f.) Phillipson LC
debilis (L.f.) C.Presl var. gracilis (C.Presl) Phillipson LC
decipiens (Sond.) Thulin LC
flava (C.Presl ex Eckl. & Zeyh.) E.Wimm. LC
kowynensis E.Wimm.....**VU**
lutea (L.) Urb. LC
scabra (Thunb.) Urb. LC
simplex (L.) E.Wimm. LC
stellarioides (C.Presl) Urb. subsp. stellarioides.....LC
unidentata (Dryand.) E.Wimm. subsp. intermedia Phillipson LC
unidentata (Dryand.) E.Wimm. subsp. laevicaulis (C.Presl) Phillipson LC
unidentata (Dryand.) E.Wimm. subsp. unidentata....LC
variifolia (Sims) Urb.....**EN**
zeyheri (Sond.) Thulin....LC
Monsonia, 389
angustifolia E.Mey. ex A.Rich. LC
attenuata Harv. LC
brevirostrata R.Knuth....LC
burkeana Planch. ex Harv.....LC
emarginata (L.f.) L'Hér.....LC
galpinii Schltr. ex R.Knuth....DDT
glauca R.Knuth....LC
grandifolia R.Knuth....LC
lanuginosa R.Knuth....**Rare**
luederitziana Focke & Schinz....LC
natalensis R.Knuth LC
parvifolia Schinz LC
praemorsa E.Mey. ex R.Knuth LC
senegalensis Guill. & Perr.....LC
speciosa L. ....**EN**
transvaalensis R.Knuth....LC
umbellata Harv.....LC
Monticapra, 273
sp. nov. (*Esterhuysen EE 28615* BOL)....**VU**
sp. nov. (*Esterhuysen EE 35788* BOL)....**EN**
Montinia
caryophyllacea Thunb. LC
Moquiniella
rubra (A.Spreng.) Balle LC
Moraea, 161
albicuspa Goldblatt....LC
albiflora (G.J.Lewis) Goldblatt LC
algoensis Goldblatt....LC
alpina Goldblatt LC
alticola Goldblatt LC
amissa Goldblatt ....**CR**
angulata Goldblatt ....**CR**
angusta (Thunb.) Ker Gawl.....LC
anomala G.J.Lewis....LC
ardesiaca Goldblatt LC
aristata (D.Delaroche) Asch. & Graebn. ....**CR**
aspera Goldblatt....**VU**
atropunctata Goldblatt ....**CR**
australis (Goldblatt) Goldblatt ....Thr*
autumnalis (Goldblatt) Goldblatt....**Rare**
barkerae Goldblatt....LC
barnardiella Goldblatt....**EN**
barnardii L.Bolus ....**CR**
bellendenii (Sweet) N.E.Br.....LC
bifida (L.Bolus) Goldblatt LC
bipartita L.Bolus....LC
bituminosa (L.f.) Ker Gawl.....LC
bolusii Baker LC
brachygyne (Schltr.) Goldblatt....LC
brevistyla (Goldblatt) Goldblatt....LC
brevituba (Goldblatt) Goldblatt....LC
britteniae (L.Bolus) Goldblatt....LC
bubalina Goldblatt LC
bulbillifera (G.J.Lewis) Goldblatt subsp. anomala (Goldblatt) Goldblatt....LC
bulbillifera (G.J.Lewis) Goldblatt subsp. bulbillifera....LC
caeca Barnard ex Goldblatt....LC
calcicola Goldblatt ....**EN**
cantharophila Goldblatt & J.C.Manning LC
carnea Goldblatt LC
cedarmontana Goldblatt....**Rare**
ciliata (L.f.) Ker Gawl. LC
citrina (G.J.Lewis) Goldblatt LC
collina Thunb. LC
comptonii (L.Bolus) Goldblatt....**EN**
contorta Goldblatt ....**Rare**
cookii (L.Bolus) Goldblatt....LC
cooperi Baker ....**VU**
crispa Thunb. LC
debilis Goldblatt....**EN**
deltoidea Goldblatt & J.C.Manning LC
demissa Goldblatt....LC
deserticola Goldblatt ....**Rare**
dracomontana Goldblatt....LC
elegans Jacq.....**EN**
elliotii Baker....LC
elsiae Goldblatt ....**VU**
exiliflora Goldblatt....**Critically Rare**
falcifolia Klatt....LC
fenestralis (Goldblatt & E.G.H.Oliv.) Goldblatt ....**Rare**
fenestrata (Goldblatt) Goldblatt ....**Rare**
fergusoniae L.Bolus....LC
fistulosa (Goldblatt) Goldblatt....**Critically Rare**
flaccida (Sweet) Steud.....LC
flavescens (Goldblatt) Goldblatt....LC
flexicaulis Goldblatt....**Critically Rare**
fragrans Goldblatt....**Rare**
fugacissima (L.f.) Goldblatt....LC
fugax (D.Delaroche) Jacq. subsp. filicaulis (Baker) Goldblatt....LC
fugax (D.Delaroche) Jacq. subsp. fugax....LC
fuscomontana (Goldblatt) Goldblatt....**Rare**
galaxia (L.f.) Goldblatt & J.C.Manning LC
galpinii (Baker) N.E.Br. LC
gawleri Spreng.....LC
gigandra L.Bolus....**EN**
gracilenta Goldblatt LC
graminicola Oberm. subsp. graminicola ....**NT**
graminicola Oberm. subsp. notata Goldblatt LC
herrei (L.Bolus) Goldblatt....LC
hesperantha (Goldblatt) Goldblatt....**NT**
hiemalis Goldblatt....**NT**
huttonii (Baker) Oberm.....LC
inclinata Goldblatt LC
inconspicua Goldblatt....LC
incurva G.J.Lewis ....**VU**
indecora Goldblatt ....**VU**
insolens Goldblatt....**CR**
kamiesensis Goldblatt....**EN**
kamiesmontana (Goldblatt) Goldblatt....**VU**
karroica Goldblatt....LC
knersvlaktensis Goldblatt LC
lewisiae (Goldblatt) Goldblatt subsp. lewisiae.....LC
lewisiae (Goldblatt) Goldblatt subsp. secunda (Goldblatt) Goldblatt....LC
lilacina Goldblatt & J.C.Manning ....**EN**
linderi Goldblatt....**CR**
longiaristata Goldblatt....**CR**
longiflora Ker Gawl. ....**VU**
longifolia (Jacq.) Pers. LC
longistyla (Goldblatt) Goldblatt LC
loubseri Goldblatt ....**CR PE**
louisabolusiae Goldblatt ....**Rare**
lugubris (Salisb.) Goldblatt....LC
lurida Ker Gawl. LC
luteoalba (Goldblatt) Goldblatt....LC
macgregorii Goldblatt....**Rare**
macrocarpa Goldblatt LC
macronyx G.J.Lewis....LC
margaretae Goldblatt....LC
marginata J.C.Manning & Goldblatt ....**Critically Rare**
marionae N.E.Br. LC
marlothii (L.Bolus) Goldblatt....LC
maximiliani (Schltr.) Goldblatt & J.C.Manning....Thr*
melanops Goldblatt & J.C.Manning ....**EN**
miniata Andrews....LC
minima Goldblatt....**CR PE**
minor Eckl.....LC
modesta Killick LC
moggii N.E.Br. subsp. albescens Goldblatt.....LC
moggii N.E.Br. subsp. moggii....LC
monticola Goldblatt....**VU**
muddii N.E.Br. LC
namaquamontana Goldblatt....**Rare**
namaquana (Goldblatt) Goldblatt....**Critically Rare**
namibensis Goldblatt....**VU**
nana (L.Bolus) Goldblatt & J.C.Manning....LC
natalensis Baker....LC
neglecta G.J.Lewis....LC
nubigena Goldblatt ....**Critically Rare**
ochroleuca (Salisb.) Drapiez LC
pallida (Baker) Goldblatt LC
papilionacea (L.f.) Ker Gawl.....LC
patens (Goldblatt) Goldblatt....**CR**
pendula (Goldblatt) Goldblatt....**VU**
pilifolia Goldblatt....LC
polyanthos L.f. LC
polystachya (Thunb.) Ker Gawl. LC

pritzeliana Diels LC
pseudospicata Goldblatt LC
pubiflora N.E.Br. LC
pyrophila Goldblatt LC
radians (Goldblatt) Goldblatt ..... **CR**
ramosissima (L.f.) Druce LC
reflexa Goldblatt LC
regalis Goldblatt & J.C.Manning ..... **CR**
reticulata Goldblatt LC
riparia (Goldblatt) Goldblatt LC
rivulicola Goldblatt & J.C.Manning ..... **Rare**
robusta (Goldblatt) Goldblatt LC
saxicola Goldblatt LC
schlechteri (L.Bolus) Goldblatt LC
serpentina Baker LC
serratostyla (Goldblatt) Goldblatt LC
setifolia (L.f.) Druce LC
simplex Goldblatt & J.C.Manning ..... Thr*
simulans Baker LC
spathulata (L.f.) Klatt LC
speciosa (L.Bolus) Goldblatt LC
stagnalis (Goldblatt) Goldblatt ..... **VU**
stricta Baker LC
thomasiae Goldblatt LC
thomsonii Baker LC
tortilis Goldblatt LC
tricolor Andrews ..... **EN**
tricuspidata (L.f.) G.J.Lewis LC
trifida R.C.Foster LC
tripetala (L.f.) Ker Gawl. LC
tulbaghensis L.Bolus ..... **EN**
umbellata Thunb. LC
unguiculata Ker Gawl. LC
unibracteata Goldblatt ..... **NT**
vallisavium Goldblatt ..... **Rare**
vallisbelli (Goldblatt) Goldblatt ..... **NT**
variabilis (G.J.Lewis) Goldblatt ..... **EN**
vegeta L. LC
venenata Dinter LC
verecunda Goldblatt ..... **Rare**
versicolor (Salisb. ex Klatt) Goldblatt ..... **VU**
vespertina Goldblatt & J.C.Manning ..... **Rare**
vigilans Goldblatt & J.C.Manning LC
villosa (Ker Gawl.) Ker Gawl. subsp. elandsmontana Goldblatt ..... **VU**
villosa (Ker Gawl.) Ker Gawl. subsp. villosa ..... **VU**
virgata Jacq. subsp. karooica (Goldblatt) Goldblatt ..... **Rare**
virgata Jacq. subsp. virgata LC
viscaria (L.f.) Ker Gawl. LC
vlokii Goldblatt ..... **Rare**
worcesterensis Goldblatt ..... **CR**

Morella, 445
brevifolia (E.Mey. ex C.DC.) Killick LC
cordifolia (L.) Killick LC
diversifolia (Adamson) Killick LC
humilis (Cham. & Schltdl.) Killick LC
integra (A.Chev.) Killick LC
kraussiana (Buchinger ex Meisn.) Killick LC
microbracteata (Weim.) Verdc. & Polhill ..... **EN**
pilulifera (Rendle) Killick LC
quercifolia (L.) Killick LC
serrata (Lam.) Killick LC

Morus
mesozygia Stapf ex A.Chev. LC

Mosdenia
leptostachys (Ficalho & Hiern) Clayton LC

Mossia
intervallaris (L.Bolus) N.E.Br. LC

Mucuna
coriacea Baker subsp. irritans (Burtt Davy) Verdc. LC
gigantea (Willd.) DC. subsp. gigantea LC
pruriens (L.) DC. var. pruriens LC

Muiria, 438
hortenseae N.E.Br. ..... **CR**

Mukia
maderaspatana (L.) M.Roem. LC

Mundulea
sericea (Willd.) A.Chev. subsp. sericea LC

Muraltia, 459
acerosa Harv. LC
acicularis Harv. LC
acipetala Harv. ..... **Rare**
aciphylla Levyns ..... **DDD**
alba Levyns ..... **Rare**
alopecuroides (L.) DC. LC
alticola Schltr. LC
angulosa Turcz. LC
angustiflora Levyns ..... **DDD**
arachnoidea Chodat ..... **VU**
aspalatha DC. ..... **Rare**
aspalathoides Schltr. ..... Thr*
asparagifolia Eckl. & Zeyh. LC
barkerae Levyns ..... **EN**
bolusii Levyns ..... **EN**
bondii Vlok ..... **Critically Rare**
brachyceras Schltr. LC
brachypetala Wolley-Dod ..... **VU**
brevicornu DC. ..... **EN**
caledonensis Levyns ..... **EN**
calycina Harv. ..... **VU**
capensis Levyns ..... **DDD**
carnosa E.Mey. ex Harv. ..... **Rare**
chamaepitys Chodat ..... **VU**
ciliaris DC. LC
cliffortiifolia Eckl. & Zeyh. ..... **VU**
collina Levyns LC
commutata Levyns LC
comptonii Levyns ..... **VU**
concava Levyns ..... **DDD**
crassifolia Harv. LC
curvipetala Levyns ..... **Rare**
cuspifolia Chodat ..... **DDD**
cyclolopha Chodat ..... **VU**
decipiens Schltr. ..... **EN**
demissa Wolley-Dod LC
depressa DC. LC
diabolica Levyns ..... **Rare**
dispersa Levyns LC
divaricata Eckl. & Zeyh. LC
dumosa (Poir.) DC. LC
elsieae Paiva ..... **Critically Rare**
empetroides Chodat LC
empleuridioides Schltr. var. diversifolia Levyns LC
empleuridioides Schltr. var. empleuridioides LC
ericaefolia DC. LC
ericoides (Burm.f.) Steud. LC
ferox Levyns ..... **CR PE**
filiformis (Thunb.) DC. var. caledonensis Levyns LC
filiformis (Thunb.) DC. var. filiformis LC
flanaganii Bolus LC
gillettiae Levyns ..... **EN**
guthriei Levyns ..... **VU**
harveyana Levyns ..... **VU**
heisteria (L.) DC. LC
hirsuta Levyns ..... **EN**
horrida Diels LC
hyssopifolia Chodat LC
juniperifolia (Poir.) DC. LC
karroica Levyns ..... **VU**
knysnaensis Levyns ..... **VU**
lancifolia Harv. LC
langebergensis Levyns ..... **Rare**
leptorhiza Turcz. LC
lewisiae Levyns ..... **VU**
lignosa Levyns LC
longicuspis Turcz. LC
macowanii Levyns LC
macrocarpa Eckl. & Zeyh. LC
macroceras DC. LC
macropetala Harv. ..... **VU**
minuta Levyns ..... **EN**
mitior (P.J.Bergius) Levyns ..... **EN**
mixta (L.f.) DC. ..... **DDD**
montana Levyns ..... **Rare**
muirii F.Bolus LC
muraltioides (Eckl. & Zeyh.) Levyns LC
mutabilis Levyns ..... **DDD**
namaquensis Levyns LC
obovata DC. ..... **VU**
occidentalis Levyns ..... **Rare**
ononidifolia Eckl. & Zeyh. LC
orbicularis Hutch. ..... **VU**
origanoides C.Presl LC
oxysepala Schltr. LC
pageae Levyns LC
paludosa Levyns ..... **Rare**
pappeana Harv. ..... **NT**
parvifolia N.E.Br. LC
pauciflora (Thunb.) DC. LC
pillansii Levyns LC
plumosa Chodat LC
polyphylla (DC.) Levyns LC
pottebergensis Levyns ..... **VU**
pubescens DC. LC
pungens Schltr. LC
rara Levyns ..... **DDD**
rhamnoides Chodat LC
rigida E.Mey. ex Turcz. LC
rosmarinifolia Levyns LC
rubeacea Eckl. & Zeyh. LC
salsolacea Chodat LC
satureioides DC. var. floribunda Levyns LC
satureioides DC. var. salteri Levyns ..... **CR PE**
satureioides DC. var. satureioides LC
saxicola Chodat LC
schlechteri Levyns ..... **DDD**
serpylloides DC. LC
serrata Levyns ..... **DDD**
spicata Bolus ..... **VU**
splendens Levyns var. splendens LC
squarrosa (L.f.) DC. LC
stenophylla Levyns LC
stipulacea (Burm.f.) DC. ..... **DDD**
stokoei Levyns ..... **Rare**
tenuifolia (Poir.) DC. ..... **VU**
thunbergii Eckl. & Zeyh. ..... **NT**
thymifolia (Thunb.) DC. LC
trinervia (L.f.) DC. ..... **NT**
vulnerans Levyns LC
vulpina Chodat LC

Murdannia
simplex (Vahl) Brenan LC

Myosotis
afropalustris C.H.Wright LC
galpinii C.H.Wright LC
graminifolia A.DC. LC
semiamplexicaulis A.DC. ..... DDT

Myrothamnus
flabellifolius Welw. ..... DDT

Myrsine
africana L. LC
pillansii Adamson LC

Mystacidium, 196
aliceae Bolus ..... **VU**
brayboniae Summerh. ..... **NT**
capense (L.f.) Schltr. LC
flanaganii (Bolus) Bolus LC
gracile Harv. LC
pusillum Harv. LC
venosum Harv. ex Rolfe LC

Mystropetalon
thomii Harv. LC

Mystroxylon
aethiopicum (Thunb.) Loes. subsp. aethiopicum LC
aethiopicum (Thunb.) Loes. subsp. burkeanum (Sond.) R.H.Archer LC
aethiopicum (Thunb.) Loes. subsp. schlechteri (Loes.) R.H.Archer LC

Myxopappus
acutilobus (DC.) Källersjö LC

N

Najas
graminea Delile var. graminea LC
marina L. ex Magnus subsp. armata (H.Lindb.) Horn LC
setacea (A.Br.) Rendle ..... DDT

Namaquanthus, 439
vanheerdii L.Bolus ..... **VU**

Namaquanula, 70
bruce-bayeri D. & U.Müll.-Doblies ..... **VU**

Nananthus
aloides (Haw.) Schwantes LC
gerstneri (L.Bolus) L.Bolus LC
margaritiferus L.Bolus LC
pallens (L.Bolus) L.Bolus LC
pole-evansii N.E.Br. LC
vittatus (N.E.Br.) Schwantes ..... DDT

Nebelia, 290
fragarioides (Willd.) Kuntze LC
laevis (E.Mey.) Kuntze ..... **VU**
paleacea (P.J.Bergius) Sweet LC

sphaerocephala (Sond.) Kuntze ..... **Rare**
stokoei Pillans ..... **Rare**
tulbaghensis Schltr. ex Dummer ..... DDT

Nectaropetalum
capense (Bolus) Stapf & Boodle LC
zuluense (Schönland) Corbishley LC

Neesenbeckia
punctoria (Vahl) Levyns LC

Nelia, 439
pillansii (N.E.Br.) Schwantes ..... **Rare**
schlechteri Schwantes ..... **Rare**

Nemesia, 548
acornis K.E.Steiner ..... **Rare**
acuminata Benth. LC
affinis Benth. LC
albiflora N.E.Br. LC
anfracta Hiern ..... DDT
anisocarpa E.Mey. ex Benth. LC
azurea Diels LC
barbata (Thunb.) Benth. LC
bicornis (L.) Pers. LC
bodkinii Bolus LC
brevicalcarata Schltr. LC
caerulea Hiern LC
calcarata E.Mey. ex Benth. LC
cheiranthus E.Mey. ex Benth. LC
chrysolopha Diels ..... DDT
cynanchifolia Benth. LC
deflexa Grant ex K.E.Steiner LC
denticulata (Benth.) Grant ex Fourc. LC
diffusa Benth. var. diffusa LC
diffusa Benth. var. rigida Benth. LC
euryceras Schltr. LC
fleckii Thell. LC
floribunda Lehm. LC
fruticans (Thunb.) Benth. LC
glabriuscula Hilliard & B.L.Burtt LC
glaucescens Hiern ..... DDT
gracilis Benth. LC
grandiflora Diels ..... DDT
hanoverica Hiern LC
hemiptera K.E.Steiner ..... **Critically Rare**
ionantha Diels ..... DDT
karroensis Bond LC
lanceolata Hiern LC
leipoldtii Hiern LC
ligulata E.Mey. ex Benth. LC
lilacina N.E.Br. LC
linearis Vent. LC
lucida Benth. ..... DDT
macrocarpa (Aiton) Druce LC
macroceras Schltr. var. macroceras LC
macroceras Schltr. var. ß crocea Schltr. ..... Thr*
maxii Hiern LC
melissifolia Benth. LC
micrantha Hiern ..... **EX**
pageae L.Bolus LC
pallida Hiern ..... DDT
parviflora Benth. LC
petiolina Hiern LC
picta Schltr. ..... **Rare**
pinnata (L.f.) E.Mey. ex Benth. LC
platysepala Diels LC
psammophila Schltr. LC
pubescens Benth. var. glabrior Benth. ex Hiern LC
pubescens Benth. var. pubescens LC
pulchella Schltr. ex Hiern LC
rupicola Hilliard LC
saccata E.Mey. ex Benth. ..... **Rare**
silvatica Hilliard LC
sp. nov. (*Fourcade 1594* BOL) ..... **CR**
strumosa (Herb. Banks ex Benth.) Benth. ..... **NT**
umbonata (Hiern) Hilliard & B.L.Burtt LC
versicolor E.Mey. ex Benth. var. oxyceras Benth. LC
versicolor E.Mey. ex Benth. var. versicolor LC
viscosa E.Mey. ex Benth. LC
williamsonii K.E.Steiner LC
zimbabwensis Rendle ..... **EN**

Nenax, 521
acerosa Gaertn. subsp. acerosa LC
acerosa Gaertn. subsp. macrocarpa (Eckl. & Zeyh.) Puff LC
arenicola Puff LC
cinerea (Thunb.) Puff LC
coronata Puff LC
divaricata T.M.Salter LC
elsieae Puff ..... **Rare**
hirta (Cruse) T.M.Salter subsp. calciphila Puff ..... **NT**
hirta (Cruse) T.M.Salter subsp. hirta LC
microphylla (Sond.) T.M.Salter LC
namaquensis Puff LC
sp. nov. (*Levyns 9200* BOL) ..... **VU**

Neobolusia
tysonii (Bolus) Schltr. LC

Neohenricia, 439
sibbettii (L.Bolus) L.Bolus LC
spiculata S.A.Hammer ..... **Rare**

Neonotonia
wightii (Wight. ex Arn.) J.A.Lackey LC

Neopatersonia, 123
namaquensis G.J.Lewis ..... **VU**
uitenhagensis Schönland LC

Neorautanenia
amboensis Schinz LC
ficifolia (Benth. ex Harv.) C.A.Sm. LC

Nephrolepis
biserrata (Sw.) Schott LC

Nephrotheca
ilicifolia (L.) B.Nord. & Källersjö LC

Neptunia
oleracea Lour. LC

Nerine, 75
angustifolia (Baker) Baker LC
appendiculata Baker LC
bowdenii Watson ..... **Rare**
filamentosa W.F.Barker LC
filifolia Baker LC
frithii L.Bolus LC
gaberonensis Bremek. & Oberm. LC
gibsonii Douglas ..... **VU**
gracilis R.A.Dyer ..... **NT**
hesseoides L.Bolus LC
humilis (Jacq.) Herb. LC
huttoniae Schönland ..... **VU**
krigei W.F.Barker LC
laticoma (Ker Gawl.) T.Durand & Schinz LC
marincowitzii Snijman ..... **VU**
masoniorum L.Bolus ..... **CR**
pancratioides Baker ..... **VU**
platypetala McNeil ..... **VU**
pudica Hook.f. ..... **Rare**
rehmannii (Baker) L.Bolus LC
ridleyi E.Phillips ..... **Rare**
sarniensis (L.) Herb. LC
undulata (L.) Herb. LC

Nervilia, 197
bicarinata (Blume) Schltr. LC
crociformis (Zoll. & Moritzi) Seidenf. LC
gassneri Börge Pett. LC
kotschyi (Rchb.f.) Schltr. var. purpurata (Rchb.f. & Sond.) Börge Pett. LC
renschiana (Rchb.f.) Schltr. ..... **DDD**

Nesaea, 405
alata Immelman ..... **Rare**
anagalloides (Sond.) Koehne LC
cordata Hiern LC
crassicaulis (Guill. & Perr.) Koehne LC
cymosa Immelman LC
dinteri Koehne subsp. elata A.Fern. LC
drummondii A.Fern. LC
heptamera Hiern LC
passerinoides (Welw. ex Hiern) Koehne LC
radicans Guill. & Perr. var. floribunda (Sond.) A.Fern. LC
rigidula (Sond.) Koehne LC
sagittifolia (Sond.) Koehne var. ericiformis Koehne LC
sagittifolia (Sond.) Koehne var. sagittifolia LC
schinzii Koehne LC
schlechteri A.Fern. LC
tolypobotrys Koehne LC
wardii Immelman ..... **VU**
woodii Koehne LC
zambatidis Immelman LC

Nestlera
biennis (Jacq.) Spreng. LC

Neuracanthus
africanus T.Anderson ex S.Moore var. africanus LC
africanus T.Anderson ex S.Moore var. limpopoensis Bidgood & Brummitt LC

Neuradopsis
austro-africana (Schinz) Bremek. & Oberm. LC
bechuanensis Bremek. & Schweick. LC

Neurotheca
congolana De Wild. & T.Durand LC

Nevillea, 208
obtusissima (Steud.) H.P.Linder LC
singularis Esterh ..... **VU**
sp. nov. (*Helme 3916* NBG) ..... **VU**

Newtonia, 380
hildebrandtii (Vatke) Torre var. hildebrandtii ..... **Declining**

Nicolasia
nitens (O.Hoffm.) Eyles var. nitens LC
stenoptera (O.Hoffm.) Merxm. subsp. stenoptera LC

Nidorella
agria Hilliard LC
anomala Steetz LC
auriculata DC. LC
foetida (L.) DC. LC
hottentotica DC. LC
linifolia DC. LC
microcephala Steetz LC
resedifolia DC. subsp. resedifolia LC
tongensis Hilliard ..... Thr*
undulata (Thunb.) Sond. ex Harv. LC

Nivenia, 169
argentea Goldblatt LC
binata Klatt LC
concinna N.E.Br. ..... **VU**
corymbosa (Ker Gawl.) Baker LC
dispar N.E.Br. ..... **VU**
fruticosa (L.f.) Baker ..... **Rare**
inaequalis Goldblatt & J.C.Manning LC
levynsiae Weim ..... **Rare**
parviflora Goldblatt ..... **Rare**
stenosiphon Goldblatt ..... **Rare**
stokoei (L.Guthrie) N.E.Br. ..... **Rare**

Nolletia
arenosa O.Hoffm. LC
ciliaris (DC.) Steetz LC
gariepina (DC.) Mattf. LC
rarifolia (Turcz.) Steetz LC
ruderalis Hilliard LC

Noltea
africana (L.) Endl. LC

Norlindhia
amplectens (Harv.) B.Nord. LC
breviradiata (Norl.) B.Nord. LC

Notechidnopsis, 237
columnaris (Nel) Lavranos & Bleck ..... **Rare**
tessellata (Pillans) Lavranos & Bleck LC

Nothoperanema
squamiseta (Hook.) Ching LC

Nothosaerva
brachiata (L.) Wight LC

Nuxia
congesta R.Br. ex Fresen. LC
floribunda Benth. LC
glomerulata (C.A.Sm.) I.Verd. LC
gracilis Engl. LC
oppositifolia (Hochst.) Benth. LC

Nylandtia
scoparia (Eckl. & Zeyh.) Goldblatt & J.C.Manning LC
spinosa (L.) Dumort LC

Nymania
capensis (Thunb.) Lindb. LC

Nymphaea
lotus L. LC
nouchali Burm.f. var. caerulea (Savigny) Verdc. LC
nouchali Burm.f. var. zanzibariensis (Casp.) Verdc. LC

Nymphoides, 408
forbesiana (Griseb.) Kuntze ..... **DDD**
indica (L.) Kuntze subsp. occidentalis A.Raynal LC
rautanenii (N.E.Br.) A.Raynal LC
thunbergiana (Griseb.) Kuntze LC

O

Oberonia, 197
disticha (Lam.) Schltr. ... **CR**
Obetia
tenax (N.E.Br.) Friis ... LC
Ochna
arborea Burch. ex DC. var. arborea ... LC
arborea Burch. ex DC. var. oconnorii (E.Phillips) Du Toit ... LC
barbosae N.Robson ... LC
confusa Burtt Davy & Greenway ... LC
gamostigmata Du Toit ... LC
glauca I.Verd. ... LC
holstii Engl. ... LC
inermis (Forssk.) Schweinf. ... LC
natalitia (Meisn.) Walp. ... LC
pretoriensis E.Phillips ... LC
pulchra Hook.f. ... LC
serrulata (Hochst.) Walp ... LC
Ocimum
americanum L. var. americanum ... LC
angustifolium Benth. ... LC
burchellianum Benth. ... LC
coddii (S.D.Will. & K.Balkwill) A.J.Paton ... LC
dolomiticola A.J.Paton ... LC
filamentosum Forssk. ... LC
gratissimum L. subsp. gratissimum var. gratissimum ... LC
labiatum (N.E.Br.) A.J.Paton ... LC
natalense Ayob. ex A.J.Paton ... LC
obovatum E.Mey. ex Benth. subsp. obovatum var. galpinii (Gürke) A.J.Paton ... LC
obovatum E.Mey. ex Benth. subsp. obovatum var. obovatum ... LC
pseudoserratum (M.Ashby) A.J.Paton ... LC
reclinatum (S.D.Will. & K.Balkwill) A.J.Paton ... LC
serratum (Schltr.) A.J.Paton ... LC
tubiforme (R.D.Good) A.J.Paton ... LC
waterbergense (S.D.Will. & K.Balkwill) A.J.Paton ... LC
Ocotea, 403
bullata (Burch.) Baill. ... **EN**
kenyensis (Chiov.) Robyns & R.Wilczek ... **VU**
Octopoma, 439
abruptum (A.Berger) N.E.Br. ... **DDD**
connatum (L.Bolus) L.Bolus ... LC
inclusum (L.Bolus) N.E.Br. ... LC
octojuge (L.Bolus) N.E.Br. ... **VU**
quadrisepalum (L.Bolus) H.E.K.Hartmann ... **VU**
rupigenum (L.Bolus) L.Bolus ... **DDD**
subglobosum (L.Bolus) L.Bolus ... LC
tetrasepalum (L.Bolus) H.E.K.Hartmann ... LC
Odontelytrum
abyssinicum Hack. ... LC
Odontophorus, 439
angustifolius L.Bolus subsp. angustifolius ... **Rare**
angustifolius L.Bolus subsp. protoparcoides S.A.Hammer ... **Rare**
marlothii N.E.Br. ... **Rare**
nanus L.Bolus ... LC
pusillus S.A.Hammer ... LC
Odyssea
paucinervis (Nees) Stapf ... LC
Oeceoclades
decaryana (H.Perrier) Garay & P.Taylor ... LC
lonchophylla (Rchb.f.) Garay & P.Taylor ... LC
mackenii (Rolfe ex Hemsl.) Garay & P.Taylor ... LC
Oedera, 273
capensis (L.) Druce ... LC
conferta (Hutch.) Anderb. & K.Bremer ... **VU**
epaleacea Beyers ... **Critically Rare**
foveolata (K.Bremer) Anderb. & K.Bremer ... **DDD**
genistifolia (L.) Anderb. & K.Bremer ... LC
hirta Thunb. ... LC
imbricata Lam. ... LC
laevis DC. ... **DDD**
multipunctata (DC.) Anderb. & K.Bremer ... **NT**
nordenstamii (K.Bremer) Anderb. & K.Bremer ... **Rare**
resinifera (K.Bremer) Anderb. & K.Bremer ... **Rare**
sedifolia (DC.) Anderb. & K.Bremer ... LC
silicicola (K.Bremer) Anderb. & K.Bremer ... **VU**
squarrosa (L.) Anderb. & K.Bremer ... LC
steyniae (L.Bolus) Anderb. & K.Bremer ... **VU**
uniflora (L.f.) Anderb. & K.Bremer ... LC
viscosa (L'Hér.) Anderb. & K.Bremer ... **NT**
Oftia, 548
africana (L.) Bocq. ... LC
glabra Compton ... **Rare**
revoluta (E.Mey.) Bocq. ... LC
Olax
dissitiflora Oliv. ... LC
Oldenburgia
grandis (Thunb.) Baill. ... LC
intermedia Bond ... LC
papionum DC. ... LC
paradoxa Less. ... LC
Oldenlandia
affinis (Roem. & Schult.) DC. subsp. fugax (Vatke) Verdc. ... LC
capensis L.f. var. capensis ... LC
cephalotes (Hochst.) Kuntze ... LC
corymbosa L. var. caespitosa (Benth.) Verdc. ... LC
geminiflora (Sond.) Kuntze ... LC
herbacea (L.) Roxb. var. flaccida Bremek. ... LC
herbacea (L.) Roxb. var. herbacea ... LC
herbacea (L.) Roxb. var. suffruticosa Bremek. ... LC
lancifolia (Schumach.) DC. var. scabridula Bremek. ... LC
muscosa Bremek. ... LC
rosulata K.Schum. var. rosulata ... LC
rupicola (Sond.) Kuntze var. hirtula (Sond.) Bremek. ... LC
rupicola (Sond.) Kuntze var. rupicola ... LC
tenella (Hochst.) Kuntze ... LC
Olea
capensis L. subsp. capensis ... LC
capensis L. subsp. enervis (Harv. ex C.H.Wright) I.Verd. ... LC
capensis L. subsp. macrocarpa (C.H.Wright) I.Verd. ... LC
europaea L. subsp. africana (Mill.) P.S.Green ... LC
exasperata Jacq. ... LC
woodiana Knobl. subsp. woodiana ... LC
Oleandra
distenta Kunze ... LC
Oligocarpus
calendulaceus (L.f.) Less. ... LC
Oligomeris
dipetala (Aiton) Turcz. var. dipetala ... LC
dregeana (Müll.Arg.) Müll.Arg. ... LC
Oligothrix, 274
gracilis DC. ... **Rare**
Olinia
capensis (Jacq.) Klotzsch ... LC
emarginata Burtt Davy ... LC
micrantha Decne. ... LC
radiata Hofmeyr & E.Phillips ... LC
rochetiana Juss. ... LC
ventosa (L.) Cufod. ... LC
Oncinema
lineare (L.f.) Bullock ... LC
Oncinotis
tenuiloba Stapf ... LC
Oncoba
spinosa Forssk. subsp. spinosa ... LC
Oncocalyx
bolusii (Sprague) Wiens & Polhill ... LC
quinquenervius (Hochst.) Wiens & Polhill ... LC
Oncosiphon, 274
africanum (P.J.Bergius) Källersjö ... **VU**
glabratum (Thunb.) Källersjö ... DDT
grandiflorum (Thunb.) Källersjö ... LC
intermedium (Hutch.) Källersjö ... Thr*
piluliferum (L.f.) Källersjö ... LC
sabulosum (Wolley-Dod) Källersjö ... LC
schlechteri (Bolus) Källersjö ... **EN**
suffruticosum (L.) Källersjö ... LC
Onixotis see **Wurmbea**
Oophytum
nanum (Schltr.) L.Bolus ... LC
oviforme (N.E.Br.) N.E.Br. ... LC
Ophioglossum, 54
bergianum Schltdl. ... **Rare**
caroticaule J.E.Burrows ... LC
convexum J.E.Burrows ... LC
costatum R.Br. ... LC
gomezianum Welw. ex A.Braun ... LC
gracile Pocock ex J.E.Burrows ... LC
gracillimum Welw. ex Hook. & Baker ... **EN**
lusoafricanum Welw. ex Prantl ... LC
nudicaule L.f. ... LC
polyphyllum A.Braun ... LC
reticulatum L. subsp. reticulatum ... LC
rubellum Welw. ex A.Braun ... LC
vulgatum L. subsp. africanum Pocock ex J.E.Burrows var. africanum ... LC
vulgatum L. subsp. kilimandscharicum (Hieron.) J.E.Burrows ... LC
Ophionella, 237
arcuata (N.E.Br.) Bruyns subsp. arcuata ... LC
arcuata (N.E.Br.) Bruyns subsp. mirkinii (Pillans) Bruyns ... LC
willowmorensis Bruyns ... **Rare**
Ophrestia
oblongifolia (E.Mey.) H.M.L.Forbes var. oblongifolia ... LC
oblongifolia (E.Mey.) H.M.L.Forbes var. velutinosa H.M.L.Forbes ... LC
Oplismenus
burmannii (Retz.) P.Beauv. ... LC
hirtellus (L.) P.Beauv. ... LC
undulatifolius (Ard.) Roem. & Schult. ... LC
Orbea, 237
carnosa (Stent) Bruyns subsp. carnosa ... LC
carnosa (Stent) Bruyns subsp. keithii (R.A.Dyer) Bruyns ... LC
ciliata (Thunb.) L.C.Leach ... LC
conjuncta (A.C.White & B.Sloane) Bruyns ... LC
cooperi (N.E.Br.) L.C.Leach ... LC
elegans Plowes ... **CR PE**
gerstneri (Letty) Bruyns subsp. elongata (R.A.Dyer) Bruyns ... **Rare**
gerstneri (Letty) Bruyns subsp. gerstneri ... **Rare**
hardyi (R.A.Dyer) Bruyns ... **Rare**
knobelii (E.Phillips) Bruyns ... LC
longidens (N.E.Br.) L.C.Leach ... LC
longii (C.A.Lückh.) Bruyns ... **Rare**
lugardii (N.E.Br.) Bruyns ... LC
lutea (N.E.Br.) Bruyns subsp. lutea ... LC
lutea (N.E.Br.) Bruyns subsp. vaga (N.E.Br.) Bruyns ... LC
macloughlinii (I.Verd.) L.C.Leach ... **Rare**
maculata (N.E.Br.) L.C.Leach subsp. maculata ... LC
melanantha (Schltr.) Bruyns ... LC
miscella (N.E.Br.) Meve ... LC
namaquensis (N.E.Br.) L.C.Leach ... LC
paradoxa (I.Verd.) L.C.Leach ... LC
pulchella (Masson) L.C.Leach ... LC
rogersii (L.Bolus) Bruyns ... LC
tapscottii (I.Verd.) L.C.Leach ... LC
variegata (L.) Haw. ... LC
verrucosa (Masson) L.C.Leach ... LC
woodii (N.E.Br.) L.C.Leach ... **VU**
Oreoleysera
montana (Bolus) K.Bremer ... LC
Oreosyce
africana Hook.f. ... LC
Oresbia
heterocarpa Cron & B.Nord. ... LC
Oricia
bachmannii (Engl.) I.Verd. ... LC
Ormocarpum
kirkii S.Moore ... LC
trichocarpum (Taub.) Engl. ... LC
Ornithogalum, 123
abyssinicum (Jacq.) J.C.Manning & Goldblatt ... LC
adseptentrionesvergentulum U. & D.Müll.-Dobies ... LC
aetfatense U. & D.Müll.-Dobies ... LC
anguinum F.M.Leight. ... LC
autumnulum U. & D.Müll.-Dobies ... LC
baurii Baker ... LC
bicornutum F.M.Leight. ... LC
britteniae F.M.Leight. ... **VU**
brucebayeri U. & D.Müll.-Dobies ... LC
campanulatum U. & D.Müll.-Dobies ... LC
capillare J.M.Wood & M.S.Evans ... LC
ciliiferum U. & D.Müll.-Dobies ... LC
concordianum (Baker) U. & D.Müll.-Dobies ... LC
conicum Jacq. subsp. conicum ... LC
conicum Jacq. subsp. strictum (L.Bolus) Oberm. ... LC
constrictum F.M.Leight. ... LC
corticatum Mart.-Azorín ... LC

decusmontium G.Will. LC
deltoideum Baker LC
diluculum Oberm. LC
diphyllum Baker LC
dolichopharynx U. & D.Müll.-Doblies LC
dregeanum Kunth LC
dubium Houtt. LC
esterhuyseniae Oberm. .... **Rare**
etesiograripense U. & D.Müll.-Doblies subsp. etesiograripense LC
fimbrimarginatum F.M.Leight. LC
flexuosum (Thunb.) U. & D.Müll.-Doblies LC
geniculatum Oberm. LC
gethylloides U. & D.Müll.-Doblies LC
glandulosum Oberm. LC
glaucifolium U. & D.Müll.-Doblies LC
graminifolium Thunb. LC
gregorianum U. & D.Müll.-Doblies LC
hallii Oberm. .... **CR PE**
hispidulum U. & D.Müll.-Doblies LC
hispidum Hornem. subsp. bergii (Schltdl.) Oberm. LC
hispidum Hornem. subsp. hispidum LC
inclusum F.M.Leight. .... **CR**
juncifolium Jacq. var. emsii Van Jaarsv. & A.E.van Wyk .... **Critically Rare**
juncifolium Jacq. var. juncifolium LC
karachabpoortense U. & D.Müll.-Doblies LC
kirstenii J.C.Manning & Goldblatt .... **Rare**
knersvlaktense U. & D.Müll.-Doblies LC
leeupoortense U. & D.Müll.-Doblies LC
longibracteatum Jacq. LC
longicollum U. & D.Müll.-Doblies LC
maculatum Jacq. LC
materfamilias U. & D.Müll.-Doblies LC
monarchos U. & D.Müll.-Doblies LC
monophyllum Baker subsp. eckardtianum U. & D.Müll.-Doblies LC
monophyllum Baker subsp. monophyllum LC
multifolium Baker LC
namaquanulum U. & D.Müll.-Doblies LC
nanodes F.M.Leight. LC
nathoanum U. & D.Müll.-Doblies LC
naviculum W.F.Barker .... **VU**
osmynellum U. & D.Müll.-Doblies LC
ovatum Thunb. subsp. oliverorum U. & D.Müll.-Doblies LC
ovatum Thunb. subsp. ovatum LC
paludosum Baker LC
paucifolium U. & D.Müll.-Doblies subsp. karooparkense U. & D.Müll.-Doblies LC
paucifolium U. & D.Müll.-Doblies subsp. paucifolium LC
pearsonii F.M.Leight LC
pentheri Zahlbr. LC
perdurans A.P.Dold & S.A.Hammer .... **VU**
pilosum L.f. LC
polyphyllum Jacq. LC
prasinum Lindl. LC
pruinosum F.M.Leight. LC
psammophorum U. & D.Müll.-Doblies LC
pullatum F.M.Leight. .... **Rare**
rogersii Baker ....DDT
rossouwii U. & D.Müll.-Doblies LC
rotatum U. & D.Müll.-Doblies LC
rupestre L.f. (Plate 16) LC
sabulosum U. & D.Müll.-Doblies LC
sardienii Van Jaarsv. .... **Critically Rare**
saundersiae Baker LC
scabrocostatum U. & D.Müll.-Doblies LC
schlechterianum Schinz LC
secundum Jacq. LC
seineri (Engl. & K.Krause) Oberm. LC
semipedale (Baker) U. & D.Müll.-Doblies LC
sephtonii Hilliard & B.L.Burtt LC
stuetselianum U. & D.Müll.-Doblies LC
suaveolens Jacq. LC
subcoriaceum L.Bolus LC
subglandulosum U. & D.Müll.-Doblies LC
synadelphicum U. & D.Müll.-Doblies LC
tenuifolium F.Delaroche subsp. aridum Oberm. LC
tenuifolium F.Delaroche subsp. tenuifolium LC
thermophilum F.M.Leight ....DDT
thyrsoides Jacq. LC
tortuosum Baker LC
toxicarium C. & R.H.Archer LC
unifoliatum (G.D.Rowley) Oberm. .... **Critically Rare**
unifolium Retz. var. unifolium LC
unifolium Retz. var. vestitum U. & D.Müll.-Doblies LC
verae U. & D.Müll.-Doblies LC
xanthochlorum Baker LC
zebrinellum U. & D.Müll.-Doblies LC
zebrinum (Baker) Oberm. .... **Rare**

Ornithoglossum, 102
dinteri K.Krause LC
gracile B.Nord. .... **NT**
parviflorum B.Nord. var. namaquense B.Nord. LC
parviflorum B.Nord. var. parviflorum LC
undulatum Sweet LC
viride (L.f.) Aiton LC
vulgare B.Nord. LC
zeyheri (Baker) B.Nord. LC

Oropetium
capense Stapf LC

Orothamnus, 489
zeyheri Pappe ex Hook.f. .... **VU**

Orphium
frutescens (L.) E.Mey. LC

Orthanthera
jasminiflora (Decne.) Schinz LC

Orthopterum, 439
coegana L.Bolus .... **CR**
waltoniae L.Bolus LC

Orthosiphon
fruticosus Codd LC
rubicundus (D.Don) Benth. LC
suffrutescens (Thonn.) J.K.Morton LC

Oryza, 201
longistaminata A.Chev. & Roehr. .... **VU**
punctata Kotschy ex Steud. LC

Oscularia, 440
alba (L.Bolus) H.E.K.Hartmann LC
caulescens (Mill.) Schwantes LC
cedarbergensis (L.Bolus) H.E.K.Hartmann LC
compressa (L.Bolus) H.E.K.Hartmann LC
comptonii (L.Bolus) H.E.K.Hartmann LC
copiosa (L.Bolus) H.E.K.Hartmann LC
cremnophila Van Jaarsv., Desmet & A.E.van Wyk .... **CR**
deltoides (L.) Schwantes LC
excedens (L.Bolus) H.E.K.Hartmann LC
guthriae (L.Bolus) H.E.K.Hartmann LC
lunata (Willd.) H.E.K.Hartmann LC
major (Weston) Schwantes LC
ornata (L.Bolus) H.E.K.Hartmann LC
paardebergensis (L.Bolus) H.E.K.Hartmann LC
pedunculata (N.E.Br.) Schwantes ....DDT
piquetbergensis (L.Bolus) H.E.K.Hartmann LC
prasina (L.Bolus) H.E.K.Hartmann LC
primiverna (L.Bolus) H.E.K.Hartmann LC
steenbergensis (L.Bolus) H.E.K.Hartmann LC
superans (L.Bolus) H.E.K.Hartmann LC
thermarum (L.Bolus) H.E.K.Hartmann LC
vernicolor (L.Bolus) H.E.K.Hartmann ....DDT
vredenburgensis (L.Bolus) H.E.K.Hartmann .... **VU**

Osmitopsis, 274
afra (L.) K.Bremer LC
asteriscoides (P.J.Bergius) Less. LC
dentata (Thunb.) K.Bremer .... **Rare**
glabra K.Bremer .... **Rare**
nana Schltr. .... **Rare**
osmitoides (Less.) K.Bremer LC
parvifolia (DC.) Hofmeyr .... **Rare**
pinnatifida (DC.) K.Bremer subsp. angustifolia (DC.) K.Bremer .... **Rare**
pinnatifida (DC.) K.Bremer subsp. pinnatifida .... **VU**
pinnatifida (DC.) K.Bremer subsp. serrata K.Bremer .... **Critically Rare**
tenuis K.Bremer .... **Rare**

Osmunda
regalis L. LC

Osteospermum, 275
acanthospermum (DC.) Norl. LC
aciphyllum DC. .... **NT**
armatum Norl. LC
asperulum (DC.) Norl. LC
attenuatum Hilliard & B.L.Burtt .... **Rare**
australe B.Nord. ....Thr*
bidens Thunb. LC
bolusii (Compton) Norl. LC
burttianum B.Nord. .... **Rare**
ciliatum P.J.Bergius LC
corymbosum L. LC
elsieae Norl. .... **Critically Rare**
glabrum N.E.Br. LC
grandidentatum DC. LC
grandiflorum DC. LC
hafstroemii Norl. .... **VU**
herbaceum L.f. LC
hirsutum Thunb. .... **EX**
hispidum Harv. var. hispidum ....Thr*
hispidum Harv. var. viride Norl. .... **DDD**
imbricatum L. subsp. imbricatum LC
imbricatum L. subsp. nervatum (DC.) Norl. var. helichrysoides (DC.) Norl. LC
imbricatum L. subsp. nervatum (DC.) Norl. var. nervatum LC
junceum P.J.Bergius LC
karrooicum (Bolus) Norl. LC
lanceolatum DC. ....DDT
leptolobum (Harv.) Norl. LC
microphyllum DC. LC
muricatum E.Mey. ex DC. subsp. muricatum LC
pinnatum (Thunb.) Norl. var. breve Norl. LC
pinnatum (Thunb.) Norl. var. pinnatum LC
polygaloides L. var. latifolium Norl. LC
polygaloides L. var. polygaloides LC
potbergense A.R.Wood & B.Nord. .... **Critically Rare**
pterigoideum Klatt .... **EN**
pyrifolium Norl. .... **VU**
rigidum Aiton var. elegans (Bolus) Norl. LC
rigidum Aiton var. rigidum LC
rotundifolium (DC.) Norl. LC
spinescens Thunb. LC
spinosum L. var. runcinatum P.J.Bergius LC
spinosum L. var. spinosum LC
striatum Burtt Davy LC
subulatum DC. ....Thr*
thodei Markötter LC
triquetrum L.f. LC

Osyridicarpus
schimperianus (Hochst. ex A.Rich.) A.DC. LC

Osyris, 539
compressa (P.J.Bergius) A.DC. LC
lanceolata Hochst. & Steud. LC
speciosa (A.W.Hill) J.C.Manning & Goldblatt .... **VU**

Otholobium, 380
accrescens C.H.Stirt. .... **NT**
acuminatum (Lam.) C.H.Stirt. LC
arborescens C.H.Stirt. LC
argenteum (Thunb.) C.H.Stirt. .... **DDD**
bolusii (H.M.L.Forbes) C.H.Stirt. .... **NT**
bowieanum (Harv.) C.H.Stirt. .... **EN**
bracteolatum (Eckl. & Zeyh.) C.H.Stirt. LC
caffrum (Eckl. & Zeyh.) C.H.Stirt. LC
candicans (Eckl. & Zeyh.) C.H.Stirt. LC
carneum (E.Mey.) C.H.Stirt. .... **Rare**
flexuosum C.H.Stirt. LC
foliosum (Oliv.) C.H.Stirt. subsp. gazense (Baker f.) Verdc. LC
fruticans (L.) C.H.Stirt. LC
fumeum C.H.Stirt. LC
hamatum (Harv.) C.H.Stirt. .... **VU**
heterosepalum (Fourc.) C.H.Stirt. .... **Rare**
hirtum (L.) C.H.Stirt. LC
incanum C.H.Stirt. .... **VU**
macradenium (Harv.) C.H.Stirt. .... **Rare**
mundianum (Eckl. & Zeyh.) C.H.Stirt. LC
nigricans C.H.Stirt. LC
obliquum (E.Mey.) C.H.Stirt. LC
parviflorum (E.Mey.) C.H.Stirt. LC
pictum C.H.Stirt. LC
polyphyllum (Eckl. & Zeyh.) C.H.Stirt. LC
polystictum (Benth. ex Harv.) C.H.Stirt. LC
prodiens C.H.Stirt. LC
pungens C.H.Stirt. .... **EN**
pustulatum C.H.Stirt. .... **Rare**
racemosum (Thunb.) C.H.Stirt. .... **Rare**
rotundifolium (L.f.) C.H.Stirt. .... **VU**
rubicundum C.H.Stirt. .... **CR**
saxosum C.H.Stirt. .... **EN**
sericeum (Poir.) C.H.Stirt. LC
sp. nov. (*Drewe 450* HER, K) .... **VU**
sp. nov. (*Esterhuysen 11381* K) .... **CR**
sp. nov. (*Esterhuysen 33240a* BOL) .... **VU**
sp. nov. (*Stirton, Vlok & Zantovska 11561* NBG) .... **VU**

sp. nov. (*Stirton & Zantovska 11281* NBG) ..... **VU**
spicatum (L.) C.H.Stirt. LC
stachyerum (Eckl. & Zeyh.) C.H.Stirt. LC
striatum (Thunb.) C.H.Stirt. LC
swartbergense C.H.Stirt. ..... **Rare**
thomii (Harv.) C.H.Stirt ..... **EN**
trianthum (E.Mey.) C.H.Stirt. LC
uncinatum (Eckl. & Zeyh.) C.H.Stirt. ..... **NT**
venustum (Eckl. & Zeyh.) C.H.Stirt. ..... **VU**
virgatum (Burm.f.) C.H.Stirt. LC
wilmsii (Harms) C.H.Stirt LC
zeyheri (Harv.) C.H.Stirt. LC

Othonna, 276

abrotanifolia (Harv.) Druce LC
alba Compton LC
amplexifolia DC. LC
arborescens L. LC
arbuscula (Thunb.) Sch.Bip. LC
armiana Van Jaarsv. ..... **Critically Rare**
auriculifolia Licht. ex Less. LC
bulbosa L. LC
burttii B.Nord. LC
cacalioides L.f. ..... **VU**
cakilifolia DC. ..... **VU**
capensis L.H.Bailey LC
carnosa Less. var. carnosa LC
carnosa Less. var. discoidea Oliv. LC
chromochaeta (DC.) Sch.Bip. LC
ciliata L.f. ..... **VU**
clavifolia Marloth LC
coronopifolia L. LC
cremnophila B.Nord. & Van Jaarsv. LC
cuneata DC. LC
cyclophylla Merxm. ..... **Rare**
cylindrica (Lam.) DC. LC
dentata L. LC
digitata L. LC
divaricata Hutch. ..... **DDD**
diversifolia (DC.) Sch.Bip. ..... **Rare**
eriocarpa (DC.) Sch.Bip. LC
euphorbioides Hutch. ..... Thr*
filicaulis Jacq. LC
floribunda Schltr. LC
frutescens L. LC
furcata (Lindl.) Druce LC
graveolens O.Hoffm. LC
gymnodiscus (DC.) Sch.Bip. LC
hallii B.Nord. ..... **VU**
hederifolia B.Nord. LC
herrei Pillans ..... **Rare**
heterophylla L.f. LC
humilis Schltr. ..... **Rare**
incisa Harv. LC
intermedia Compton ..... Thr*
lasiocarpa (DC.) Sch.Bip. LC
lepidocaulis Schltr. ..... **Rare**
leptodactyla Harv. LC
linearifolia (DC.) Sch.Bip. ..... **DDD**
lingua (Less.) Sch.Bip. LC
lobata Schltr. LC
lyrata DC. LC
macrophylla DC. LC
macrosperma DC. ..... DDT
membranifolia DC. ..... **DDD**
mucronata Harv. LC
multicaulis Harv. LC
natalensis Sch.Bip. LC
obtusiloba Harv. LC
oleracea Compton LC
opima Merxm. LC
osteospermoides DC. LC
ovalifolia Hutch. ..... DDT
pachypoda Hutch. ..... DDT
papaveroides Hutch. ..... **DDD**
parviflora P.J.Bergius LC
patula Schltr. LC
pavelkae Lavranos ..... **Rare**
pavonia E.Mey. LC
perfoliata Thunb. LC
petiolaris DC. ..... **EN**
pinnata L.f. LC
pluridentata DC. ..... DDT
primulina DC. ..... DDT
protecta Dinter LC
pteronioides Harv. LC
purpurascens Harv. ..... DDT
pygmaea Compton LC
quercifolia DC. LC
quinquedentata Thunb. LC
quinqueradiata DC. LC
ramulosa DC. LC
rechingeri B.Nord. LC
reticulata DC. ..... DDT
retrofracta Jacq. LC
retrorsa DC. var. retrorsa LC
retrorsa DC. var. spektakelensis (Compton) G.D.Rowley ..... **Rare**
rosea Harv. ..... DDT
rotundifolia DC. LC
rufibarbis Harv. ..... Thr*
sedifolia DC. LC
sonchifolia DC. LC
spinescens DC. ..... DDT
stenophylla Levyns LC
tephrosioides Sond. ..... **DDD**
trinervia DC. ..... DDT
triplinervia DC. LC
umbelliformis DC. ..... DDT
viminea E.Mey. ..... DDT
zeyheri Sond. ..... DDT

Otiophora

calycophylla (Sond.) Schltr. & K.Schum. subsp. calycophylla LC
calycophylla (Sond.) Schltr. & K.Schum. subsp. verdcourtii Puff LC
cupheoides N.E.Br. LC

Otoptera

burchellii DC. LC

Ottelia

exserta (Ridl.) Dandy LC
ulvifolia (Planch.) Walp. LC

Ottosonderia, 440

monticola (Sond.) L.Bolus LC
obtusa L.Bolus ..... **VU**

Oxalis, 446

adenodes Sond. LC
adspersa Eckl. & Zeyh. LC
albiuscula T.M.Salter ..... **DDD**
algoensis Eckl. & Zeyh. LC
ambigua Jacq. LC
amblyodonta T.M.Salter LC
amblyosepala Schltr. ..... **VU**
annae F.Bolus LC
anomala T.M.Salter ..... **DDD**
argillacea F.Bolus LC
argyrophylla T.M.Salter LC
aridicola T.M.Salter ..... **DDD**
attaquana T.M.Salter ..... **Rare**
aurea Schltr. ..... **VU**
beneprotecta Dinter ex R.Knuth LC
bifida Thunb. LC
bifurca Lodd. var. angustiloba Sond. LC
bifurca Lodd. var. bifurca LC
blastorrhiza T.M.Salter ..... **VU**
bowiei Lindl. LC
burkei Sond. LC
burtoniae T.M.Salter ..... **VU**
callosa R.Knuth LC
calvinensis R.Knuth ..... **DDD**
camelopardalis T.M.Salter ..... **VU**
campicola T.M.Salter LC
campylorrhiza T.M.Salter LC
capillacea E.Mey. ex Sond. LC
caprina L. LC
cathara T.M.Salter ..... **Rare**
ciliaris Jacq. var. ciliaris LC
ciliaris Jacq. var. pageae (L.Bolus) T.M.Salter ..... DDT
clavifolia Sond. LC
commutata Sond. var. commutata LC
commutata Sond. var. concolor T.M.Salter ..... DDT
commutata Sond. var. montana T.M.Salter LC
comosa E.Mey. ex Sond. LC
compressa L.f. var. compressa LC
compressa L.f. var. purpurascens T.M.Salter LC
comptonii T.M.Salter ..... **NT**
confertifolia (Kuntze) R.Knuth ..... DDT
convexula Jacq. LC
copiosa F.Bolus LC
creaseyi T.M.Salter ..... **VU**
crispula Sond. ..... **DDD**
crocea T.M.Salter ..... **VU**
cuneata Jacq. ..... **VU**
davyana R.Knuth ..... **VU**
densa N.E.Br. ..... DDT
depressa Eckl. & Zeyh. LC
deserticola T.M.Salter ..... DDT
dichotoma T.M.Salter ..... DDT
dilatata L.Bolus LC
dines Ornduff ..... **VU**
disticha Jacq. LC
dregei Sond. LC
droseroides E.Mey. ex Sond. ..... **VU**
duriuscula Schltr. ..... **NT**
ebracteata Savign. LC
eckloniana C.Presl var. eckloniana LC
eckloniana C.Presl var. hopefieldiana R.Knuth LC
eckloniana C.Presl var. montigena (Schltr.) R.Knuth LC
eckloniana C.Presl var. robusta T.M.Salter ..... DDT
eckloniana C.Presl var. sonderi T.M.Salter LC
engleriana Schltr. LC
exserta T.M.Salter LC
extensa T.M.Salter ..... **DDD**
fabifolia Jacq. LC
falcatula T.M.Salter ..... **EN**
fergusonae T.M.Salter LC
fibrosa F.Bolus LC
flava L. LC
flaviuscula T.M.Salter LC
fourcadei T.M.Salter ..... **Rare**
foveolata Turcz. LC
fragilis T.M.Salter ..... **CR PE**
furcillata T.M.Salter var. caulescens T.M.Salter LC
furcillata T.M.Salter var. furcillata LC
giftbergensis T.M.Salter LC
glabra Thunb. LC
goniorrhiza Eckl. & Zeyh. ..... DDT
gracilipes Schltr. LC
gracilis Jacq. var. gracilis LC
gracilis Jacq. var. lilacea T.M.Salter LC
gracilis Jacq. var. purpurea T.M.Salter LC
grammopetala Sond. LC
grammophylla T.M.Salter LC
haedulipes T.M.Salter LC
heidelbergensis T.M.Salter ..... DDT
helicoides T.M.Salter var. alba T.M.Salter LC
helicoides T.M.Salter var. helicoides LC
henrici F.Bolus ..... DDT
heterophylla DC. LC
hirsuta Sond. ..... **DDD**
hirta L. var. canescens R.Knuth ..... DDT
hirta L. var. hirta LC
hirta L. var. intermedia T.M.Salter ..... DDT
hirta L. var. polioeides T.M.Salter LC
hirta L. var. secunda (Jacq.) T.M.Salter ..... DDT
hirta L. var. tenuicaulis R.Knuth ..... DDT
hirta L. var. tubiflora (Jacq.) T.M.Salter ..... DDT
hygrophila Dreyer ..... **CR PE**
imbricata Eckl. & Zeyh. var. cuneifolia T.M.Salter ..... DDT
imbricata Eckl. & Zeyh. var. imbricata LC
imbricata Eckl. & Zeyh. var. violacea R.Knuth LC
inaequalis Weintroub LC
incarnata L. LC
inconspicua T.M.Salter ..... **Rare**
involuta T.M.Salter ..... **CR PE**
ioeides T.M.Salter & Exell ..... **DDD**
kamiesbergensis T.M.Salter LC
knuthiana T.M.Salter LC
lanata L.f. var. lanata LC
lanata L.f. var. rosea T.M.Salter LC
lasiorrhiza T.M.Salter ..... **VU**
lawsonii F.Bolus LC
leipoldtii Schltr. ..... DDT
leptocalyx Sond. ..... DDT
leptogramma T.M.Salter LC
levis T.M.Salter ..... **CR PE**
lichenoides T.M.Salter ..... **Rare**
lindaviana Schltr. ..... DDT
linearis Jacq. LC
lineolata T.M.Salter ..... **DDD**
livida Jacq. var. altior T.M.Salter LC
livida Jacq. var. livida LC
louisae T.M.Salter ..... **Rare**
luteola Jacq. LC
macra Schltr. ..... **VU**
marlothii Schltr. ex R.Knuth ..... **CR PE**
massoniana T.M.Salter var. flavescens T.M.Salter ..... **VU**

massoniana T.M.Salter var. massoniana ..... **DDD**
meisneri Sond. ..... **VU**
melanograpta T.M.Salter ..... **DDD**
melanosticta Sond. var. latifolia T.M.Salter ..... **DDD**
melanosticta Sond. var. melanosticta LC
microdonta T.M.Salter ..... **DDD**
minuta Thunb. LC
monophylla L. var. minor T.M.Salter LC
monophylla L. var. monophylla LC
monophylla L. var. rotundifolia T.M.Salter LC
monophylla L. var. stenophylla (Meisn.) Sond. LC
multicaulis Eckl. & Zeyh. LC
namaquana Sond. LC
natans L.f. ..... **CR**
nidulans Eckl. & Zeyh. var. denticulata (Wolley-Dod) T.M.Salter LC
nidulans Eckl. & Zeyh. var. nidulans LC
nortieri T.M.Salter LC
obliquifolia Steud. ex A.Rich. LC
obtusa Jacq. LC
oculifera E.G.H.Oliv. ..... **Rare**
oligophylla T.M.Salter ..... **Rare**
orbicularis T.M.Salter LC
oreithala T.M.Salter ..... **VU**
oreophila T.M.Salter ..... **Critically Rare**
orthopoda T.M.Salter LC
pallens Eckl. & Zeyh. ..... **EN**
palmifrons T.M.Salter LC
pardalis Sond. ..... DDT
pendulifolia T.M.Salter ..... **VU**
perineson T.M.Salter & Exell ..... **CR PE**
pes-caprae L. var. pes-caprae LC
pes-caprae L. var. sericea (L.f.) T.M.Salter LC
petiolulata F.Bolus ..... **DDD**
petraea T.M.Salter LC
phloxidiflora Schltr. ..... **Rare**
pillansiana T.M.Salter & Exell ..... **DDD**
pocockiae L.Bolus LC
polyphylla Jacq. var. alba T.M.Salter LC
polyphylla Jacq. var. heptaphylla T.M.Salter ..... DDT
polyphylla Jacq. var. minor T.M.Salter ..... DDT
polyphylla Jacq. var. pentaphylla (Sims) T.M.Salter LC
polyphylla Jacq. var. polyphylla LC
polyphylla Jacq. var. pubescens Sond. ..... DDT
porphyriosiphon T.M.Salter ..... **Critically Rare**
primuloides R.Knuth LC
psammophila G.Will. ..... **Rare**
pseudo-hirta T.M.Salter ..... **CR PE**
psilopoda Turcz. LC
pulchella Jacq. var. glauca T.M.Salter LC
pulchella Jacq. var. leucotricha (Turcz.) T.M.Salter ..... DDT
pulchella Jacq. var. pulchella ..... DDT
pulchella Jacq. var. tomentosa Sond. LC
pulvinata Sond. LC
punctata L.f. LC
purpurata Jacq. ..... **Rare**
purpurea L. LC
pusilla Jacq. LC
reclinata Jacq. var. micromera (Sond.) T.M.Salter LC
reclinata Jacq. var. quinata T.M.Salter ..... DDT
reclinata Jacq. var. reclinata LC
recticaulis Sond. LC
reflexa T.M.Salter ..... **Rare**
rhomboidea T.M.Salter LC
robinsonii T.M.Salter & Exell ..... DDT
rubro-punctata T.M.Salter ..... DDT
salteri L.Bolus ..... **Rare**
semiloba Sond. subsp. semiloba LC
senecta T.M.Salter ..... **VU**
setosa E.Mey. ex Sond. ..... DDT
simplex T.M.Salter ..... DDT
smithiana Eckl. & Zeyh. LC
sonderiana (Kuntze) T.M.Salter LC
stellata Eckl. & Zeyh. var. glandulosa T.M.Salter LC
stellata Eckl. & Zeyh. var. gracilior T.M.Salter ..... **Rare**
stellata Eckl. & Zeyh. var. montaguensis T.M.Salter ..... DDT
stellata Eckl. & Zeyh. var. stellata LC
stenopetala T.M.Salter LC
stenoptera Turcz. var. alba T.M.Salter ..... DDT
stenoptera Turcz. var. stenoptera ..... **Rare**
stenoptera Turcz. var. undulata T.M.Salter ..... **Rare**
stenorrhyncha T.M.Salter LC
stictocheila T.M.Salter ..... **EN**
stokoei Weintroub ..... **DDD**
strigosa T.M.Salter ..... **EN**
suavis R.Knuth ..... **VU**
subsessilis L.Bolus ..... **DDD**
suteroides T.M.Salter LC
tenella Jacq. LC
tenuifolia Jacq. LC
tenuipes T.M.Salter var. biapiculata T.M.Salter ..... DDT
tenuipes T.M.Salter var. tenuipes ..... **Rare**
tenuis T.M.Salter ..... **Rare**
tomentosa L.f. LC
tragopoda T.M.Salter LC
truncatula Jacq. LC
tysonii E.Phillips ..... DDT
uliginosa Schltr. ..... **CR**
variifolia Steud. ..... **CR PE**
versicolor L. var. flaviflora Sond. LC
versicolor L. var. latifolia Wolley-Dod LC
versicolor L. var. versicolor LC
virginea Jacq. ..... **Rare**
viscidula Schltr. ..... DDT
viscosa E.Mey. ex Sond. LC
xantha T.M.Salter ..... **DDD**
zeekoevleyensis R.Knuth LC
zeyheri Sond. LC

Oxyanthus
latifolius Sond. LC
pyriformis (Hochst.) Skeels subsp. pyriformis LC
speciosus DC. subsp. gerrardii (Sond.) Bridson LC
speciosus DC. subsp. stenocarpus (K.Schum.) Bridson LC

Oxycaryum
cubense (Poepp. & Kunth) Lye LC

Oxygonum
alatum Burch. var. alatum LC
delagoense Kuntze LC
dregeanum Meisn. subsp. canescens (Sond.) Germish. var. canescens LC
dregeanum Meisn. subsp. canescens (Sond.) Germish. var. dissectum Germish. LC
dregeanum Meisn. subsp. canescens (Sond.) Germish. var. linearifolium Germish. LC
dregeanum Meisn. subsp. canescens (Sond.) Germish. var. lobophyllum Germish. LC
dregeanum Meisn. subsp. canescens (Sond.) Germish. var. pilosum Germish. LC
dregeanum Meisn. subsp. dregeanum LC
dregeanum Meisn. subsp. lanceolatum Germish. LC
dregeanum Meisn. subsp. streyi Germish. LC
dregeanum Meisn. subsp. swazicum (Burtt Davy) Germish. LC
robustum Germish. LC

Oxylaena
acicularis (Benth.) Anderb. ..... DDT

Oxyrhachis, 201
gracillima (Baker) C.E.Hubb. ..... **NT***

Oxytenanthera
abyssinica (A.Rich.) Munro ..... DDT

Ozoroa, 219
albicans R. & A.Fern. LC
barbertonensis Retief ..... **VU**
concolor (C.Presl ex Sond.) De Winter LC
crassinervia (Engl.) R. & A.Fern. LC
dispar (C.Presl) R. & A.Fern. LC
engleri R. & A.Fern. LC
mucronata (Bernh.) R. & A.Fern. LC
namaensis (Schinz & Dinter) R.Fern. LC
namaquensis (Sprague) Von Teichman & A.E.van Wyk ..... **Rare**
obovata (Oliv.) R. & A.Fern. var. elliptica R. & A.Fern. LC
obovata (Oliv.) R. & A.Fern. var. obovata LC
paniculosa (Sond.) R. & A.Fern. var. paniculosa LC
paniculosa (Sond.) R. & A.Fern. var. salicina (Sond.) R. & A.Fern. LC
sphaerocarpa R. & A.Fern. LC

P

Pachites, 197
appressa Lindl. ..... **Rare**
bodkinii Bolus ..... **Rare**

Pachycarpus, 238
appendiculatus E.Mey. LC
asperifolius Meisn. LC
campanulatus (Harv.) N.E.Br. var. campanulatus LC
campanulatus (Harv.) N.E.Br. var. sutherlandii N.E.Br. LC
concolor E.Mey. LC
coronarius E.Mey. LC
dealbatus E.Mey. LC
decorus N.E.Br. LC
galpinii (Schltr.) N.E.Br. LC
grandiflorus (L.f.) E.Mey. subsp. grandiflorus LC
grandiflorus (L.f.) E.Mey. subsp. tomentosus (Schltr.) Goyder LC
lebomboensis D.M.N.Sm. ..... **Rare**
linearis (E.Mey.) N.E.Br. ..... **DDD**
mackenii (Harv.) N.E.Br. ..... **DDD**
macrochilus (Schltr.) N.E.Br. LC
natalensis N.E.Br. LC
plicatus N.E.Br. LC
reflectens E.Mey. LC
rigidus E.Mey. LC
rostratus N.E.Br. ..... **CR PE**
scaber (Harv.) N.E.Br. LC
schinzianus (Schltr.) N.E.Br. LC
stenoglossus (E.Mey.) N.E.Br. ..... **DDD**
suaveolens (Schltr.) Nicholas & Goyder ..... **VU**
transvaalensis (Schltr.) N.E.Br. LC
vexillaris E.Mey. LC

Pachypodium
bispinosum (L.f.) A.DC. LC
namaquanum (Wyley ex Harv.) Welw. LC
saundersii N.E.Br. LC
succulentum (Jacq.) Sweet LC

Pachystigma
bowkeri Robyns LC
coeruleum Robyns LC
latifolium Sond. LC
macrocalyx (Sond.) Robyns LC
pygmaeum (Schltr.) Robyns LC
thamnus Robyns LC
triflorum Robyns LC
venosum Hochst. LC

Paederia
bojeriana (A.Rich.) Drake subsp. foetens (Hiern) Verdc. LC

Pancovia
golungensis (Hiern) Exell & Mendonça LC

Pancratium
tenuifolium Hochst. ex A.Rich. LC

Panicum, 201
aequinerve Nees LC
arbusculum Mez LC
arcurameum Stapf LC
coloratum L. var. coloratum LC
deustum Thunb. LC
dewinteri J.G.Anderson ..... **NT**
dregeanum Nees LC
ecklonii Nees LC
fluviicola Steud. LC
genuflexum Stapf LC
gilvum Launert LC
glandulopaniculatum Renvoize LC
heterostachyum Hack. LC
hymeniochilum Nees LC
impeditum Launert LC
infestum Peters LC
kalaharense Mez LC
lanipes Mez LC
laticomum Nees LC
maximum Jacq. LC
monticola Hook.f. LC
natalense Hochst. LC
novemnerve Stapf LC
parvifolium Lam. LC
repens L. LC
repentellum Napper LC
schinzii Hack. LC
stapfianum Fourc. LC
subalbidum Kunth LC
subflabellatum Stapf LC
volutans J.G.Anderson LC

Papaver
aculeatum Thunb. LC

Pappea
capensis Eckl. & Zeyh. LC
Paralepistemon
shirensis (Oliv.) Lejoly & Lisowski LC
Paranomus, 489
abrotanifolius Salisb. ex Knight....**VU**
adiantifolius Salisb. ex Knight ....**EN**
bolusii (Gand.) Levyns ....**VU**
bracteolaris Salisb. ex Knight LC
candicans (Thunb.) Kuntze....LC
capitatus (R.Br.) Kuntze....LC
centaureoides Levyns ....**NT**
dispersus Levyns LC
dregei (H.Buek ex Meisn.) Kuntze....LC
esterhuyseniae Levyns....**NT**
lagopus (Thunb.) Salisb....LC
longicaulis Salisb. ex Knight ....**VU**
reflexus (E.Phillips & Hutch.) Fourc. ....**EN**
roodebergensis (Compton) Levyns....**Rare**
sceptrum-gustavianus (Sparrm.) Hyl.....**NT**
sp. nov. (*Helme 1999* NBG) ....**CR**
spathulatus (Thunb.) Kuntze....**NT**
spicatus (P.J.Bergius) Kuntze ....**NT**
tomentosus (E.Phillips & Hutch.) N.E.Br. ....**NT**
Parapodium
costatum E.Mey.....LC
crispum N.E.Br.....LC
simile N.E.Br.....LC
Parietaria
debilis G.Forst.....LC
Parinari
capensis Harv. subsp. capensis LC
capensis Harv. subsp. incohata F.White LC
curatellifolia Planch. ex Benth. LC
Parkinsonia
africana Sond. LC
Paropsia
braunii Gilg LC
Paspalidium
geminatum (Forssk.) Stapf LC
obtusifolium (Delile) N.D.Simpson....LC
Paspalum
distichum L. LC
scrobiculatum L.....LC
vaginatum Sw.....LC
Passerina, 558
burchellii Thoday ....**Rare**
comosa (Meisn.) C.H.Wright LC
corymbosa Eckl. ex C.H.Wright LC
drakensbergensis Hilliard & B.L.Burtt....LC
ericoides L. ....**VU**
esterhuyseniae C.L.Bredenkamp & A.E.van Wyk....**Rare**
falcifolia (Meisn.) C.H.Wright LC
filiformis L. subsp. filiformis LC
filiformis L. subsp. glutinosa (Thoday) C.L.Bredenkamp & A.E.van Wyk....**NT**
galpinii C.H.Wright LC
montana Thoday....LC
montivaga C.L.Bredenkamp & A.E.van Wyk....LC
nivicola C.L.Bredenkamp & A.E.van Wyk LC
obtusifolia Thoday....LC
paleacea Wikstr.....LC
paludosa Thoday....**EN**
pendula Eckl. & Zeyh. ex Thoday....LC
quadrifaria C.L.Bredenkamp & A.E.van Wyk....LC
rigida Wikstr. LC
rubra C.H.Wright....LC
truncata (Meisn.) C.L.Bredenkamp & A.E.van Wyk subsp. monticola C.L.Bredenkamp & A.E.van Wyk LC
truncata (Meisn.) C.L.Bredenkamp & A.E.van Wyk subsp. truncata LC
Pauridia, 125
longituba M.F.Thomps. ....**EN**
minuta (L.f.) T.Durand & Schinz ....**NT**
Pavetta, 521
barbertonensis Bremek....LC
bowkeri Harv....LC
capensis (Houtt.) Bremek. subsp. capensis....LC
capensis (Houtt.) Bremek. subsp. komghensis (Bremek.) Kok....LC
catophylla K.Schum....LC
cooperi Harv. & Sond....LC
edentula Sond....LC
eylesii S.Moore LC
galpinii Bremek....LC
gardeniifolia A.Rich. var. gardeniifolia LC
gardeniifolia A.Rich. var. subtomentosa K.Schum. LC
gerstneri Bremek. LC
gracilifolia Bremek. LC
harborii S.Moore....LC
inandensis Bremek....LC
kotzei Bremek....LC
lanceolata Eckl. LC
natalensis Sond....LC
revoluta Hochst....LC
schumanniana F.Hoffm. ex K.Schum. LC
trichardtensis Bremek....LC
tshikondeni N.Hahn ....**Rare**
vanwykiana Bridson LC
zeyheri Sond. subsp. microlancea (K.Schum.) P.P.J.Herman....**EN**
zeyheri Sond. subsp. middelburgensis (Bremek.) P.P.J.Herman....**VU**
zeyheri Sond. subsp. zeyheri....LC
Pavonia
burchellii (DC.) R.A.Dyer LC
clathrata Mast. LC
columella Cav. LC
dentata Burtt Davy....LC
dregei Garcke....LC
elegans Garcke....LC
leptocalyx (Sond.) Ulbr. LC
praemorsa (L.f.) Cav.....LC
senegalensis (Cav.) Leistner LC
transvaalensis (Ulbr.) A.Meeuse....LC
urens Cav. var. urens ....Thr*
Pearsonia, 382
aristata (Schinz) Dummer LC
bracteata (Benth.) Polhill....LC
cajanifolia (Harv.) Polhill subsp. cajanifolia....LC
cajanifolia (Harv.) Polhill subsp. cryptantha (Baker) Polhill LC
callistoma Campb.-Young & K.Balkwill ....**EN**
grandifolia (Bolus) Polhill subsp. grandifolia LC
grandifolia (Bolus) Polhill subsp. latibracteolata (Dummer) Polhill LC
hirsuta Germish.....**VU**
obovata (Schinz) Polhill....LC
sessilifolia (Harv.) Dummer subsp. filifolia (Bolus) Polhill LC
sessilifolia (Harv.) Dummer subsp. marginata (Schinz) Polhill LC
sessilifolia (Harv.) Dummer subsp. sessilifolia LC
sessilifolia (Harv.) Dummer subsp. swaziensis (Bolus) Polhill LC
uniflora (Kensit) Polhill....LC
Pechuel-Loeschea
leubnitziae (Kuntze) O.Hoffm. LC
Pectinaria, 238
articulata (Aiton) Haw. subsp. articulata ....**Rare**
articulata (Aiton) Haw. subsp. asperiflora (N.E.Br.) Bruyns LC
articulata (Aiton) Haw. subsp. borealis Bruyns....LC
articulata (Aiton) Haw. subsp. namaquensis (N.E.Br.) Bruyns LC
longipes (N.E.Br.) Bruyns subsp. longipes....LC
longipes (N.E.Br.) Bruyns subsp. villetii (C.A.Lückh.) Bruyns LC
maughanii (R.A.Dyer) Bruyns LC
Peddiea
africana Harv. LC
Pedistylis
galpinii (Schinz ex Sprague) Wiens....LC
Peersia
frithii (L.Bolus) L.Bolus LC
macradenia (L.Bolus) L.Bolus LC
vanheerdei (L.Bolus) H.E.K.Hartmann LC
Pegolettia
baccaridifolia Less....LC
gariepina Anderb. LC
lanceolata Harv. LC
oxyodonta DC. LC
retrofracta (Thunb.) Kies....LC
senegalensis Cass....LC
tenuifolia Bolus....LC
Pelargonium, 389
abrotanifolium (L.f.) Jacq.....LC
acetosum (L.) L'Hér. LC
aciculatum E.M.Marais....LC
acraeum R.A.Dyer LC
aestivale E.M.Marais LC
album J.J.A.van der Walt ....**Rare**
alchemilloides (L.) L'Hér.....LC
alpinum Eckl. & Zeyh. LC
alternans J.C.Wendl.....LC
althaeoides (L.) L'Hér. LC
anethifolium (Eckl. & Zeyh.) Steud. LC
angustipetalum E.M.Marais LC
antidysentericum (Eckl. & Zeyh.) Kostel. subsp. antidysentericum LC
antidysentericum (Eckl. & Zeyh.) Kostel. subsp. inerme Scheltema LC
antidysentericum (Eckl. & Zeyh.) Kostel. subsp. zonale Scheltema....LC
appendiculatum (L.f.) Willd. ....**EN**
aridicola E.M.Marais LC
aridum R.A.Dyer....LC
aristatum (Sweet) G.Don....LC
articulatum (Cav.) Willd....LC
asarifolium (Sweet) Loudon LC
attenuatum Harv. ....**EN**
auritum (L.) Willd. var. auritum....LC
auritum (L.) Willd. var. carneum (Harv.) E.M.Marais LC
barklyi Scott-Elliot LC
betulinum (L.) L'Hér. LC
bicolor (Jacq.) L'Hér. ....DDT
bifolium (Burm.f.) Willd. ....DDT
bowkeri Harv.....LC
brevipetalum N.E.Br. ....DDT
brevirostre R.A.Dyer....LC
bubonifolium (Andrews) Pers....**Rare**
burgerianum J.J.A.van der Walt....**Rare**
burtoniae L.Bolus....DDT
buysii Hellbr. LC
caespitosum Turcz. subsp. caespitosum....LC
caespitosum Turcz. subsp. concavum Hugo LC
caffrum (Eckl. & Zeyh.) Harv.....LC
caledonicum L.Bolus ....**CR**
calviniae R.Knuth LC
campestre (Eckl. & Zeyh.) Steud. ....**DDD**
candicans Spreng. LC
capillare (Cav.) Willd. LC
capitatum (L.) L'Hér.....LC
capituliforme R.Knuth....LC
carneum Jacq. LC
carnosum (L.) L'Hér. LC
caroli-henrici B.Nord. ....**Rare**
caucalifolium Jacq. subsp. caucalifolium....LC
caucalifolium Jacq. subsp. convolvulifolium (Schltr. ex R.Knuth) J.J.A.van der Walt LC
ceratophyllum L'Hér. LC
chamaedryfolium Jacq. LC
chelidonium (Houtt.) DC. ....**EN**
citronellum J.J.A.van der Walt....**Rare**
columbinum Jacq. LC
confertum E.M.Marais....LC
connivens E.M.Marais ....**VU**
cordifolium (Cav.) Curtis LC
coronopifolium Jacq....LC
crassicaule L'Hér. LC
crassipes Harv.....**EN**
crispum (P.J.Bergius) L'Hér. LC
crithmifolium Sm. LC
cucullatum (L.) L'Hér. subsp. cucullatum LC
cucullatum (L.) L'Hér. subsp. strigifolium Volschenk....LC
cucullatum (L.) L'Hér. subsp. tabulare Volschenk...LC
curviandrum E.M.Marais....**VU**
dasyphyllum E.Mey. ex R.Knuth LC
denticulatum Jacq. ....**Rare**
desertorum Vorster ....**Rare**
dichondrifolium DC. LC
dipetalum L'Hér. LC
dispar N.E.Br. LC
divisifolium Vorster....**NT**
dolomiticum R.Knuth....LC
echinatum Curtis LC
elegans (Andrews) Willd. LC
ellaphieae E.M.Marais ....**EN**
elongatum (Cav.) Salisb. LC
englerianum R.Knuth LC

eupatoriifolium (Eckl. & Zeyh.) Steud. LC
exhibens Vorster ..... **NT**
exstipulatum (Cav.) L'Hér. LC
fasciculaceum E.M.Marais ..... **NT**
fergusoniae L.Bolus LC
fissifolium (Andrews) Pers. LC
frutetorum R.A.Dyer LC
fruticosum (Cav.) Willd. LC
fulgidum (L.) L'Hér. LC
fumariifolium R.Knuth LC
gibbosum (L.) L'Hér. LC
gilgianum Schltr. ex R.Knuth LC
githagineum E.M.Marais LC
glabriphyllum E.M.Marais ..... **Rare**
glutinosum (Jacq.) L'Hér. LC
gracile (Eckl. & Zeyh.) Steud. LC
gracilipes R.Knuth ..... DDT
gracillimum Fourc. LC
grandicalcaratum R.Knuth LC
grandiflorum (Andrews) Willd. LC
graveolens L'Hér. LC
grenvilleae (Andrews) Harv. LC
greytonense J.J.A.van der Walt LC
griseum R.Knuth LC
grossularioides (L.) L'Hér. LC
hantamianum R.Knuth LC
hemicyclicum Hutch. & C.A.Sm. ..... DDT
hermanniifolium (P.J.Bergius) Jacq. LC
heterophyllum Jacq. ..... **CR**
hirtipetalum E.M.Marais LC
hirtum (Burm.f.) Jacq. LC
hispidum (L.f.) Willd. LC
hypoleucum Turcz. LC
hystrix Harv. LC
incarnatum (L'Hér.) Moench LC
incrassatum (Andrews) Sims LC
inquinans (L.) L'Hér. LC
iocastum (Eckl. & Zeyh.) Steud. LC
ionidiflorum (Eckl. & Zeyh.) Steud. LC
karooicum Compton & P.E.Barnes LC
klinghardtense R.Knuth LC
laciniatum R.Knuth ..... DDT
ladysmithianum R.Knuth ..... DDT
laevigatum (L.f.) Willd. subsp. diversifolium (J.C.Wendl.) Schonken LC
laevigatum (L.f.) Willd. subsp. laevigatum LC
laevigatum (L.f.) Willd. subsp. oxyphyllum (DC.) Schonken LC
lanceolatum (Cav.) Kern LC
laxum (Sweet) G.Don LC
leipoldtii R.Knuth LC
leptum L.Bolus ..... **VU**
leucophyllum Turcz. LC
lobatum (Burm.f.) L'Hér. LC
longicaule Jacq. var. angustipetalum C.Boucher ..... **VU**
longicaule Jacq. var. longicaule LC
longiflorum Jacq. LC
longifolium (Burm.f.) Jacq. LC
luridum (Andrews) Sweet LC
luteolum N.E.Br. LC
luteum (Andrews) G.Don ..... DDT
magenteum J.J.A.van der Walt LC
minimum (Cav.) Willd. LC
mollicomum Fourc. LC
moniliforme Harv. LC
multicaule Jacq. subsp. multicaule LC
multicaule Jacq. subsp. subherbaceum (R.Knuth) J.J.A.van der Walt LC
multiradiatum J.C.Wendl. LC
mutans Vorster LC
myrrhifolium (L.) L'Hér. var. coriandrifolium (L.) Harv. LC
myrrhifolium (L.) L'Hér. var. myrrhifolium LC
nanum L'Hér. LC
nelsonii Burtt Davy LC
nephrophyllum E.M.Marais ..... **EN**
nervifolium Jacq. LC
nummulifolium Salisb. ..... **Critically Rare**
oblongatum Harv. LC
ocellatum J.J.A.van der Walt ..... **Rare**
ochroleucum Harv. ..... **VU**
odoratissimum (L.) L'Hér. LC
oenothera (L.f.) Jacq. LC
oreophilum Schltr. LC
otaviense R.Knuth LC
ovale (Burm.f.) L'Hér. subsp. hyalinum Hugo ... **Rare**
ovale (Burm.f.) L'Hér. subsp. ovale LC
ovale (Burm.f.) L'Hér. subsp. veronicifolium (Eckl. & Zeyh.) Hugo LC
oxaloides (Burm.f.) Willd. ..... DDT
panduriforme Eckl. & Zeyh. LC
paniculatum Jacq. LC
papilionaceum (L.) L'Hér. LC
parvipetalum E.M.Marais LC
parvirostre R.A.Dyer LC
patulum Jacq. var. grandiflorum N.van Wyk LC
patulum Jacq. var. patulum LC
patulum Jacq. var. tenuilobum (Eckl. & Zeyh.) Harv. LC
peltatum (L.) L'Hér. LC
petroselinifolium G.Don ..... **VU**
pillansii Salter LC
pilosellifolium (Eckl. & Zeyh.) Steud. LC
pinnatum (L.) L'Hér. LC
plurisectum Salter ..... **VU**
polycephalum (E.Mey. ex Harv.) R.Knuth LC
praemorsum (Andrews) F.Dietr. subsp. praemorsum LC
praemorsum (Andrews) F.Dietr. subsp. speciosum Scheltema LC
proliferum (Burm.f.) Steud. LC
pseudofumarioides R.Knuth LC
pseudoglutinosum R.Knuth LC
pubipetalum E.M.Marais ..... **VU**
pulchellum Sims LC
pulverulentum Colvill ex Sweet LC
punctatum (Andrews) Willd. LC
quarciticola Meve & E.M.Marais ..... **Rare**
quercifolium (L.f.) L'Hér. LC
radens H.E.Moore LC
radiatum (Andrews) Pers. LC
radicatum Vent. LC
radulifolium (Eckl. & Zeyh.) Steud. LC
ramosissimum (Cav.) Willd. LC
ranunculophyllum (Eckl. & Zeyh.) Baker LC
rapaceum (L.) L'Hér. LC
redactum Vorster LC
reflexipetalum E.M.Marais LC
reflexum (Andrews) Pers. ..... **EN**
reniforme Curtis subsp. reniforme ..... **DDD**
reniforme Curtis subsp. velutinum (Eckl. & Zeyh.) Dreyer LC
ribifolium Jacq. LC
riversdalense Knuth ..... DDT
rubiginosum E.M.Marais LC
rustii R.Knuth ..... DDT
salmoneum R.A.Dyer ..... DDT
scabroide R.Knuth LC
scabrum (Burm.f.) L'Hér. LC
schizopetalum Sweet LC
semitrilobum Jacq. ..... DDT
senecioides L'Hér. LC
sericifolium J.J.A.van der Walt LC
setosiusculum R.Knuth ..... DDT
setosum (Sweet) DC. LC
setulosum Turcz. LC
sibthorpiifolium Harv. LC
sidoides DC. ..... **Declining**
spinosum Willd. LC
stipulaceum (L.f.) Willd. subsp. ovato-stipulatum (R.Knuth) Vorster LC
stipulaceum (L.f.) Willd. subsp. stipulaceum LC
sublignosum R.Knuth LC
suburbanum Clifford ex C.Boucher subsp. bipinnatifidum (Harv.) C.Boucher LC
suburbanum Clifford ex C.Boucher subsp. suburbanum ..... **VU**
sulphureum R.Knuth ..... DDT
tabulare (Burm.f.) L'Hér. LC
tenellum (Andrews) G.Don LC
tenuicaule R.Knuth LC
ternatum (L.f.) Jacq. LC
ternifolium Vorster ..... **NT**
tetragonum (L.f.) L'Hér. LC
theianthum (Eckl. & Zeyh.) Steud. LC
tomentosum Jacq. LC
tongaense Vorster ..... **Rare**
torulosum E.M.Marais ..... **Rare**
tragacanthoides Burch. LC
transvaalense R.Knuth LC
triandrum E.M.Marais LC
tricolor Curtis LC
trifidum Jacq. LC
trifoliolatum (Eckl. & Zeyh.) E.M.Marais LC
tripalmatum E.M.Marais ..... **Rare**
triphyllum Jacq. LC
triste (L.) L'Hér. LC
undulatum (Andrews) Pers. LC
viciifolium DC. ..... **EN**
vinaceum E.M.Marais LC
violiflorum (Sweet) DC. ..... **EN**
vitifolium (L.) L'Hér. LC
woodii R.Knuth ..... **DDD**
worcesterae R.Knuth LC
xerophyton Schltr. ex R.Knuth LC
zonale (L.) L'Hér. LC

Peliostomum
calycinum N.E.Br. LC
leucorrhizum E.Mey. ex Benth. LC
origanoides E.Mey. ex Benth. LC
virgatum E.Mey. ex Benth. LC
viscosum E.Mey. ex Benth. LC

Pellaea
boivinii Hook. LC
calomelanos (Sw.) Link var. calomelanos LC
dura (Willd.) Hook. var. dura LC
leucomelas (Mett. ex Kuhn) Baker LC
pectiniformis Baker LC
pteroides (L.) Prantl LC
rufa A.F.Tryon LC

Peltophorum
africanum Sond. LC

Penaea, 455
acutifolia A.Juss. ..... **Rare**
cneorum Meerb. subsp. cneorum LC
cneorum Meerb. subsp. gigantea R.Dahlgren LC
cneorum Meerb. subsp. lanceolata R.Dahlgren LC
cneorum Meerb. subsp. ovata (Eckl. & Zeyh. ex A.DC.) R.Dahlgren LC
cneorum Meerb. subsp. ruscifolia R.Dahlgren LC
dahlgrenii Rourke ..... **VU**
mucronata L. LC

Pennisetum
glaucocladum Stapf & C.E.Hubb. LC
macrourum Trin. LC
mezianum Leeke LC
natalense Stapf LC
sphacelatum (Nees) T.Durand & Schinz LC
thunbergii Kunth LC
unisetum (Nees) Benth. LC

Pentameris, 202
distichophylla (Lehm.) Nees LC
glacialis N.P.Barker ..... **Rare**
hirtiglumis N.P.Barker ..... **Rare**
longiglumis (Nees) Stapf subsp. gymnocolea N.P.Barker ..... **Rare**
longiglumis (Nees) Stapf subsp. longiglumis ..... **VU**
macrocalycina (Steud.) Schweick. LC
oreophila N.P.Barker LC
swartbergensis N.P.Barker ..... **Rare**
thuarii P.Beauv. LC
uniflora N.P.Barker ..... **Rare**

Pentanisia
angustifolia (Hochst.) Hochst. LC
prunelloides (Klotzsch ex Eckl. & Zeyh.) Walp. subsp. latifolia (Hochst.) Verdc. LC
prunelloides (Klotzsch ex Eckl. & Zeyh.) Walp. subsp. prunelloides LC
sykesii Hutch. subsp. otomerioides Verdc. LC

Pentarrhinum
abyssinicum Decne. subsp. abyssinicum LC
insipidum E.Mey. LC

Pentas
angustifolia (A.Rich. ex DC.) Verdc. LC
micrantha Baker subsp. wyliei (N.E.Br.) Verdc. LC

Pentaschistis, 202
acinosa Stapf LC
airoides (Nees) Stapf subsp. airoides LC
airoides (Nees) Stapf subsp. jugorum (Stapf) H.P.Linder LC
alticola H.P.Linder LC
ampla (Nees) McClean LC
argentea Stapf LC
aristidoides (Thunb.) Stapf LC
aristifolia Schweick. LC
aspera (Thunb.) Stapf ..... **NT**
aurea (Steud.) McClean subsp. aurea LC

aurea (Steud.) McClean subsp. pilosogluma (McClean) H.P.Linder LC
barbata (Nees) H.P.Linder subsp. barbata LC
barbata (Nees) H.P.Linder subsp. orientalis H.P.Linder ..... CR
basutorum Stapf LC
calcicola H.P.Linder var. calcicola ..... NT
calcicola H.P.Linder var. hirsuta H.P.Linder ..... VU
capensis (Nees) Stapf LC
capillaris (Thunb.) McClean LC
caulescens H.P.Linder ..... Rare
chippindalliae H.P.Linder LC
cirrhulosa (Nees) H.P.Linder LC
clavata C.A.Galley ..... Rare
colorata (Steud.) Stapf LC
curvifolia (Schrad.) Stapf LC
densifolia (Nees) Stapf LC
ecklonii (Nees) McClean ..... EN
elegans (Nees) Stapf ..... CR
eriostoma (Nees) Stapf LC
exserta H.P.Linder LC
galpinii (Stapf) McClean LC
glandulosa (Schrad.) H.P.Linder LC
heptamera (Nees) Stapf LC
holciformis (Nees) H.P.Linder ..... Rare
horrida C.A.Galley ..... Rare
lima (Nees) Stapf ..... NT
longipes Stapf ..... VU
malouinensis (Steud.) Clayton LC
microphylla (Nees) McClean LC
montana H.P.Linder LC
natalensis Stapf LC
oreodoxa Schweick. LC
pallescens (Schrad.) Stapf LC
pallida (Thunb.) H.P.Linder LC
papillosa (Steud.) H.P.Linder LC
patula (Nees) Stapf LC
pseudopallescens H.P.Linder LC
pungens H.P.Linder LC
pusilla (Nees) H.P.Linder LC
pyrophila H.P.Linder LC
reflexa H.P.Linder LC
rigidissima Pilg. ex H.P.Linder LC
rosea H.P.Linder subsp. purpurascens H.P.Linder LC
rosea H.P.Linder subsp. rosea LC
rupestris (Nees) Stapf LC
scandens H.P.Linder ..... EN
setifolia (Thunb.) McClean LC
tomentella Stapf LC
tortuosa (Trin.) Stapf LC
trifida C.A.Galley ..... VU
triseta (Thunb.) Stapf LC
tysonii Stapf LC
velutina H.P.Linder LC
veneta H.P.Linder LC
viscidula (Nees) Stapf LC

Pentatrichia, 277
alata S.Moore ..... DDD
petrosa Klatt LC

Pentodon
pentandrus (Schumach. & Thonn.) Vatke var. minor Bremek. LC
pentandrus (Schumach. & Thonn.) Vatke var. pentandrus LC

Pentzia
argentea Hutch. LC
bolusii Hutch. ..... DDT
calcarea Kies LC
cooperi Harv. LC
dentata (L.) Kuntze LC
elegans DC. LC
globosa Less. LC
incana (Thunb.) Kuntze LC
lanata Hutch. LC
monocephala S.Moore LC
nana Burch. ..... DDT
peduncularis B.Nord. LC
pinnatisecta Hutch. LC
punctata Harv. LC
quinquefida (Thunb.) Less. LC
sphaerocephala DC. LC
spinescens Less. LC
tortuosa (DC.) Fenzl ex Harv. LC
viridis Kies LC

Peperomia
blanda (Jacq.) Kunth LC
retusa (L.f.) A.Dietr. var. bachmannii (C.DC.) Düll LC
retusa (L.f.) A.Dietr. var. retusa LC
rotundifolia (L.) Kunth LC
tetraphylla (G.Forst.) Hook. & Arn. LC

Peponium
caledonicum (Sond.) Engl. LC
mackenii (Naudin) Engl. LC

Perdicium
capense L. LC
leiocarpum DC. LC

Pergularia
daemia (Forssk.) Chiov. subsp. daemia LC
daemia (Forssk.) Chiov. subsp. garipensis (E.Mey.) Goyder LC

Periglossum
angustifolium Decne. LC
mackenii Harv. LC

Peristrophe, 217
cernua Hook. ex Nees LC
cliffordii K.Balkwill ..... Rare
decorticans K.Balkwill LC
gillilandiorum K.Balkwill ..... Rare
transvaalensis (C.B.Clarke) K.Balkwill LC

Perotis
patens Gand. LC

Persicaria
attenuata (R.Br.) Soják subsp. africana K.L.Wilson LC
decipiens (R.Br.) K.L.Wilson LC
hystricula (J.Schust.) Soják LC
meisneriana (Cham. & Schltdl.) M.Gómez LC
senegalensis (Meisn.) Soják LC

Petalacte
coronata (L.) D.Don LC

Petalidium
aromaticum Oberm. var. aromaticum LC
aromaticum Oberm. var. canescens Oberm. LC
lucens Oberm. LC
oblongifolium C.B.Clarke LC
parvifolium C.B.Clarke ex Schinz LC
setosum C.B.Clarke ex Schinz LC

Petrina
parva J.B.Phipps LC

Peucedanum, 223
caffrum (Meisn.) E.Phillips LC
camdebooense B.L.Burtt ..... Rare
capense (Thunb.) Sond. var. capense LC
capense (Thunb.) Sond. var. lanceolatum Sond. LC
capillaceum Thunb. var. capillaceum LC
capillaceum Thunb. var. rigidum Sond. LC
dregeanum D.Dietr. LC
ferulaceum (Thunb.) Eckl. & Zeyh. var. ferulaceum LC
ferulaceum (Thunb.) Eckl. & Zeyh. var. stadense (Eckl. & Zeyh.) Sond. LC
galbaniopse H.Wolff LC
galbanum (L.) Drude LC
gummiferum (L.) Wijnands LC
khamiesbergense B.L.Burtt ..... VU
magalismontanum Sond. LC
millefolium Sond. ..... DDT
natalense (Sond.) Engl. LC
pearsonii Adamson ..... VU
platycarpum E.Mey. ex Sond. LC
polyactinum B.L.Burtt LC
pungens E.Mey. ex Sond. ..... EN
striatum (Thunb.) Sond. ..... NT
strictum (Spreng.) B.L.Burtt LC
sulcatum Sond. LC
tenuifolium Thunb. LC
thodei Arnold LC
triternatum Eckl. & Zeyh. ..... DDT
upingtoniae (Schinz) Drude LC
wilmsianum H.Wolff ..... VU

Phacelurus
franksiae (J.M.Wood) Clayton LC

Phaenocoma
prolifera (L.) D.Don LC

Phaeoptilum
spinosum Radlk. LC

Phaneroglossa, 277
bolusii (Oliv.) B.Nord. ..... Rare

Pharnaceum
albens L.f. LC
alpinum Adamson LC
aurantium (DC.) Druce LC
brevicaule (DC.) Bartl. LC
ciliare Adamson LC
confertum (DC.) Eckl. & Zeyh. var. brachyphyllum Adamson LC
confertum (DC.) Eckl. & Zeyh. var. confertum LC
cordifolium L. LC
croceum E.Mey. ex Fenzl LC
detonsum Fenzl LC
dichotomum L.f. LC
elongatum (DC.) Adamson LC
exiguum Adamson LC
fluviale Eckl. & Zeyh. LC
incanum L. LC
lanatum Bartl. LC
lineare L.f. LC
microphyllum L.f. LC
rubens Adamson LC
serpyllifolium L.f. LC
subtile E.Mey. LC
thunbergii Adamson LC
trigonum Eckl. & Zeyh. LC
viride Adamson LC

Phaulopsis
imbricata (Forssk.) Sweet subsp. imbricata LC

Phiambolia, 440
franciscii (L.Bolus) Klak ..... Rare
gydouwensis (L.Bolus) Klak LC
hallii (L.Bolus) Klak ..... Rare
incumbens (L.Bolus) Klak ..... Rare
mentiens Klak LC
persistens (L.Bolus) Klak LC
stayneri (L.Bolus ex Toelken & Jessop) Klak ..... VU
unca (L.Bolus) Klak LC

Philenoptera
bussei (Harms) Schrire LC
sutherlandii (Harv.) Schrire LC
violacea (Klotzsch) Schrire LC

Philyrophyllum
schinzii O.Hoffm. LC

Phoenix
reclinata Jacq. LC

Phragmites
australis (Cav.) Steud. LC
mauritianus Kunth LC

Phygelius
aequalis Harv. ex Hiern LC
capensis E.Mey. ex Benth. LC

Phylica, 507
abietina Eckl. & Zeyh. LC
acmaephylla Eckl. & Zeyh. LC
aemula Schltr. var. aemula LC
aemula Schltr. var. multibracteolata Pillans LC
affinis Sond. ..... EN
agathosmoides Pillans ..... VU
alba Pillans LC
alpina Eckl. & Zeyh. ..... DDD
alticola Pillans ..... Rare
altigena Schltr. ..... Rare
ambigua Sond. LC
amoena Pillans ..... EN
ampliata Pillans ..... VU
anomala Pillans ..... EN
apiculata Sond. ..... DDD
atrata Licht. ex Roem. & Schult. LC
axillaris Lam. var. axillaris LC
axillaris Lam. var. cooperi Pillans LC
axillaris Lam. var. densifolia Pillans LC
axillaris Lam. var. gracilis Pillans LC
axillaris Lam. var. hirsuta Sond. LC
axillaris Lam. var. lutescens (Eckl. & Zeyh.) Pillans LC
axillaris Lam. var. maritima Pillans LC
axillaris Lam. var. microphylla (Eckl. & Zeyh.) Pillans LC
axillaris Lam. var. pulchra Pillans LC
barbata Pillans ..... DDD
barnardii Pillans LC
bolusii Pillans LC
brachycephala Sond. ..... DDD

brevifolia Eckl. & Zeyh. ..... VU
burchellii Pillans ..... DDD
buxifolia L. LC
calcarata Pillans ..... VU
callosa L.f. LC
cephalantha Sond. LC
chionocephala Schltr. ..... Rare
chionophila Schltr. ..... Rare
comosa Steud. ..... DDT
comptonii Pillans ..... Rare
confusa Pillans LC
constricta Pillans var. constricta LC
constricta Pillans var. staavioides Pillans LC
costata Pillans LC
cryptandroides Sond. LC
curvifolia Pillans ..... Rare
cuspidata Eckl. & Zeyh. var. cuspidata ..... VU
cuspidata Eckl. & Zeyh. var. minor Pillans ..... Thr*
cylindrica J.C.Wendl. ..... VU
debilis Eckl. & Zeyh. var. debilis LC
debilis Eckl. & Zeyh. var. fourcadei Pillans LC
diffusa Pillans var. burchellii Pillans LC
diffusa Pillans var. diffusa LC
dioica L. LC
diosmoides Sond. ..... EN
disticha Eckl. & Zeyh. var. cuneata Pillans LC
disticha Eckl. & Zeyh. var. disticha LC
dodii N.E.Br. LC
elimensis Pillans ..... VU
ericoides L. var. ericoides LC
ericoides L. var. montana Pillans LC
ericoides L. var. muirii Pillans LC
ericoides L. var. pauciflora Pillans LC
ericoides L. var. zeyheri Pillans LC
excelsa J.C.Wendl. var. excelsa LC
excelsa J.C.Wendl. var. papillosa (J.C.Wendl.) Sond. LC
floccosa Pillans ..... Rare
floribunda Pillans ..... VU
fourcadei Pillans LC
fruticosa Schltr. LC
galpinii Pillans LC
glabrata Thunb. ..... DDD
gnidioides Eckl. & Zeyh. LC
gracilis (Eckl. & Zeyh.) D.Dietr. LC
greyii Pillans ..... EN
guthriei Pillans ..... DDD
harveyi (Arn.) Pillans ..... VU
hirta Pillans ..... NT
humilis Sond. LC
imberbis P.J.Bergius var. eriophoros (P.J.Bergius) Pillans LC
imberbis P.J.Bergius var. imberbis LC
imberbis P.J.Bergius var. secunda Sond. LC
incurvata Pillans ..... VU
insignis Pillans LC
intrusa Pillans ..... Rare
karroica Pillans LC
keetii Pillans var. keetii LC
keetii Pillans var. mollis Pillans LC
lachneaeoides Pillans LC
laevifolia Pillans ..... DDD
laevigata Pillans LC
laevis (Eckl. & Zeyh.) Steud. ..... EN
lanata Pillans LC
lasiantha Pillans ..... DDD
lasiocarpa Sond. LC
leipoldtii Pillans ..... NT
levynsiae Pillans LC
linifolia Pillans ..... EN
litoralis (Eckl. & Zeyh.) D.Dietr. LC
longimontana Pillans ..... DDD
lucens Pillans ..... DDD
lucida Pillans ..... VU
mairei Pillans ..... Rare
marlothii Pillans var. crassa Pillans LC
marlothii Pillans var. levynsiae Pillans LC
marlothii Pillans var. marlothii LC
maximiliani Schltr. ..... Rare
meyeri Sond. LC
minutiflora Sond. LC
montana Sond. LC
mundii Pillans LC
natalensis Pillans ..... VU
nervosa Pillans LC
nigrita Sond. ..... NT
nigromontana Pillans ..... Rare
nodosa Pillans ..... Rare
obtusifolia Pillans ..... Rare
odorata Schltr. LC
oleifolia Vent. LC
paniculata Willd. LC
parviflora P.J.Bergius LC
parvula Pillans ..... EN
pauciflora Pillans ..... VU
pearsonii Pillans ..... Rare
pinea Thunb. LC
piquetbergensis Pillans ..... Rare
plumigera Pillans LC
plumosa L. var. horizontalis (Vent.) Sond. ..... VU
plumosa L. var. plumosa ..... Declining
plumosa L. var. squarrosa (Vent.) Sond. ..... EN
propinqua Sond. LC
pubescens Aiton var. angustifolia Sond. LC
pubescens Aiton var. orientalis Pillans LC
pubescens Aiton var. pubescens LC
pulchella Schltr. LC
purpurea Sond. var. floccosa Pillans LC
purpurea Sond. var. pearsonii Pillans LC
purpurea Sond. var. purpurea LC
pustulata E.Phillips LC
recurvifolia Eckl. & Zeyh. ..... DDD
retorta Pillans ..... Rare
retrorsa E.Mey. ex Sond. ..... VU
reversa Pillans ..... DDD
rigida Eckl. & Zeyh. LC
rigidifolia Sond. LC
rogersii Pillans LC
rubra Willd. ex Roem. & Schult. LC
salteri Pillans LC
schlechteri Pillans ..... CR PE
selaginoides Sond. LC
sericea Pillans ..... Rare
simii Pillans ..... VU
spicata L.f. var. piquetbergensis Pillans LC
spicata L.f. var. spicata LC
stenantha Pillans ..... Rare
stenopetala Schltr. var. sieberi Pillans ..... Thr*
stenopetala Schltr. var. stenopetala ..... EN
stokoei Pillans ..... Rare
strigosa P.J.Bergius var. australis Pillans LC
strigosa P.J.Bergius var. dregei Pillans LC
strigosa P.J.Bergius var. elongata Pillans LC
strigosa P.J.Bergius var. macowanii Pillans LC
strigosa P.J.Bergius var. strigosa LC
strigulosa Sond. ..... VU
subulifolia Pillans ..... VU
thodei E.Phillips LC
thunbergiana Sond. ..... EN
tortuosa E.Mey. ex Harv. & Sond. LC
trachyphylla (Eckl. & Zeyh.) D.Dietr. ..... Rare
tuberculata Pillans LC
tubulosa Schltr. ..... DDD
tysonii Pillans var. brevifolia Pillans ..... DDD
tysonii Pillans var. tysonii ..... DDD
variabilis Pillans ..... Rare
velutina Sond. ..... NT
villosa Thunb. var. pedicellata (DC.) Sond. LC
villosa Thunb. var. villosa LC
virgata (Eckl. & Zeyh.) D.Dietr. ..... Rare
vulgaris Pillans var. burchellii Pillans LC
vulgaris Pillans var. major Pillans LC
vulgaris Pillans var. vulgaris LC
willdenowiana Eckl. & Zeyh. LC
wittebergensis Pillans LC

Phyllanthus

asperulatus Hutch. LC
delagoensis Hutch. LC
glaucophyllus Sond. LC
graminicola Hutch. ex S.Moore LC
heterophyllus E.Mey. ex Müll.Arg. LC
incurvus Thunb. LC
loandensis Welw. ex Müll.Arg. LC
macranthus Pax var. macranthus LC
maderaspatensis L. LC
meyerianus Müll.Arg. LC
myrtaceus Sond. LC
nummulariifolius Poir. var. nummulariifolius LC
omahakensis Dinter & Pax LC
parvulus Sond. var. garipensis (E.Mey. ex Drège) Radcl.-Sm. LC
parvulus Sond. var. parvulus LC
pentandrus Schumach. & Thonn. LC
pinnatus (Wight) G.L.Webster LC
polyanthus Pax LC
reticulatus Poir. var. reticulatus LC

Phyllobolus, 440

abbreviatus (L.Bolus) Gerbaulet ..... VU
amabilis Gerbaulet & Struck ..... Rare
canaliculatus (Haw.) Bittrich LC
caudatus (L.Bolus) Gerbaulet ..... VU
chrysophthalmus Gerbaulet & Struck ..... Rare
congestus (L.Bolus) Gerbaulet ..... VU
deciduus (L.Bolus) Gerbaulet LC
decurvatus (L.Bolus) Gerbaulet LC
delus (L.Bolus) Gerbaulet LC
gariepensis Gerbaulet & Struck ..... Rare
grossus (Aiton) Gerbaulet LC
humilis (L.Bolus) Klak LC
latipetalus (L.Bolus) Gerbaulet LC
lignescens (L.Bolus) Gerbaulet LC
melanospermus (Dinter & Schwantes) Gerbaulet LC
nitidus (Haw.) Gerbaulet LC
oculatus (N.E.Br.) Gerbaulet LC
prasinus (L.Bolus) Gerbaulet LC
pumilus (L.Bolus) Gerbaulet LC
quartziticus (L.Bolus) Gerbaulet LC
rabiei (L.Bolus) Gerbaulet ..... DDD
resurgens (Kensit) Schwantes LC
roseus (L.Bolus) Gerbaulet LC
saturatus (L.Bolus) Gerbaulet LC
sinuosus (L.Bolus) Gerbaulet LC
spinuliferus (Haw.) Gerbaulet LC
splendens (L.) Gerbaulet subsp. pentagonus (L.Bolus) Gerbaulet LC
splendens (L.) Gerbaulet subsp. splendens LC
suffruticosus (L.Bolus) Gerbaulet ..... EN
tenuiflorus (Jacq.) Gerbaulet ..... VU
trichotomus (Thunb.) Gerbaulet LC
viridiflorus (Aiton) Gerbaulet ..... Rare

Phyllopodium, 548

alpinum N.E.Br. ..... Rare
anomalum Hilliard LC
bracteatum Benth. LC
caespitosum Hilliard ..... Rare
capillare (L.f.) Hilliard ..... NT
cephalophorum (Thunb.) Hilliard LC
collinum (Hiern) Hilliard LC
cordatum (Thunb.) Hilliard LC
cuneifolium (L.f.) Benth. LC
diffusum Benth. LC
dolomiticum Hilliard ..... VU
elegans (Choisy) Hilliard LC
heterophyllum (L.f.) Benth. LC
hispidulum (Thell.) Hilliard ..... VU
lupuliforme (Thell.) Hilliard ..... DDD
maxii (Hiern) Hilliard ..... DDT
micranthum (Schltr.) Hilliard LC
mimetes Hilliard ..... VU
multifolium Hiern LC
namaense (Thell.) Hilliard LC
phyllopodioides (Schltr.) Hilliard LC
pubiflorum Hilliard ..... DDD
pumilum Benth. LC
rustii (Rolfe) Hilliard LC
tweedense Hilliard ..... DDD
viscidissimum Hilliard ..... DDD

Phyllosma

barosmoides (Dummer) I.Williams LC
capensis Bolus LC

Phylohydrax

carnosa (Hochst.) Puff LC

Phymaspermum, 277

acerosum (DC.) Källersjö LC
aciculare (E.Mey. ex Harv.) Benth. & Hook. ex B.D.Jacks LC
appressum Bolus LC
argenteum Brusse LC
athanasioides (S.Moore) Källersjö LC
bolusii (Hutch.) Källersjö LC
erubescens (Hutch.) Källersjö ..... DDT
junceum Less. LC
leptophyllum (DC.) Benth. & Hook. ex B.D.Jacks. ..... Thr*
montanum (Hutch.) Källersjö LC
parvifolium (DC.) Benth. & Hook. ex B.D.Jacks. LC
peglerae (Hutch.) Källersjö ..... DDD

pinnatifidum (Oliv.) Källersjö LC
pubescens Kuntze LC
schroeteri Compton ..... **Rare**
scoparium (DC.) Källersjö LC
villosum (Hilliard) Källersjö ..... **Rare**
woodii (Thell.) Källersjö LC

Phytolacca
dodecandra L'Hér. LC
heptandra Retz. LC

Piaranthus
atrosanguineus (N.E.Br.) Bruyns LC
comptus N.E.Br. LC
decipiens (N.E.Br.) Bruyns LC
geminatus (Masson) N.E.Br. subsp. decorus (Masson) Bruyns LC
geminatus (Masson) N.E.Br. subsp. geminatus LC
parvulus N.E.Br. LC
punctatus (Masson) R.Br. var. framesii (Pillans) Bruyns LC
punctatus (Masson) R.Br. var. punctatus LC

Pilea
rivularis Wedd. LC

Piliostigma
thonningii (Schumach.) Milne-Redh. LC

Pillansia
templemannii (Baker) L.Bolus LC

Pilularia
americana A.Braun LC

Pimpinella
caffra (Eckl. & Zeyh.) D.Dietr. LC
hydrophila H.Wolff LC
krookii H.Wolff LC
schlechteri H.Wolff LC
stadensis (Eckl. & Zeyh.) D.Dietr. LC
transvaalensis H.Wolff LC

Piper
capense L.f. var. capense LC

Piriqueta
capensis (Harv.) Urb. LC

Pisonia
aculeata L. LC

Pittosporum
viridiflorum Sims LC

Pityrogramma
argentea (Willd.) Domin LC

Planea, 277
schlechteri (L.Bolus) P.O.Karis ..... **CR PE**

Plantago
cafra Decne. LC
crassifolia Forssk. var. crassifolia LC
crassifolia Forssk. var. hirsuta (Thunb.) Bég. LC
lanceolata L. LC
laxiflora Decne. ..... DDT
longissima Decne. LC
remota Lam. LC

Platostoma
rotundifolium (Briq.) A.J.Paton LC

Platycarpha
carlinoides Oliv. & Hiern LC
glomerata (Thunb.) Less. LC
parvifolia S.Moore LC

Platycaulos, 209
acutus Esterh. ..... **VU**
anceps (Mast.) H.P.Linder LC
callistachyus (Kunth) H.P.Linder LC
cascadensis (Pillans) H.P.Linder ..... DDT
compressus (Rottb.) H.P.Linder LC
depauperatus (Kunth) H.P.Linder LC
major (Mast.) H.P.Linder LC
subcompressus (Pillans) H.P.Linder ..... **Rare**

Platycoryne, 197
mediocris Summerh. ..... **EN***

Platylepis
glandulosa (Lindl.) Rchb.f. LC

Platylophus
trifoliatus (L.f.) D.Don LC

Plecostachys
polifolia (Thunb.) Hilliard & B.L.Burtt LC
serpyllifolia (P.J.Bergius) Hilliard & B.L.Burtt LC

Plectranthus, 398
aliciae (Codd) Van Jaarsv. & T.J.Edwards LC
ambiguus (Bolus) Codd LC
amboinicus (Lour.) Spreng. LC
brevimentum T.J.Edwards ..... **Critically Rare**
caninus Roth LC
ciliatus E.Mey. ex Benth. LC
cylindraceus Hochst. ex Benth. LC
dolichopodus Briq. LC
dolomiticus Codd ..... **Critically Rare**
ecklonii Benth. LC
elegantulus Briq. LC
ernstii Codd ..... **NT**
esculentus N.E.Br. ..... **DDD**
fruticosus L'Hér. LC
grallatus Briq. LC
grandidentatus Gürke LC
hadiensis (Forssk.) Schweinf. ex Spreng. var. hadiensis LC
hadiensis (Forssk.) Schweinf. ex Spreng. var. tomentosus (Benth.) Codd LC
hadiensis (Forssk.) Schweinf. ex Spreng. var. woodii (Gürke) Codd LC
hereroensis Engl. LC
hilliardiae Codd subsp. australis Van Jaarsv. & A.E.van Wyk ..... **VU**
hilliardiae Codd subsp. hilliardiae LC
laxiflorus Benth. LC
lucidus Van Jaarsv. & T.J.Edwards LC
madagascariensis (Pers.) Benth. var. madagascariensis LC
malvinus Van Jaarsv. & T.J.Edwards ..... Thr*
mutabilis Codd LC
mzimvubensis Van Jaarsv. ..... **Rare**
neochilus Schltr. LC
oertendahlii T.C.E.Fr. ..... **Rare**
oribiensis Codd ..... **Rare**
pentheri (Gürke) Van Jaarsv. & T.J.Edwards ..... DDT
petiolaris E.Mey. ex Benth. LC
porcatus Van Jaarsv. & P.J.D.Winter ..... **VU**
praetermissus Codd ..... **VU**
psammophilus Codd ..... Thr*
purpuratus Harv. subsp. montanus Van Jaarsv. & T.J.Edwards LC
purpuratus Harv. subsp. purpuratus LC
purpuratus Harv. subsp. tongaensis Van Jaarsv. & T.J.Edwards LC
ramosior (Benth.) Van Jaarsv. LC
reflexus Van Jaarsv. & T.J.Edwards ..... Thr*
rehmannii Gürke LC
rubropunctatus Codd LC
saccatus Benth. var. longitubus Codd LC
saccatus Benth. var. saccatus LC
saccatus Benth. subsp. pondoensis Van Jaarsv. & Milstein LC
spicatus E.Mey. ex Benth. LC
strigosus Benth. LC
stylesii T.J.Edwards ..... **Critically Rare**
swynnertonii S.Moore LC
tetensis (Baker) Agnew LC
tetragonus Gürke LC
venteri Van Jaarsv. & Hankey ..... **Rare**
verticillatus (L.f.) Druce LC
xerophilus Codd LC
zuluensis T.Cooke LC

Plectroniella
capillaris Bremek. LC

Pleiospilos, 441
bolusii (Hook.f.) N.E.Br. ..... **VU**
compactus (Aiton) Schwantes subsp. canus (Haw.) H.E.K.Hartmann & Liede LC
compactus (Aiton) Schwantes subsp. compactus LC
compactus (Aiton) Schwantes subsp. fergusoniae (L.Bolus) H.E.K.Hartmann & Liede LC
compactus (Aiton) Schwantes subsp. minor (L.Bolus) H.E.K.Hartmann & Liede ..... **Critically Rare**
compactus (Aiton) Schwantes subsp. sororius (N.E.Br.) H.E.K.Hartmann & Liede LC
nelii Schwantes ..... **NT**
simulans (Marloth) N.E.Br. ..... **EW**

Pleopeltis
macrocarpa (Bory ex Willd.) Kaulf. var. macrocarpa LC

Pleurostylia
capensis (Turcz.) Loes. LC

Plicosepalus
amplexicaulis Wiens LC
kalachariensis (Schinz) Danser LC
undulatus (E.Mey. ex Harv.) Tiegh. LC

Plinthus, 218
cryptocarpus Fenzl LC
karooicus I.Verd. LC
rehmannii G.Schellenb. ..... **EN**
sericeus Pax LC

Pluchea
bojeri (DC.) Humbert LC

Plumbago
auriculata Lam. LC
tristis Aiton LC

Pneumatopteris
unita (Kunze) Holttum LC

Poa
binata Nees LC
bulbosa L. LC
leptoclada Hochst. ex A.Rich. LC

Podalyria, 382
amoena Eckl. & Zeyh. LC
argentea Salisb. ..... **EN**
biflora Lam. LC
burchellii DC. LC
buxifolia (Retz.) Willd. LC
calyptrata (Retz.) Willd. LC
canescens E.Mey. LC
cordata R.Br. ..... **VU**
cuneifolia Vent. LC
glauca DC. LC
hamata E.Mey. ..... DDT
hirsuta (Aiton) Willd. LC
leipoldtii L.Bolus LC
microphylla E.Mey. ..... **CR**
montana Hutch. LC
myrtillifolia (Retz.) Willd. LC
oleaefolia Salisb. LC
orbicularis E.Mey. ..... **VU**
pearsonii E.Phillips ..... **VU**
pulcherrima Schinz LC
racemulosa Eckl. & Zeyh. LC
reticulata Harv. ..... DDT
sericea (Andrews) R.Br. ex Aiton f. ..... **NT**
speciosa Eckl. & Zeyh. LC
velutina Burch. ex Benth. ..... **NT**

Podocarpus
elongatus (Aiton) L'Hér. ex Pers. LC
falcatus (Thunb.) R.Br. ex Mirb. LC
henkelii Stapf ex Dallim. & A.B.Jacks. LC
latifolius (Thunb.) R.Br. ex Mirb. LC

Podranea, 386
ricasoliana (Tanfani) Sprague ..... **VU**

Poecilolepis, 387
ficoidea (DC.) Grau LC
maritima (Bolus) Grau ..... **VU**

Pogonarthria
squarrosa (Roem. & Schult.) Pilg. LC

Polemannia
grossulariifolia Eckl. & Zeyh. LC
montana Schltr. & H.Wolff LC
simplicior Hilliard & B.L.Burtt LC

Polemanniopsis
marlothii (H.Wolff) B.L.Burtt LC

Polevansia
rigida De Winter LC

Polhillia, 383
brevicalyx (C.H.Stirt.) B.-E.van Wyk & A.L.Schutte ..... **CR**
canescens C.H.Stirt. ..... **VU**
connata (Harv.) C.H.Stirt. ..... **CR**
involucrata (Thunb.) B.-E.van Wyk & A.L.Schutte ..... **Rare**
obsoleta (Harv.) B.-E.van Wyk ..... **EN**
pallens C.H.Stirt. ..... **VU**

Pollichia
campestris Aiton LC

Polpoda
capensis C.Presl LC
stipulacea (F.M.Leight.) Adamson LC

Polyarrhena, 278
imbricata (DC.) Grau LC
prostrata Grau subsp. dentata Grau ..... **Rare**
prostrata Grau subsp. prostrata ..... **Rare**
reflexa (L.) Cass. subsp. brachyphylla (Sond. ex Harv.) Grau ..... **VU**
reflexa (L.) Cass. subsp. reflexa LC
stricta Grau ..... DDT

Polycarena, 549
aemulans Hilliard LC
aurea Benth. LC
batteniana Hilliard LC
capensis (L.) Benth ..... **NT**
comptonii Hilliard ..... **DDD**
exigua Hilliard LC
filiformis Diels ..... **Rare**
formosa Hilliard LC
gilioides Benth. ..... DDT
gracilis Hilliard LC
lilacina Hilliard var. difficilis Hilliard LC
lilacina Hilliard var. lilacina LC
nardouwensis Hilliard ..... **EN**
pubescens Benth. LC
rariflora Benth. LC
silenoides Harv. ex Benth. ..... **CR PE**
subtilis Hilliard ..... **EN**
tenella Hiern LC

Polycarpaea
eriantha Hochst. ex A.Rich. var. effusa (Oliv.) Turrill LC

Polycarpon
prostratum (Forssk.) Asch. & Schweinf. var. prostratum LC

Polygala, 463
africana Chodat LC
albida Schinz subsp. albida LC
amatymbica Eckl. & Zeyh. LC
asbestina Burch. LC
bowkerae Harv. ..... **DDD**
brachyphylla Chodat LC
bracteolata L. LC
capillaris E.Mey. ex Harv. subsp. capillaris LC
dasyphylla Levyns ..... **EN**
declinata (Harv.) E.Mey. ex Paiva LC
ephedroides Burch. LC
ericaefolia DC. LC
erioptera DC. subsp. erioptera LC
erioptera DC. subsp. petraea (Chodat) Paiva LC
erubescens E.Mey. ex Chodat LC
fruticosa P.J.Bergius LC
garcinii DC. LC
gazensis Baker f. LC
gerrardii Chodat LC
gracilenta Burtt Davy LC
gracilipes Harv. ..... **DDD**
gymnoclada MacOwan LC
hispida Burch. ex DC. LC
hottentotta C.Presl LC
houtboshiana Chodat LC
illepida E.Mey. ex Harv. LC
krumanina Burch. ex Ficalho & Hiern LC
langebergensis Levyns ..... **Rare**
lasiosepala Levyns LC
leendertziae Burtt Davy LC
lehmanniana Eckl. & Zeyh. LC
leptophylla Burch. var. armata (Chodat) Paiva LC
leptophylla Burch. var. leptophylla LC
levynsiana Paiva LC
ludwigiana Eckl. & Zeyh. LC
lysimachiifolia Chodat LC
macowaniana Paiva LC
marensis Burtt Davy LC
meridionalis Levyns LC
microlopha DC. var. microlopha LC
mossii Exell LC
myrtifolia L. var. myrtifolia LC
myrtifolia L. var. pinifolia (Lam. ex Poir.) Paiva LC
nematocaulis Levyns LC
nodiflora Chodat ..... DDT
ohlendorfiana Eckl. & Zeyh. LC
pappeana Eckl. & Zeyh. LC
parkeri Levyns LC
peduncularis Burch. ex DC. LC
pottebergensis Levyns ..... **VU**
praticola Chodat ..... **DDD**
producta N.E.Br. LC
pubiflora Burch. LC
pungens Burch. LC
recognita Chodat LC
refracta DC. LC
rehmannii Chodat LC
rhinostigma Chodat LC
rigens Burch. LC
rodrigueana Paiva ..... **DDD**
scabra L. LC
schinziana Chodat LC
seminuda Harv. LC
senensis Klotzsch var. senensis LC
serpentaria Eckl. & Zeyh. LC
sphenoptera Fresen. var. sphenoptera LC
spicata Chodat LC
teretifolia L.f. LC
transvaalensis Chodat subsp. transvaalensis LC
triquetra C.Presl LC
umbellata L. LC
uncinata E.Mey. ex Meisn. LC
virgata Thunb. var. decora (Sond.) Harv. LC
virgata Thunb. var. speciosa (Sims) Harv. LC
virgata Thunb. var. virgata LC
welwitschii Chodat subsp. pygmaea (Gürke) Paiva LC
wilmsii Chodat LC
wittebergensis Compton LC
woodii Chodat ..... **DDD**

Polygonum
plebeium R.Br. LC
undulatum (L.) P.J.Bergius LC

Polymita
albiflora (L.Bolus) L.Bolus LC
steenbokensis H.E.K.Hartmann LC

Polypodium
ensiforme Thunb. LC
polypodioides (L.) Watt subsp. ecklonii (Kunze) Schelpe LC
vulgare L. LC

Polypogon
strictus Nees LC

Polystachya, 197
albescens Ridl. subsp. imbricata (Rolfe) Summerh. LC
cultriformis (Thouars) Spreng. LC
fusiformis (Thouars) Lindl. LC
modesta Rchb.f. LC
ottoniana Rchb.f. LC
pubescens (Lindl.) Rchb.f. LC
sandersonii Harv. LC
tessellata Lindl. LC
transvaalensis Schltr. LC
zambesiaca Rolfe LC
zuluensis L.Bolus ..... **DDD**

Polystichum
dracomontanum Schelpe & N.C.Anthony LC
incongruum J.P.Roux LC
luctuosum (Kunze) T.Moore LC
macleae (Baker) Diels LC
monticola N.C.Anthony & Schelpe LC
pungens (Kaulf.) C.Presl LC
transkeiense W.Jacobsen LC
transvaalense N.C.Anthony LC
wilsonii H.Christ LC

Pomaria
burchellii (DC.) B.B.Simpson & G.P.Lewis subsp. burchellii LC
burchellii (DC.) B.B.Simpson & G.P.Lewis subsp. rubro-violacea (Baker f.) Brummitt LC
lactea (Schinz) B.B.Simpson & G.P.Lewis LC
sandersonii (Harv.) B.B.Simpson & G.P.Lewis LC

Portulaca
collina Dinter LC
foliosa Ker Gawl. LC
grandiflora Hook. LC
hereroensis Schinz LC
kermesina N.E.Br. LC
pilosa L. LC
quadrifida L. LC
rhodesiana R.A.Dyer & E.A.Bruce LC
trianthemoides Bremek. LC

Portulacaria
afra Jacq. LC
armiana Van Jaarsv. LC

Potamogeton
crispus L. LC
octandrus Poir. LC
pectinatus L. LC
pusillus L. LC
schweinfurthii A.Benn. LC
thunbergii Cham. & Schltdl. LC
trichoides Cham. & Schltdl. LC

Pouzolzia
mixta Solms var. mixta LC
parasitica (Forssk.) Schweinf. LC

Premna
mooiensis (H.Pearson) W.Piep LC

Prenia, 441
englishiae (L.Bolus) Gerbaulet LC
pallens (Aiton) N.E.Br. subsp. lancea (Thunb.) Gerbaulet LC
pallens (Aiton) N.E.Br. subsp. lutea L.Bolus LC
pallens (Aiton) N.E.Br. subsp. namaquensis Gerbaulet LC
pallens (Aiton) N.E.Br. subsp. pallens LC
radicans (L.Bolus) Gerbaulet LC
sladeniana (L.Bolus) L.Bolus LC
tetragona (Thunb.) Gerbaulet LC
vanrensburgii L.Bolus ..... **NT**

Prepodesma
orpenii (N.E.Br.) N.E.Br. LC

Priestleya
laevigata (L.) Druce LC

Printzia
aromatica (L.) Less. LC
auriculata Harv. LC
huttoni Harv. LC
nutans (Bolus) Leins LC
polifolia (L.) Hutch. LC
pyrifolia Less. LC

Prionanthium, 203
dentatum (L.f.) Henrard ..... **EN**
ecklonii (Nees) Stapf ..... **EN**
pholiuroides Stapf ..... **EN**

Prionium, 204
serratum (L.f.) Drège ex E.Mey. ..... **Declining**

Prionostemma
delagoensis (Loes.) N.Hallé var. delagoensis LC

Prismatocarpus, 292
alpinus (Bond) Adamson LC
altiflorus L'Hér. ..... **EN**
brevilobus A.DC. LC
campanuloides (L.f.) Sond. var. campanuloides LC
campanuloides (L.f.) Sond. var. dentatus Adamson ..... **DDD**
candolleanus Cham. LC
cliffortioides Adamson ..... **EN**
cordifolius Adamson ..... **Rare**
crispus L'Hér. LC
debilis Adamson var. debilis LC
debilis Adamson var. elongatus Adamson ..... DDT
decurrens Adamson ..... **VU**
diffusus (L.f.) A.DC. LC
fastigiatus C.Presl ex A.DC. ..... **DDD**
fruticosus L'Hér. LC
hildebrandtii Vatke ..... DDT
hispidus Adamson ..... DDT
implicatus Adamson ..... **Rare**
lasiophyllus Adamson ..... **Rare**
lycioides Adamson ..... **DDD**
lycopodioides A.DC. var. hispidus Adamson ..... **Rare**
lycopodioides A.DC. var. lycopodioides LC
nitidus L'Hér. var. nitidus LC
pauciflorus Adamson ..... **VU**
pedunculatus (P.J.Bergius) A.DC. LC
pilosus Adamson ..... **DDD**
rogersii Fourc. ..... **NT**
schlechteri Adamson LC
sessilis Eckl. ex A.DC. var. macrocarpus Adamson ..... DDT
sessilis Eckl. ex A.DC. var. sessilis LC
spinosus Adamson ..... **Rare**
tenellus Oliv. LC
tenerrimus H.Buek LC
virgatus Fourc. LC

Pristimera
bojeri (Tul.) N.Hallé LC
longipetiolata (Oliv.) N.Hallé LC

Priva
adhaerens (Forssk.) Chiov. LC
africana Moldenke LC
cordifolia (L.f.) Druce var. abyssinica (Jaub. & Spach) Moldenke LC
cordifolia (L.f.) Druce var. australis Moldenke LC
meyeri Jaub. & Spach var. meyeri LC

Prosphytochloa
prehensilis (Nees) Schweick. LC

Protea, 491
acaulos (L.) Reichard LC
acuminata Sims LC
amplexicaulis (Salisb.) R.Br. LC
angustata R.Br. ..... **EN**
aristata E.Phillips ..... **VU**
aspera E.Phillips ..... **VU**
aurea (Burm.f.) Rourke subsp. aurea LC
aurea (Burm.f.) Rourke subsp. potbergensis Rourke ..... **NT**
burchellii Stapf ..... **VU**
caespitosa Andrews ..... **CR**
caffra Meisn. subsp. caffra LC
caffra Meisn. subsp. falcata (Beard) M.Lötter LC
canaliculata Andrews LC
compacta R.Br. ..... **NT**
comptonii Beard ..... **NT**
convexa E.Phillips ..... **CR**
cordata Thunb. LC
coronata Lam. ..... **NT**
cryophila Bolus ..... **NT**
curvata N.E.Br. ..... **VU**
cynaroides (L.) L. LC
decurrens E.Phillips ..... **EN**
denticulata Rourke ..... **Rare**
dracomontana Beard LC
effusa E.Mey. ex Meisn. ..... **NT**
eximia (Salisb. ex Knight) Fourc. LC
foliosa Rourke LC
gaguedi J.F.Gmel. LC
glabra Thunb. LC
grandiceps Tratt. ..... **NT**
holosericea (Salisb. ex Knight) Rourke ..... **EN**
humiflora Andrews LC
inopina Rourke ..... **VU**
intonsa Rourke LC
lacticolor Salisb. ..... **EN**
laetans L.E.Davidson ..... **VU**
laevis R.Br. LC
lanceolata E.Mey. ex Meisn. LC
laurifolia Thunb. LC
lepidocarpodendron (L.) L. ..... **NT**
longifolia Andrews ..... **VU**
lorea R.Br. ..... **NT**
lorifolia (Salisb. ex Knight) Fourc. LC
magnifica Link LC
montana E.Mey. ex Meisn. ..... **VU**
mucronifolia Salisb. ..... **CR**
mundii Klotzsch LC
namaquana Rourke ..... **CR**
nana (P.J.Bergius) Thunb. LC
neriifolia R.Br. LC
nitida Mill. LC
nubigena Rourke ..... **CR**
obtusifolia H.Buek ex Meisn. ..... **NT**
odorata Thunb. ..... **CR**
parvula Beard ..... **NT**
pendula R.Br. LC
piscina Rourke LC
pityphylla E.Phillips ..... **NT**
pruinosa Rourke ..... **EN**
pudens Rourke ..... **EN**
punctata Meisn. LC
recondita H.Buek ex Meisn. ..... **NT**
repens (L.) L. LC
restionifolia (Salisb. ex Knight) Rycroft ..... **VU**
revoluta R.Br. LC
roupelliae Meisn. subsp. hamiltonii Beard ex Rourke ..... **CR**
roupelliae Meisn. subsp. roupelliae LC
rubropilosa Beard LC
rupicola Mund ex Meisn. ..... **EN**
scabra R.Br. ..... **NT**
scabriuscula E.Phillips LC
scolopendriifolia (Salisb. ex Knight) Rourke LC
scolymocephala (L.) Reichard ..... **VU**
scorzonerifolia (Salisb. ex Knight) Rycroft ..... **VU**
simplex E.Phillips LC
speciosa (L.) L. LC
stokoei E.Phillips ..... **EN**
subulifolia (Salisb. ex Knight) Rourke LC
subvestita N.E.Br. ..... **VU**
sulphurea E.Phillips LC
susannae E.Phillips ..... **NT**
tenax (Salisb.) R.Br. LC
venusta Compton ..... **EN**
vogtsiae Rourke LC
welwitschii Engl. subsp. welwitschii LC
witzenbergiana E.Phillips LC

Protorhus
longifolia (Bernh.) Engl. LC

Prunus, 519
africana (Hook.f.) Kalkman ..... **VU**

Psammophora
longifolia L.Bolus LC
modesta (Dinter & A.Berger) Dinter & Schwantes LC

Psammotropha, 445
alternifolia Killick LC
anguina Compton LC
diffusa Adamson ..... **VU**
frigida Schltr. LC
marginata (Thunb.) Druce ..... Thr*
mucronata (Thunb.) Fenzl var. foliosa Adamson LC
mucronata (Thunb.) Fenzl var. marginata Adamson LC
mucronata (Thunb.) Fenzl var. mucronata LC
myriantha Sond. LC
obovata Adamson LC
obtusa Adamson LC
quadrangularis (L.f.) Fenzl LC
spicata Adamson ..... **EN**

Pseudalthenia, 215
aschersoniana (Graebn.) Hartog ..... **CR**

Pseudarthria
hookeri Wight & Arn. var. hookeri LC

Pseudechinolaena
polystachya (Kunth) Stapf LC

Pseuderanthemum
hildebrandtii Lindau LC
subviscosum (C.B.Clarke) Stapf LC

Pseudobaeckea, 290
africana (Burm.f.) Pillans LC
cordata (Burm.f.) Nied. LC
stokoei Pillans ..... **DDD**
teres (Oliv.) Dummer ..... DDT

Pseudobersama
mossambicensis (Sim) Verdc. LC

Pseudoconyza
viscosa (Mill.) D'Arcy LC

Pseudocyclosorus
pulcher (Bory ex Willd.) Holttum LC

Pseudogaltonia
clavata (Mast.) E.Phillips LC

Pseudognaphalium
oligandrum (DC.) Hilliard & B.L.Burtt LC
undulatum (L.) Hilliard & B.L.Burtt LC

Pseudolachnostylis
maprouneifolia Pax var. dekindtii (Pax) Radcl.-Sm. LC
maprouneifolia Pax var. glabra (Pax) Brenan LC

Pseudopentameris
brachyphylla (Stapf) Conert LC
caespitosa N.P.Barker LC
macrantha (Schrad.) Conert LC
obtusifolia (Hochst.) N.P.Barker LC

Pseudoprospero
firmifolium (Baker) Speta LC

Pseudosalacia, 300
streyi Codd ..... **EN**

Pseudoschoenus
inanis (Thunb.) Oteng-Yeb. LC

Pseudoscolopia, 539
polyantha Gilg ..... **NT**

Pseudoselago, 550
arguta (E.Mey.) Hilliard LC
ascendens (E.Mey.) Hilliard LC
bella Hilliard LC
burmannii (Choisy) Hilliard ..... **DDD**
caerulescens Hilliard ..... **Rare**
candida Hilliard LC
densifolia (Hochst.) Hilliard LC
diplotricha Hilliard ..... **Rare**
gracilis Hilliard LC
guttata (E.Mey.) Hilliard LC
humilis (Rolfe) Hilliard LC
langebergensis Hilliard LC
outeniquensis Hilliard LC
parvifolia Hilliard LC
peninsulae Hilliard ..... **DDD**
prolixa Hilliard ..... **Rare**
prostrata Hilliard ..... **Rare**
pulchra Hilliard LC
quadrangularis (Choisy) Hilliard ..... **Rare**
rapunculoides (L.) Hilliard LC
recurvifolia Hilliard LC
serrata (P.J.Bergius) Hilliard LC
similis Hilliard LC
spuria (L.) Hilliard LC
subglabra Hilliard LC
verbenacea (L.f.) Hilliard LC
violacea Hilliard LC

Psiadia
punctulata (DC.) Vatke LC

Psilocaulon, 441
articulatum (Thunb.) N.E.Br. LC
bicorne (Sond.) Schwantes LC
coriarium (Burch. ex N.E.Br.) N.E.Br. LC
densum N.E.Br. ..... **DDD**
dinteri (Engl.) Schwantes LC
foliosum L.Bolus LC
granulicaule (Haw.) Schwantes LC
junceum (Haw.) Schwantes LC
leptarthron (A.Berger) N.E.Br. LC
parviflorum (Jacq.) Schwantes LC
salicornioides (Pax) Schwantes LC
subnodosum (A.Berger) N.E.Br. LC

Psilotrichum
scleranthum Thwaites LC

Psilotum
nudum (L.) P.Beauv. LC

Psoralea, 384
abbottii C.H.Stirt. ..... **VU**
aculeata L. LC
affinis Eckl. & Zeyh. LC
alata (Thunb.) T.M.Salter LC
angustifolia Jacq. LC
aphylla L. LC
arborea Sims LC
asarina (P.J.Bergius) T.M.Salter ..... **NT**
axillaris L. LC
cataracta C.H.Stirt. ..... **EX**
ensifolia (Houtt.) Merr. LC
fascicularis DC. ..... **EN**
filifolia Thunb. ..... **EN**
glabra E.Mey. LC
glaucescens Eckl. & Zeyh. LC
glaucina Harv. ..... **CR**
gueinzii Harv. ..... **EX**
imbricata (L.) T.M.Salter LC
implexa C.H.Stirt. ..... **EN**
keetii Schönland LC
laxa T.M.Salter LC
monophylla (L.) C.H.Stirt. LC
odoratissima Jacq. ..... **NT**
oligophylla Eckl. & Zeyh. LC
oreophila Schltr. ..... **Rare**
peratica C.H.Stirt. ..... **EN**
pinnata L. var. pinnata LC
plauta C.H.Stirt. LC
repens L. ..... **NT**
restioides Eckl. & Zeyh. LC
sp. nov. (*Esterhuysen 35181* BOL) ..... **Rare**
sp. nov. (*Helme 3468* NBG) ..... **EN**
sp. nov. (*Muir 1850* PRE) ..... **EN**
sp. nov. (*Stirton 10212* NU) ..... **Rare**
sp. nov. (*Stirton 11225* NBG) ..... **Rare**
sp. nov. (*Stirton 11226* NBG) LC
sp. nov. (*Stirton & Zantovska 11568* K) ..... **Rare**
sp. nov. (*Stirton & Zantovska 11582* NU) ..... **EN**
speciosa Eckl. & Zeyh. LC
tenuifolia L. LC
tenuissima E.Mey. ..... **Rare**
triflora Thunb. LC
trullata C.H.Stirt. ..... **Rare**
verrucosa Willd. LC

Psychotria
capensis (Eckl.) Vatke subsp. capensis var. capensis LC
capensis (Eckl.) Vatke subsp. capensis var. pubescens (Sond.) E.M.A.Petit LC
zombamontana (Kuntze) E.M.A.Petit LC

Psydrax
fragrantissima (K.Schum.) Bridson LC
livida (Hiern) Bridson LC
locuples (K.Schum.) Bridson LC

obovata (Eckl. & Zeyh.) Bridson subsp. elliptica Bridson....LC
obovata (Eckl. & Zeyh.) Bridson subsp. obovata....LC
Ptaeroxylon
obliquum (Thunb.) Radlk. LC
Pteleopsis
anisoptera (Welw. ex M.A.Lawson) Engl. & Diels....LC
myrtifolia (M.A.Lawson) Engl. & Diels....LC
Pteridium
aquilinum (L.) Kuhn subsp. aquilinum....LC
Pteris
buchananii Baker ex Sim....LC
catoptera Kunze var. catoptera....LC
catoptera Kunze var. horridula Schelpe....LC
cretica L. LC
dentata Forssk. LC
friesii Hieron. LC
vittata L. LC
Pterocarpus
angolensis DC. LC
lucens Lepr. ex Guill. & Perr. subsp. antunesii (Taub.) Rojo LC
rotundifolius (Sond.) Druce subsp. rotundifolius LC
Pterocelastrus, 300
echinatus N.E.Br. LC
galpinii Loes....LC
rostratus (Thunb.) Walp. ....Declining
tricuspidatus (Lam.) Walp. LC
Pterodiscus
luridus Hook.f. LC
ngamicus N.E.Br. ex Stapf LC
speciosus Hook. LC
Pterolobium
stellatum (Forssk.) Brenan LC
Pteronia, 278
acuminata DC. LC
acuta Muschl. LC
adenocarpa Harv. LC
ambrariifolia Schltr. LC
anisata B.Nord. ....Rare
aspalatha DC. LC
beckeoides DC. ....DDD
bolusii E.Phillips....LC
callosa DC. ....DDT
camphorata (L.) L. var. armata Harv. LC
camphorata (L.) L. var. camphorata LC
camphorata (L.) L. var. laevigata Harv. LC
camphorata (L.) L. var. longifolia Harv. LC
centauroides DC. ....VU
ciliata Thunb. LC
cinerea L.f. LC
cylindracea DC. LC
diosmifolia Brusse....VU
divaricata (P.J.Bergius) Less. LC
elata B.Nord. ....Rare
elongata Thunb. LC
empetrifolia DC. LC
erythrochaeta DC. LC
fasciculata L.f. LC
fastigiata Thunb. LC
flexicaulis L.f. LC
foleyi Hutch. & E.Phillips ....DDT
glabrata L.f. LC
glauca Thunb. LC
glaucescens DC. LC
glomerata L.f. LC
gymnocline DC. ....DDT
heterocarpa DC. LC
hirsuta L.f. LC
hutchinsoniana Compton ....Rare
incana (Burm.) DC. LC
inflexa Thunb. ex L.f. LC
intermedia Hutch. & E.Phillips....LC
leptospermoides DC. LC
leucoclada Turcz. LC
leucoloma DC. ....DDT
lucilioides DC. LC
membranacea L.f. LC
mooreiana Hutch. ....DDT
mucronata DC. LC
oblanceolata E.Phillips....LC
onobromoides DC. LC
oppositifolia L. ....Thr*
ovalifolia DC. LC
pallens L.f. LC
paniculata Thunb. LC
pillansii Hutch. ....DDD
punctata E.Phillips LC
quinqueflora DC. ....DDT
scabra Harv. ....EN
scariosa L.f. LC
sordida N.E.Br. LC
staehelinoides DC. LC
stricta Aiton var. longifolia E.Phillips LC
stricta Aiton var. stricta....LC
succulenta Thunb. LC
tenuifolia DC. ....EN
teretifolia (Thunb.) Fourc. LC
tricephala DC. LC
uncinata DC. LC
undulata DC. LC
unguiculata S.Moore....LC
utilis Hutch. ....Rare
villosa L.f. LC
viscosa Thunb. LC
Pterygodium, 197
acutifolium Lindl. LC
alatum (Thunb.) Sw. LC
caffrum (L.) Sw. LC
catholicum (L.) Sw. LC
connivens Schelpe ....CR PE
cooperi Rolfe....LC
cruciferum Sond. ....EN
hallii (Schelpe) Kurzweil & H.P.Linder LC
hastatum Bolus LC
inversum (Thunb.) Sw. ....EN
leucanthum Bolus LC
magnum Rchb.f. LC
newdigateae Bolus var. cleistogamum Bolus ....VU
newdigateae Bolus var. newdigateae....DDD
pentherianum Schltr. LC
platypetalum Lindl. LC
schelpei H.P.Linder....LC
volucris (L.f.) Sw. LC
Ptycholobium
biflorum (E.Mey.) Brummitt subsp. biflorum....LC
contortum (N.E.Br.) Brummitt LC
plicatum (Oliv.) Harms subsp. plicatum LC
Puccinellia
acroxantha C.A.Sm. & C.E.Hubb....LC
angusta (Nees) C.A.Sm. & C.E.Hubb. LC
Pulicaria
scabra (Thunb.) Druce....LC
Pupalia
lappacea (L.) A.Juss. var. lappacea LC
Putterlickia, 300
pyracantha (L.) Szyszyl. LC
retrospinosa A.E.van Wyk & Mostert....NT
saxatilis (Burch.) Jordaan....LC
verrucosa (E.Mey. ex Sond.) Szyszyl. LC
Pycnostachys
reticulata (E.Mey.) Benth. LC
urticifolia Hook. LC
Pycreus
atribulbus (Kük.) Napper LC
betschuanus (Boeck.) C.B.Clarke....LC
chrysanthus (Boeck.) C.B.Clarke LC
cooperi C.B.Clarke LC
flavescens (L.) P.Beauv. ex Rchb. LC
intactus (Vahl) J.Raynal....LC
macranthus (Boeck.) C.B.Clarke LC
macrostachyos (Lam.) J.Raynal LC
mundii Nees....LC
muricatus (Kük.) Napper LC
niger (Ruíz & Pav.) Cufod. subsp. elegantulus (Steud.) Lye LC
nigricans (Steud.) C.B.Clarke....LC
nitidus (Lam.) J.Raynal....LC
oakfortensis C.B.Clarke....LC
pelophilus (Ridl.) C.B.Clarke....LC
permutatus (Boeck.) Napper LC
polystachyos (Rottb.) P.Beauv. var. polystachyos....LC
pumilus (L.) Domin....LC
rehmannianus C.B.Clarke....LC
unioloides (R.Br.) Urb. LC
Pygmaeothamnus
chamaedendrum (Kuntze) Robyns var. chamaedendrum LC
chamaedendrum (Kuntze) Robyns var. setulosus Robyns LC
zeyheri (Sond.) Robyns var. rogersii Robyns LC
zeyheri (Sond.) Robyns var. zeyheri LC
Pyrenacantha
grandiflora Baill. LC
kaurabassana Baill. LC
scandens Planch. ex Harv. LC
Pyrostria
hystrix (Bremek.) Bridson....LC
Pyrrosia
africana (Kunze) F.Ballard LC
schimperiana (Mett. ex Kuhn) Alston var. schimperiana....LC

Q

Quaqua, 239
acutiloba (N.E.Br.) Bruyns....LC
arenicola (N.E.Br.) Plowes subsp. arenicola....LC
arenicola (N.E.Br.) Plowes subsp. pilifera (Bruyns) Bruyns LC
arida (N.E.Br.) Plowes LC
armata (N.E.Br.) Bruyns subsp. armata LC
armata (N.E.Br.) Bruyns subsp. maritima Bruyns ...LC
aurea (C.A.Lückh.) Plowes LC
bayeriana (Bruyns) Plowes ....Rare
cincta (C.A.Lückh.) Bruyns....Rare
framesii (Pillans) Bruyns....EN
incarnata (L.f.) Bruyns subsp. hottentotorum (N.E.Br.) Bruyns LC
incarnata (L.f.) Bruyns subsp. incarnata LC
incarnata (L.f.) Bruyns subsp. tentaculata (Bruyns) Bruyns LC
inversa (N.E.Br.) Bruyns ....Rare
linearis (N.E.Br.) Bruyns....LC
mammillaris (L.) Bruyns....LC
marlothii (N.E.Br.) Bruyns....LC
multiflora (R.A.Dyer) Bruyns LC
pallens Bruyns ....Rare
parviflora (Masson) Bruyns subsp. confusa (Plowes) Bruyns....LC
parviflora (Masson) Bruyns subsp. dependens (N.E.Br.) Bruyns LC
parviflora (Masson) Bruyns subsp. gracilis (C.A.Lückh.) Bruyns LC
parviflora (Masson) Bruyns subsp. parviflora....LC
parviflora (Masson) Bruyns subsp. swanepoelii (Lavranos) Bruyns....LC
pillansii (N.E.Br.) Bruyns LC
pruinosa (Masson) Bruyns....LC
pulchra (Bruyns) Plowes....EN
ramosa (Masson) Bruyns LC
Quisqualis
parviflora Gerrard ex Sond. LC

R

Rabdosiella
calycina (Benth.) Codd LC
Rabiea
albinota (Haw.) N.E.Br. LC
albipuncta (Haw.) N.E.Br. LC
comptonii (L.Bolus) L.Bolus LC
differmis (L.Bolus) L.Bolus LC
jamesii (L.Bolus) L.Bolus....DDT
lesliei N.E.Br. LC
Radinosiphon
leptostachya (Baker) N.E.Br. LC
lomatensis (N.E.Br.) N.E.Br. LC
Radyera
urens (L.f.) Bullock LC
Rafnia, 385
acuminata (E.Mey.) G.J.Campbell & B.-E.van Wyk LC
alata G.J.Campbell & B.-E.van Wyk LC
amplexicaulis (L.) Thunb. LC
angulata Thunb. subsp. angulata LC
angulata Thunb. subsp. ericifolia (T.M.Salter) G.J.Campbell & B.-E.van Wyk ....EN
angulata Thunb. subsp. humilis (Eckl. & Zeyh.) G.J.Campbell & B.-E.van Wyk ....CR
angulata Thunb. subsp. montana G.J.Campbell & B.-E.van Wyk....Critically Rare

angulata Thunb. subsp. thunbergii (Harv.) G.J.Campbell & B.-E.van Wyk ..... **EN**
capensis (L.) Schinz subsp. calycina G.J.Campbell & B.-E.van Wyk LC
capensis (L.) Schinz subsp. capensis LC
capensis (L.) Schinz subsp. carinata G.J.Campbell & B.-E.van Wyk LC
capensis (L.) Schinz subsp. dichotoma (Eckl. & Zeyh.) G.J.Campbell & B.-E.van Wyk LC
capensis (L.) Schinz subsp. elsieae G.J.Campbell & B.-E.van Wyk ..... **Rare**
capensis (L.) Schinz subsp. ovata (P.J.Bergius) G.J.Campbell & B.-E.van Wyk LC
capensis (L.) Schinz subsp. pedicellata G.J.Campbell & B.-E.van Wyk LC
crassifolia Harv. LC
crispa C.H.Stirt. ..... **CR**
diffusa Thunb. LC
elliptica Thunb. LC
globosa G.J.Campbell & B.-E.van Wyk LC
inaequalis G.J.Campbell & B.-E.van Wyk ..... **EN**
lancea (Thunb.) DC. LC
ovata E.Mey. LC
racemosa Eckl. & Zeyh. subsp. pumila G.J.Campbell & B.-E.van Wyk ..... **Critically Rare**
racemosa Eckl. & Zeyh. subsp. racemosa LC
rostrata G.J.Campbell & B.-E.van Wyk subsp. pluriflora G.J.Campbell & B.-E.van Wyk ..... **Rare**
rostrata G.J.Campbell & B.-E.van Wyk subsp. rostrata LC
schlechteriana Schinz LC
spicata Thunb. LC
triflora Thunb. LC
vlokii G.J.Campbell & B.-E.van Wyk ..... **VU**

Rangaeris
muscicola (Rchb.f.) Summerh. LC

Ranunculus
baurii MacOwan LC
capensis Thunb. ..... DDT
meyeri Harv. LC
rionii Lagger LC

Rapanea, 445
gilliana (Sond.) Mez ..... **EN**
melanophloeos (L.) Mez ..... **Declining**

Raphia, 78
australis Oberm. & Strey ..... **VU**

Raphionacme, 239
dyeri Retief & Venter LC
elsana Venter & R.L.Verh. ..... **EN**
flanaganii Schltr. LC
galpinii Schltr. LC
hirsuta (E.Mey.) R.A.Dyer LC
lobulata Venter & R.L.Verh. ..... **Rare**
lucens Venter & R.L.Verh. ..... **NT**[*]
monteiroae (Oliv.) N.E.Br. LC
palustris Venter & R.L.Verh. LC
procumbens Schltr. LC
velutina Schltr. LC
villicorona Venter ..... **CR**
zeyheri Harv. LC

Raspalia, 290
angulata (Sond.) Nied. LC
barnardii Pillans ..... **EN**
dregeana (Sond.) Nied. LC
globosa (Lam.) Pillans LC
microphylla (Thunb.) Brongn. LC
oblongifolia Pillans ..... **Rare**
palustris (Schltr. ex Kirchn.) Pillans LC
phylicoides (Thunb.) Arn. ..... Thr[*]
sacculata (Bolus ex Kirchn.) Pillans LC
schlechteri Dummer ..... **Rare**
staavioides (Sond.) Pillans LC
stokoei Pillans LC
trigyna (Schltr.) Dummer ..... **CR**
variabilis Pillans LC
villosa C.Presl LC
virgata (Brongn.) Pillans LC

Rauvolfia
caffra Sond. LC

Rawsonia
lucida Harv. & Sond. LC

Reissantia
indica (Willd.) N.Hallé var. orientalis N.Hallé & B.Mathew LC

Relhania, 279
acerosa (DC.) K.Bremer LC
calycina (L.f.) L'Hér. subsp. apiculata (DC.) K.Bremer LC
calycina (L.f.) L'Hér. subsp. calycina LC
calycina (L.f.) L'Hér. subsp. lanceolata K.Bremer LC
corymbosa (Bolus) K.Bremer LC
decussata L'Hér. ..... **Rare**
fruticosa (L.) K.Bremer LC
garnotii (Less.) K.Bremer ..... **VU**
pungens L'Hér. subsp. angustifolia (DC.) K.Bremer LC
pungens L'Hér. subsp. pungens LC
pungens L'Hér. subsp. trinervis (Thunb.) K.Bremer LC
relhanioides (Schltr.) K.Bremer LC
rotundifolia Less. ..... **CR**
spathulifolia K.Bremer ..... **EN**
speciosa (DC.) Harv. LC
tricephala (DC.) K.Bremer ..... **NT**

Rendlia
altera (Rendle) Chiov. LC

Rennera, 279
stellata P.P.J.Herman ..... **VU**

Requienia
pseudosphaerosperma (Schinz) Brummitt LC
sphaerosperma DC. LC

Reseda
lutea L. subsp. lutea var. nutans Boiss. LC

Resnova
humifusa (Baker) U. & D.Müll.-Doblies LC
lachenalioides (Baker) Van der Merwe LC
maxima Van der Merwe LC
minor Van der Merwe LC
pilosa Van der Merwe LC

Restio, 209
acockii Pillans ..... **CR**
alticola Pillans ..... **Rare**
ambiguus Mast. LC
arcuatus Mast. LC
aureolus Pillans LC
bifarius Mast. LC
bifidus Thunb. LC
bifurcus Mast. LC
bolusii Pillans LC
brachiatus (Mast.) Pillans LC
brunneus Pillans ..... **Rare**
burchellii Pillans LC
capillaris Kunth LC
colliculospermus H.P.Linder ..... **VU**
communis Pillans ..... **VU**
confusus Pillans LC
corneolus Esterh. LC
cymosus (Mast.) Pillans LC
debilis Nees LC
decipiens (N.E.Br.) H.P.Linder LC
degenerans Pillans LC
dispar Mast. LC
distans Pillans ..... **Rare**
distichus Rottb. LC
dodii Pillans var. dodii ..... **VU**
dodii Pillans var. purpureus Pillans ..... **VU**
echinatus Kunth LC
egregius Hochst. LC
ejuncidus Mast. LC
festuciformis Mast. LC
filiformis Poir. LC
fragilis Esterh. LC
fusiformis Pillans ..... **Rare**
galpinii Pillans LC
harveyi Mast. ..... **EN**
implicatus Esterh. ..... **Critically Rare**
inconspicuus Esterh. LC
ingens Esterh. LC
insignis Pillans LC
inveteratus Esterh. LC
involutus Pillans ..... DDT
leptostachyus Kunth LC
micans Nees ..... **EN**
miser Kunth LC
montanus Esterh. ..... **Critically Rare**
multiflorus Spreng. LC
nodosus Pillans ..... **Rare**
nuwebergensis Esterh. ..... **VU**
obscurus Pillans LC
occultus (Mast.) Pillans LC
pachystachyus Kunth LC
paludicola H.P.Linder ..... **Rare**
papyraceus Pillans ..... **VU**
patens Mast. LC
peculiaris Esterh. ..... **Critically Rare**
pedicellatus Mast. LC
perplexus Kunth LC
perseverans Esterh. LC
pillansii H.P.Linder LC
praeacutus Mast. LC
pulvinatus Esterh. LC
pumilis Esterh. ..... **Rare**
purpurascens Mast. LC
quadratus Mast. LC
quinquefarius Nees LC
rarus Esterh. ..... **Critically Rare**
rupicola Esterh. ..... **Critically Rare**
sarocladus Mast. LC
scaber Mast. ..... **VU**
scaberulus N.E.Br. LC
secundus (Pillans) H.P.Linder LC
sejunctus Mast. LC
similis Pillans LC
singularis Esterh. ..... **Rare**
stereocaulis Mast. LC
stokoei Pillans LC
strictus N.E.Br. LC
strobolifer Kunth LC
subtilis Mast. ..... **Rare**
tetragonus Thunb. LC
triticeus Rottb. LC
tuberculatus Pillans LC
vallis-simius H.P.Linder ..... **Rare**
verrucosus Esterh. ..... Thr[*]
versatilis H.P.Linder LC
zuluensis H.P.Linder ..... **VU**
zwartbergense Pillans LC

Retzia
capensis Thunb. LC

Reyemia, 550
chasmanthiflora Hilliard ..... **Rare**
nemesioides (Diels) Hilliard LC

Rhamnus
prinoides L'Hér. LC

Rhamphicarpa
brevipedicellata O.J.Hansen LC
fistulosa (Hochst.) Benth. LC

Rhigiophyllum, 295
squarrosum Hochst. ..... **VU**

Rhigozum
brevispinosum Kuntze LC
obovatum Burch. LC
trichotomum Burch. LC
zambesiacum Baker LC

Rhinacanthus
gracilis Klotzsch var. gracilis LC
gracilis Klotzsch var. latilabiatus K.Balkwill LC
xerophilus A.Meeuse LC

Rhinephyllum, 441
broomii L.Bolus LC
comptonii L.Bolus LC
graniforme (Haw.) L.Bolus LC
inaequale L.Bolus ..... **EN**
luteum (L.Bolus) L.Bolus LC
muirii N.E.Br. LC
obliquum L.Bolus LC
parvifolium L.Bolus LC
pillansii N.E.Br. LC
schonlandii L.Bolus LC

Rhipsalis
baccifera (Roem. & Schult.) Stapf subsp. mauritiana (DC.) Barthlott LC

Rhizophora
mucronata Lam. LC

Rhodocoma
alpina H.P.Linder & Vlok LC
arida H.P.Linder & Vlok LC
capensis Steud. LC
foliosa (N.E.Br.) H.P.Linder LC
fruticosa (Thunb.) H.P.Linder LC
gigantea (Kunth) H.P.Linder LC
gracilis H.P.Linder & Vlok LC
vleibergensis H.P.Linder LC

Rhodohypoxis, 125
baurii (Baker) Nel var. baurii....LC
baurii (Baker) Nel var. confecta Hilliard & B.L.Burtt....LC
baurii (Baker) Nel var. platypetala (Baker) Nel....LC
deflexa Hilliard & B.L.Burtt....LC
incompta Hilliard & B.L.Burtt....Rare
milloides (Baker) Hilliard & B.L.Burtt....LC
rubella (Baker) Nel....LC
thodiana (Nel) Hilliard & B.L.Burtt....Rare

Rhoiacarpos
capensis (Harv.) A.DC....LC

Rhoicissus, 559
digitata (L.f.) Gilg & M.Brandt....LC
kougabergensis Retief & Van Jaarsv.....Rare
laetans Retief....Rare
microphylla (Turcz.) Gilg & M.Brandt....LC
revoilii Planch.....LC
rhomboidea (E.Mey. ex Harv.) Planch....LC
sekhukhuniensis Retief, Siebert & A.E.van Wyk ...LC
sessilifolia Retief....LC
tomentosa (Lam.) Wild & R.B.Drumm....LC
tridentata (L.f.) Wild & R.B.Drumm....LC

Rhombophyllum, 441
albanense (L.Bolus) H.E.K.Hartmann....LC
dolabriforme (L.) Schwantes....LC
dyeri (L.Bolus) H.E.K.Hartmann....LC
nelii Schwantes....LC
rhomboideum (Salm-Dyck) Schwantes....EN

Rhus see **Searsia**

Rhynchocalyx, 515
lawsonioides Oliv.....NT

Rhynchopsidium
pumilum (L.f.) DC....LC
sessiliflorum (L.f.) DC....LC

Rhynchosia, 386
adenodes Eckl. & Zeyh....LC
albissima Gand....LC
angulosa Schinz....LC
angustifolia (Jacq.) DC....LC
argentea (Thunb.) Harv.....LC
arida C.H.Stirt....VU
atropurpurea Germish.....LC
bullata Benth. ex Harv....LC
calvescens Meikle....LC
capensis (Burm.f.) Schinz....LC
caribaea (Jacq.) DC....LC
chrysantha Schltr. ex Zahlbr....DDT
chrysoscias Benth. ex Harv.....LC
ciliata (Thunb.) Schinz....LC
clivorum S.Moore subsp. clivorum....LC
clivorum S.Moore subsp. pycnantha (Harms) Verdc....LC
confusa Burtt Davy....LC
connata Baker f.....DDD
cooperi (Harv. ex Baker f.) Burtt Davy....LC
crassifolia Benth. ex Harv....LC
densiflora (Roth) DC. subsp. chrysadenia (Taub.) Verdc....LC
emarginata Germish....LC
ferulifolia Benth. ex Harv.....LC
foliosa Markötter....DDD
galpinii Baker f....LC
grandifolia Steud.....LC
harmsiana Schltr. ex Zahlbr. var. burchellii Burtt Davy....LC
harmsiana Schltr. ex Zahlbr. var. harmsiana....LC
harveyi Eckl. & Zeyh.....LC
hirsuta Eckl. & Zeyh....LC
hirta (Andrews) Meikle & Verdc.....LC
holosericea Schinz....LC
komatiensis Harms....LC
leucoscias Benth. ex Harv.....LC
microscias Benth. ex Harv....LC
minima (L.) DC. var. falcata (E.Mey.) Verdc.....LC
minima (L.) DC. var. minima....LC
minima (L.) DC. var. prostrata (Harv.) Meikle LC
monophylla Schltr....LC
nervosa Benth. ex Harv. var. nervosa....LC
nervosa Benth. ex Harv. var. petiolata Burtt Davy....DDT
nitens Benth. ex Harv....LC
ovata J.M.Wood & M.S.Evans....LC
pauciflora Bolus....LC
peglerae Baker f....DDT
pentheri Schltr. ex Zahlbr. var. hutchinsoniana Burtt Davy....LC
pentheri Schltr. ex Zahlbr. var. pentheri....LC
pinnata Harv....LC
reptabunda N.E.Br....LC
resinosa (Hochst. ex A.Rich.) Baker....LC
rogersii Schinz....VU
schlechteri Baker f.....LC
sordida (E.Mey.) Schinz....LC
spectabilis Schinz....LC
stenodon Baker f....LC
sublobata (Schumach.) Meikle....LC
thorncroftii (Baker f.) Burtt Davy....LC
totta (Thunb.) DC. var. totta....LC
vendae C.H.Stirt....VU
venulosa (Hiern) K.Schum....LC
villosa (Meisn.) Druce....LC
viscidula Steud....DDT
woodii Schinz....LC

Rhynchospora
barrosiana Guagl....LC
brownii Roem. & Schult....LC
gracillima Thwaites subsp. subquadrata (Cherm.) J.Raynal....LC
holoschoenoides (Rich.) Herter....LC
perrieri Cherm....LC
rubra (Lour.) Makino subsp. africana J.Raynal....LC
spectabilis Hochst....LC

Rhyssolobium
dumosum E.Mey....Thr*

Rhytachne
latifolia Clayton....LC
rottboellioides Desv....LC

Rinorea, 559
angustifolia (Thouars) Baill. subsp. natalensis (Engl.) Grey-Wilson....LC
domatiosa A.E.van Wyk....Rare
ilicifolia (Welw. ex Oliv.) Kuntze subsp. ilicifolia var. ilicifolia....LC

Riocreuxia, 239
aberrans R.A.Dyer....NT
alexandrina (H.Huber) R.A.Dyer....CR PE
bolusii N.E.Br....DDD
burchellii K.Schum....LC
flanaganii Schltr.....Rare
picta Schltr....LC
torulosa Decne. var. bolusii (N.E.Br.) Masinde LC
torulosa Decne. var. torulosa....LC
woodii N.E.Br.....CR PE

Robsonodendron
eucleiforme (Eckl. & Zeyh.) R.H.Archer....LC
maritimum (Bolus) R.H.Archer....LC

Roella, 295
amplexicaulis Wolley-Dod....LC
arenaria Schltr.....VU
bryoides H.Buek....DDT
ciliata L....LC
compacta Schltr....LC
decurrens L'Hér.....VU
dregeana A.DC. var. dregeana....LC
dregeana A.DC. var. nitida (Schltr.) Adamson.....LC
dunantii A.DC....LC
glomerata A.DC....LC
goodiana Adamson....VU
incurva A.DC....LC
latiloba A.DC.....DDD
maculata Adamson....LC
muscosa L.f.....LC
prostrata E.Mey. ex A.DC.....LC
recurvata A.DC.....Rare
secunda H.Buek....LC
spicata L.f. var. burchellii Adamson....LC
spicata L.f. var. spicata....LC
squarrosa P.J.Bergius....LC
triflora (R.D.Good) Adamson....LC

Rogeria
longiflora (Royen) J.Gay ex DC....LC

Romulea, 169
albiflora J.C.Manning & Goldblatt.....CR
albomarginata M.P.de Vos....VU
amoena Schltr. ex Bég....VU
aquatica G.J.Lewis....EN
atrandra G.J.Lewis var. atrandra....LC
atrandra G.J.Lewis var. esterhuyseniae M.P.de Vos....LC
atrandra G.J.Lewis var. lewisiae M.P.de Vos LC
austinii E.Phillips....LC
autumnalis L.Bolus....LC
barkerae M.P.de Vos....EN
biflora (Bég.) M.P.de Vos....LC
camerooniana Baker....LC
cedarbergensis M.P.de Vos.....Rare
citrina Baker....LC
collina J.C.Manning & Goldblatt....VU
cruciata (Jacq.) Baker var. cruciata....LC
cruciata (Jacq.) Baker var. intermedia (Bég.) M.P.de Vos....LC
dichotoma (Thunb.) Baker....LC
discifera J.C.Manning & Goldblatt.....CR
diversiformis M.P.de Vos....LC
eburnea J.C.Manning & Goldblatt....VU
elliptica M.P.de Vos.....CR
eximia M.P.de Vos....EN
fibrosa M.P.de Vos....LC
flava (Lam.) M.P.de Vos var. flava....LC
flava (Lam.) M.P.de Vos var. hirsuta (Bég.) M.P.de Vos....LC
flava (Lam.) M.P.de Vos var. minor (Bég.) M.P.de Vos....LC
flava (Lam.) M.P.de Vos var. viridiflora (Bég.) M.P.de Vos....LC
flexuosa Klatt....LC
gigantea Bég.....LC
gracillima Baker....LC
hallii M.P.de Vos....VU
hantamensis (Diels) Goldblatt.....Rare
hirsuta (Steud. ex Klatt) Baker var. cuprea (Bég.) M.P.de Vos....LC
hirsuta (Steud. ex Klatt) Baker var. framesii (L.Bolus) M.P.de Vos....LC
hirsuta (Steud. ex Klatt) Baker var. hirsuta.....LC
hirsuta (Steud. ex Klatt) Baker var. zeyheri (Baker) M.P.de Vos....LC
hirta Schltr.....LC
jugicola M.P.de Vos....VU
kamisensis M.P.de Vos....LC
komsbergensis M.P.de Vos....NT
leipoldtii Marais....LC
lilacina J.C.Manning & Goldblatt....VU
longipes Schltr.....LC
luteoflora (M.P.de Vos) M.P.de Vos var. luteoflora....LC
macowanii Baker var. alticola (B.L.Burtt) M.P.de Vos....LC
macowanii Baker var. macowanii....LC
macowanii Baker var. oreophila M.P.de Vos.....LC
maculata J.C.Manning & Goldblatt....EN
malaniae M.P.de Vos....VU
membranacea M.P.de Vos....VU
minutiflora Klatt....LC
monadelpha (Sweet) Baker....LC
montana Schltr. ex Bég.....LC
monticola M.P.de Vos....VU
multifida M.P.de Vos....VU
multisulcata M.P.de Vos....VU
namaquensis M.P.de Vos....NT
neglecta (Schult.) M.P.de Vos....VU
obscura Klatt var. blanda M.P.de Vos....LC
obscura Klatt var. campestris M.P.de Vos.....LC
obscura Klatt var. obscura....LC
obscura Klatt var. subtestacea M.P.de Vos LC
pearsonii M.P.de Vos....VU
pratensis M.P.de Vos....LC
rosea (L.) Eckl. var. australis (Ewart) M.P.de Vos....LC
rosea (L.) Eckl. var. communis M.P.de Vos.....LC
rosea (L.) Eckl. var. elegans (Klatt) Bég.....LC
rosea (L.) Eckl. var. reflexa (Eckl.) Bég.....LC
rosea (L.) Eckl. var. rosea....LC
rupestris J.C.Manning & Goldblatt....EN
sabulosa Schltr. ex Bég.....VU
saldanhensis M.P.de Vos....EN
sanguinalis M.P.de Vos....VU
saxatilis M.P.de Vos....LC
schlechteri Bég.....LC
setifolia N.E.Br. var. aggregata M.P.de Vos LC
setifolia N.E.Br. var. belviderica M.P.de Vos.....LC
setifolia N.E.Br. var. ceresiana M.P.de Vos LC
setifolia N.E.Br. var. setifolia....LC
singularis J.C.Manning & Goldblatt....VU
sinispinosensis M.P.de Vos....EN

sladenii M.P.de Vos ..... **VU**
sphaerocarpa M.P.de Vos LC
stellata M.P.de Vos ..... **VU**
subfistulosa M.P.de Vos ..... **NT**
sulphurea Bég ..... **VU**
syringodeoflora M.P.de Vos ..... **VU**
tabularis Eckl. ex Bég LC
tetragona M.P.de Vos var. flavandra M.P.de Vos LC
tetragona M.P.de Vos var. tetragona LC
tortilis Baker var. dissecta M.P.de Vos ..... DDT
tortilis Baker var. tortilis ..... **DDD**
tortuosa (Licht. ex Roem. & Schult.) Baker subsp. aurea (Klatt) M.P.de Vos LC
tortuosa (Licht. ex Roem. & Schult.) Baker subsp. depauperata M.P.de Vos LC
tortuosa (Licht. ex Roem. & Schult.) Baker subsp. tortuosa LC
toximontana M.P.de Vos ..... **VU**
triflora (Burm.f.) N.E.Br. LC
unifolia M.P.de Vos ..... **NT**
vinacea M.P.de Vos ..... **Rare**
viridibracteata M.P.de Vos ..... **Rare**
vlokii M.P.de Vos ..... **VU**

Roodebergia, 279
kitamurana B.Nord ..... **EN**

Roridula
dentata L. LC
gorgonias Planch. LC

Rorippa
fluviatilis (E.Mey. ex Sond.) Thell. var. caledonica (Sond.) Marais LC
fluviatilis (E.Mey. ex Sond.) Thell. var. fluviatilis LC
madagascariensis (DC.) Hara LC
nudiuscula Thell. LC

Rosenia
glandulosa Thunb. LC
humilis (Less.) K.Bremer LC
oppositifolia (DC.) K.Bremer LC
spinescens DC. LC

Rotala
capensis (Harv.) A.Fern. & Diniz LC
filiformis (Bellardi) Hiern LC
tenella (Guill. & Perr.) Hiern LC

Rotheca, 399
caerulea (N.E.Br.) P.P.J.Herman & Retief LC
cuneiformis (Moldenke) P.P.J.Herman & Retief LC
hirsuta (Hochst.) R.Fern. LC
louwalbertsii (P.P.J.Herman) P.P.J.Herman & Retief LC
myricoides (Hochst.) Steane & Mabb. LC
pilosa (H.Pearson) P.P.J.Herman & Retief ..... **DDD**
uncinata (Schinz) P.P.J.Herman & Retief LC
violacea (Gürke) Verdc. LC
wildii (Moldenke) R.Fern. LC

Rothia
hirsuta (Guill. & Perr.) Baker LC

Rothmannia
capensis Thunb. LC
fischeri (K.Schum.) Bullock subsp. fischeri LC
fischeri (K.Schum.) Bullock subsp. moramballae (Hiern) Bridson LC
globosa (Hochst.) Keay LC

Rottboellia
cochinchinensis (Lour.) Clayton LC

Rubia
cordifolia L. subsp. conotricha (Gand.) Verdc. LC
horrida (Thunb.) Puff LC
petiolaris DC. LC

Rubus, 519
apetalus Poir. var. apetalus LC
flagellaris Willd. ..... Thr*
immixtus Gust. LC
intercurrens Gust. ..... **DDD**
longepedicellatus (Gust.) C.H.Stirt. LC
ludwigii Eckl. & Zeyh. subsp. ludwigii LC
ludwigii Eckl. & Zeyh. subsp. spatiosus C.H.Stirt. LC
pinnatus Willd. LC
rigidus Sm. LC
transvaaliensis Gust. var. transvaaliensis ..... Thr*

Ruellia, 218
baurii C.B.Clarke LC
cordata Thunb. LC
malacophylla C.B.Clarke LC
otaviensis P.G.Mey. LC
patula Jacq. LC
pilosa L.f. ..... **VU**
stenophylla C.B.Clarke LC
woodii C.B.Clarke ..... DDT

Ruelliopsis
setosa (Nees) C.B.Clarke LC

Rumex
bequaertii De Wild. LC
conglomeratus Murb. LC
cordatus Poir. LC
dregeanus Meisn. subsp. dregeanus LC
dregeanus Meisn. subsp. montanus B.L.Burtt LC
lanceolatus Thunb. LC
lativalvis Meisn. LC
obtusifolius L. subsp. obtusifolius LC
rhodesius Rech.f. LC
sagittatus Thunb. LC
spathulatus Thunb. LC
steudelii Hochst. ex A.Rich. LC
woodii N.E.Br. LC

Rumohra
adiantiformis (G.Forst.) Ching LC

Ruppia
cirrhosa (Petagna) Grande LC
maritima L. LC

Ruschia, 442
abbreviata L.Bolus LC
acocksii L.Bolus LC
acuminata L.Bolus ..... DDT
acutangula (Haw.) Schwantes ..... DDT
aggregata L.Bolus ..... DDT
alata L.Bolus ..... DDT
altigena (L.Bolus) L.Bolus ..... **Rare**
amicorum (L.Bolus) Schwantes ..... **VU**
ampliata L.Bolus ..... DDT
approximata (L.Bolus) Schwantes LC
archeri L.Bolus LC
aspera L.Bolus LC
atrata L.Bolus ..... DDT
barnardii L.Bolus LC
beaufortensis L.Bolus LC
bijliae L.Bolus LC
bipapillata L.Bolus ..... Thr*
bolusiae Schwantes LC
brakdamensis (L.Bolus) L.Bolus LC
breekpoortensis L.Bolus LC
brevibracteata L.Bolus ..... DDT
brevicyma L.Bolus ..... DDT
brevifolia L.Bolus ..... DDT
brevipes L.Bolus ..... DDT
britteniae L.Bolus LC
burtoniae L.Bolus LC
calcarea L.Bolus ..... DDT
calcicola (L.Bolus) L.Bolus LC
callifera L.Bolus ..... DDT
campestris (Burch.) Schwantes LC
canonotata (L.Bolus) Schwantes LC
capornii (L.Bolus) L.Bolus ..... DDT
caroli (L.Bolus) Schwantes LC
caudata L.Bolus ..... DDT
cedarbergensis L.Bolus LC
centrocapsula H.E.K.Hartmann & Stüber LC
ceresiana L.Bolus ..... **Rare**
cincta (L.Bolus) L.Bolus LC
clavata L.Bolus ..... DDT
complanata L.Bolus ..... DDT
congesta (Salm-Dyck) L.Bolus ..... DDT
copiosa L.Bolus ..... DDT
costata L.Bolus LC
cradockensis (Kuntze) H.E.K.Hartmann & Stüber subsp. cradockensis LC
cradockensis (Kuntze) H.E.K.Hartmann & Stüber subsp. triticiformis (L.Bolus) H.E.K.Hartmann & Stüber LC
crassa (L.Bolus) Schwantes LC
crassisepala L.Bolus LC
cupulata (L.Bolus) Schwantes ..... **VU**
curta (Haw.) Schwantes ..... DDT
cymbifolia (Haw.) L.Bolus LC
cymosa (L.Bolus) Schwantes LC
decumbens L.Bolus LC
decurrens L.Bolus LC
decurvans L.Bolus ..... DDT
dejagerae L.Bolus LC
densiflora L.Bolus ..... **CR**
depressa L.Bolus LC
dichroa (Rolfe) L.Bolus LC
dilatata L.Bolus ..... DDT
divaricata L.Bolus LC
diversifolia L.Bolus LC
duthiae (L.Bolus) Schwantes ..... **EN**
edentula (Haw.) L.Bolus ..... DDT
elineata L.Bolus LC
erecta (L.Bolus) Schwantes LC
esterhuyseniae L.Bolus ..... DDT
exigua L.Bolus ..... DDT
extensa L.Bolus LC
festiva (N.E.Br.) Schwantes LC
filipetala L.Bolus ..... DDT
firma L.Bolus ..... DDT
floribunda L.Bolus ..... DDT
foliosa (Haw.) Schwantes ..... DDT
fourcadei L.Bolus LC
framesii L.Bolus LC
fredericii (L.Bolus) L.Bolus ..... DDT
fugitans L.Bolus ..... DDT
geminiflora (Haw.) Schwantes ..... **VU**
glauca L.Bolus LC
goodiae L.Bolus LC
gracilipes L.Bolus LC
gracilis L.Bolus LC
griquensis (L.Bolus) Schwantes LC
grisea (L.Bolus) Schwantes LC
hamata (L.Bolus) Schwantes LC
haworthii H.Jacobsen & G.D.Rowley ..... DDT
heteropetala L.Bolus ..... DDT
hexamera L.Bolus LC
holensis L.Bolus ..... Thr*
imbricata (Haw.) Schwantes ..... DDT
impressa L.Bolus LC
inclusa L.Bolus ..... DDT
inconspicua L.Bolus LC
incurvata L.Bolus ..... Thr*
indecora (L.Bolus) Schwantes ..... **EN**
indurata (L.Bolus) Schwantes LC
intermedia L.Bolus ..... Thr*
intricata (N.E.Br.) H.E.K.Hartmann & Stüber LC
karrachabensis L.Bolus ..... DDT
karrooica (L.Bolus) L.Bolus LC
kenhardtensis L.Bolus LC
klipbergensis L.Bolus ..... **DDD**
knysnana (L.Bolus) L.Bolus LC
kuboosana L.Bolus ..... DDT
langebaanensis L.Bolus ..... Thr*
lapidicola L.Bolus ..... **Rare**
lavisii L.Bolus LC
laxa (Willd.) Schwantes ..... DDT
laxiflora L.Bolus LC
laxipetala L.Bolus ..... DDT
leptocalyx L.Bolus ..... **EN**
lerouxiae (L.Bolus) L.Bolus LC
leucosperma L.Bolus LC
lineolata (Haw.) Schwantes LC
lisabeliae L.Bolus LC
littlewoodii L.Bolus ..... DDT
macowanii (L.Bolus) Schwantes LC
mariae L.Bolus ..... DDT
marianae (L.Bolus) Schwantes ..... DDT
maxima (Haw.) L.Bolus LC
middlemostii L.Bolus LC
misera (L.Bolus) L.Bolus ..... DDT
mollis (A.Berger) Schwantes ..... DDT
montaguensis L.Bolus LC
muelleri (L.Bolus) Schwantes LC
muiriana (L.Bolus) Schwantes ..... DDT
multiflora (Haw.) Schwantes LC
muricata L.Bolus LC
nana L.Bolus ..... DDT
nelii Schwantes ..... DDT
neovirens Schwantes ..... DDT
nieuwerustensis L.Bolus ..... **Rare**
nonimpressa L.Bolus LC
obtusa L.Bolus ..... DDT
orientalis L.Bolus LC
pallens L.Bolus LC
paripetala (L.Bolus) L.Bolus LC
parviflora (Haw.) Schwantes LC
parvifolia L.Bolus ..... DDT
patens L.Bolus ..... DDT
patulifolia L.Bolus LC
pauciflora L.Bolus ..... DDT
paucipetala L.Bolus ..... DDT
perfoliata (Mill.) Schwantes LC

phylicoides L.Bolus ..... DDT
pinguis L.Bolus ..... DDT
polita L.Bolus ..... VU
primosii L.Bolus LC
promontorii L.Bolus ..... Rare
pulvinaris L.Bolus LC
punctulata (L.Bolus) L.Bolus ex H.E.K.Hartmann ..... DDT
pungens (A.Berger) H.Jacobsen ..... DDT
putterillii (L.Bolus) L.Bolus LC
radicans L.Bolus ..... DDT
rariflora L.Bolus ..... DDT
recurva (Moench) H.E.K.Hartmann LC
rigens L.Bolus LC
rigida (Haw.) Schwantes LC
rigidicaulis (Haw.) Schwantes LC
robusta L.Bolus LC
rostella (Haw.) Schwantes ..... DDT
rubricaulis (Haw.) L.Bolus ..... VU
ruralis (N.E.Br.) Schwantes LC
sandbergensis L.Bolus ..... DDT
sarmentosa (Haw.) Schwantes LC
scabra H.E.K.Hartmann LC
schollii (Salm-Dyck) Schwantes LC
semidentata (Haw.) Schwantes LC
semiglobosa L.Bolus ..... DDT
senaria L.Bolus ..... Thr*
serrulata (Haw.) Schwantes ..... DDT
sessilis (Thunb.) H.E.K.Hartmann ..... DDT
singula L.Bolus ..... DDT
solitaria L.Bolus LC
spinosa (L.) Dehn LC
staminodiosa L.Bolus LC
stricta L.Bolus LC
strubeniae (L.Bolus) Schwantes ..... VU
suaveolens L.Bolus ..... DDT
subpaniculata L.Bolus LC
subsphaerica L.Bolus ..... DDT
subteres L.Bolus ..... Thr*
tardissima L.Bolus LC
tecta L.Bolus ..... EN
tenella (Haw.) Schwantes LC
testacea L.Bolus LC
tribracteata L.Bolus ..... DDT
triflora L.Bolus ..... DDT
truteri L.Bolus ..... DDT
tumidula (Haw.) Schwantes LC
uitenhagensis (L.Bolus) Schwantes LC
umbellata (L.) Schwantes ..... DDT
uncinata (L.) Schwantes LC
unidens (Haw.) Schwantes LC
vaginata (Haw.) Schwantes LC
valida Schwantes ..... DDT
vanbredai L.Bolus ..... Thr*
vanderbergiae L.Bolus LC
vanheerdei L.Bolus ..... DDT
vanniekerkiae L.Bolus LC
versicolor L.Bolus LC
vetovalida H.E.K.Hartmann ..... DDT
victoris (L.Bolus) L.Bolus ..... DDT
virens L.Bolus LC
virgata (Haw.) L.Bolus LC
viridifolia L.Bolus LC
willdenowii Schwantes ..... DDT

Ruschiella
argentea (L.Bolus) Klak LC
henricii (L.Bolus) Klak LC
lunulata (A.Berger) Klak LC

Ruspolia
hypocrateriformis (Vahl) Milne-Redh. var. australis Milne-Redh. LC

Ruttya
ovata Harv. LC

Rytigynia
celastroides (Baill.) Verdc. var. australis Verdc. LC

S

Sacciolepis
africana C.E.Hubb. & Snowden LC
chevalieri Stapf LC
curvata (L.) Chase LC
indica (L.) Chase LC
spiciformis (A.Rich.) Stapf LC
typhura (Stapf) Stapf LC

Salacia
gerrardii Harv. ex Sprague LC
kraussii (Harv.) Harv. LC
leptoclada Tul. LC
rehmannii Schinz LC

Salicornia
meyeriana Moss LC
pachystachya Bunge ex Ung.-Sternb. LC
perrieri A.Chev. LC
uniflora Toelken LC

Salix
mucronata Thunb. subsp. hirsuta (Thunb.) Immelman LC
mucronata Thunb. subsp. mucronata LC
mucronata Thunb. subsp. woodii (Seemen) Immelman LC

Salpinctium, 218
natalense (C.B.Clarke) T.J.Edwards ..... Rare
stenosiphon (C.B.Clarke) T.J.Edwards LC

Salsola
adisca Botsch. LC
adversariifolia Botsch. LC
aellenii Botsch. LC
albida Botsch. LC
angolensis Botsch. LC
aphylla L.f. LC
apiciflora Botsch. ..... DDT
apterygea Botsch. LC
araneosa Botsch. LC
arborea C.A.Sm. ex Aellen LC
armata C.A.Sm. ex Aellen LC
atrata Botsch. LC
barbata Aellen LC
calluna Fenzl ex C.H.Wright LC
capensis Botsch. ..... DDT
ceresica Botsch. LC
columnaris Botsch. LC
contrariifolia Botsch. LC
cryptoptera Aellen LC
dealata Botsch. LC
decussata C.A.Sm. ex Botsch. LC
denudata Botsch. LC
esterhuyseniae Botsch. LC
exalata Botsch. LC
geminiflora Fenzl ex C.H.Wright LC
gemmifera Botsch. LC
gemmipara Botsch. LC
glabrescens Burtt Davy LC
henriciae I.Verd. LC
humifusa A.Brückn. LC
inaperta Botsch. LC
kalaharica Botsch. LC
koichabica Botsch. LC
melanantha Botsch. LC
merxmuelleri Aellen LC
microtricha Botsch. LC
minutifolia Botsch. LC
namaqualandica Botsch. LC
nollothensis Aellen LC
patentipilosa Botsch. LC
procera Botsch. LC
ptiloptera Botsch. LC
rabieana I.Verd. LC
robinsonii Botsch. LC
scopiformis Botsch. LC
seminuda Botsch. LC
sericata Botsch. LC
smithii Botsch. LC
squarrosula Botsch. LC
tetramera Botsch. LC
tuberculata (Moq.) Fenzl LC
tuberculatiformis Botsch. LC
verdoorniae Toelken ..... Thr*
zeyheri (Moq.) Bunge LC

Saltera
sarcocolla (L.) Bullock LC

Salvadora
australis Schweick. LC
persica L. var. persica LC
persica L. var. pubescens Brenan LC

Salvia, 399
africana-caerulea L. LC
africana-lutea L. LC
albicaulis Benth. LC
aurita L.f. var. aurita LC
aurita L.f. var. galpinii (Skan) Hedge LC
chamelaeagnea P.J.Bergius LC
dentata Aiton LC
disermas L. LC
dolomitica Codd LC
garipensis E.Mey. ex Benth. LC
granitica Hochst. ..... DDT
lanceolata Lam. LC
muirii L.Bolus LC
namaensis Schinz LC
obtusata Thunb. ..... VU
radula Benth. LC
repens Burch. ex Benth. var. keiensis Hedge ... DDD
repens Burch. ex Benth. var. repens LC
repens Burch. ex Benth. var. transvaalensis Hedge LC
runcinata L.f. LC
scabra L.f. LC
schlechteri Briq. ..... DDD
thermarum Van Jaarsv. ..... VU
triangularis Thunb. LC
tysonii Skan LC
verbenaca L. LC

Samolus
porosus (L.f.) Thunb. LC
valerandi L. LC

Sandersonia, 102
aurantiaca Hook. ..... Declining

Sanicula
elata Buch.-Ham. ex D.Don LC

Saniella, 125
occidentalis (Nel) B.L.Burtt ..... Rare
verna Hilliard & B.L.Burtt LC

Sansevieria, 107
aethiopica Thunb. LC
concinna N.E.Br. LC
hallii Chahinian LC
hyacinthoides (L.) Druce LC
metallica Gérôme & Labroy ..... Critically Rare
pearsonii N.E.Br. LC

Saphesia, 443
flaccida (Jacq.) N.E.Br. ..... CR

Sarcocaulon
camdeboense Moffett LC
ciliatum Moffett LC
crassicaule Rehm LC
flavescens Rehm LC
herrei L.Bolus LC
l'heritieri Sweet LC
multifidum E.Mey. ex R.Knuth LC
patersonii (DC.) G.Don LC
salmoniflorum Moffett LC
vanderietiae L.Bolus LC

Sarcocornia
capensis (Moss) A.J.Scott LC
decumbens (Toelken) A.J.Scott LC
littorea (Moss) A.J.Scott LC
mossiana (Toelken) A.J.Scott LC
natalensis (Bunge ex Ung.-Sternb.) A.J.Scott var. affinis (Moss) O'Callaghan LC
natalensis (Bunge ex Ung.-Sternb.) A.J.Scott var. natalensis LC
perennis (Mill.) A.J.Scott var. lignosa (Woods) O'Callaghan LC
perennis (Mill.) A.J.Scott var. perennis LC
pillansii (Moss) A.J.Scott var. pillansii LC
terminalis (Toelken) A.J.Scott LC
xerophila (Toelken) A.J.Scott LC

Sarcophyte
sanguinea Sparrm. subsp. sanguinea LC

Sarcostemma
pearsonii N.E.Br. LC
viminale (L.) R.Br. subsp. orangeanum Liede & Meve LC
viminale (L.) R.Br. subsp. suberosum Meve & Liede LC
viminale (L.) R.Br. subsp. thunbergii (Don) Liede & Meve LC
viminale (L.) R.Br. subsp. viminale LC

Sartidia, 203
jucunda (Schweick.) De Winter ..... VU

Satureja, 399
biflora (Buch.-Ham. ex D.Don) Briq. LC
compacta Killick ..... Rare
grandibracteata Killick ..... Rare
reptans Killick LC

Satyrium, 198
acuminatum Lindl. LC
bicallosum Thunb. LC
bicorne (L.) Thunb. LC
bracteatum (L.f.) Thunb. LC
candidum Lindl. LC
carneum (Dryand.) Sims ....**NT**
coriifolium Sw. LC
cristatum Sond. var. cristatum LC
cristatum Sond. var. longilabiatum A.V.Hall LC
erectum Sw. LC
foliosum Sw. ....**VU**
hallackii Bolus subsp. hallackii ....**EN**
hallackii Bolus subsp. ocellatum (Bolus) A.V.Hall LC
humile Lindl. LC
ligulatum Lindl. LC
longicauda Lindl. var. jacottetianum (Kraenzl.) A.V.Hall LC
longicauda Lindl. var. longicauda LC
longicolle Lindl. LC
lupulinum Lindl. LC
macrophyllum Lindl. LC
membranaceum Sw. LC
microrrhynchum Schltr. ....**Rare**
muticum Lindl. ....**CR**
neglectum Schltr. subsp. neglectum var. neglectum LC
neglectum Schltr. subsp. woodii (Schltr.) A.V.Hall LC
odorum Sond. LC
outeniquense Schltr. LC
pallens S.D.Johnson & Kurzweil LC
parviflorum Sw. LC
princeps Bolus ....**VU**
pulchrum S.D.Johnson & Kurzweil ....**VU**
pumilum Thunb. LC
pygmaeum Sond. LC
retusum Lindl. LC
rhodanthum Schltr. ....**CR**
rhynchanthum Bolus LC
rupestre Schltr. ex Bolus LC
sphaerocarpum Lindl. LC
stenopetalum Lindl. subsp. brevicalcaratum (Bolus) A.V.Hall LC
stenopetalum Lindl. subsp. stenopetalum LC
striatum Thunb. ....**VU**
trinerve Lindl. LC

Scabiosa
africana L. LC
albanensis R.A.Dyer LC
angustiloba (Sond.) Hutch. LC
buekiana Eckl. & Zeyh. LC
columbaria L. LC
drakensbergensis B.L.Burtt LC
incisa Mill. LC
transvaalensis S.Moore ....Thr*
tysonii L.Bolus LC

Scadoxus
membranaceus (Baker) Friis & Nordal LC
multiflorus (Martyn) Raf. subsp. katharinae (Baker) Friis & Nordal LC
multiflorus (Martyn) Raf. subsp. multiflorus LC
puniceus (L.) Friis & Nordal LC

Scaevola
plumieri (L.) Vahl LC
sericea Vahl LC

Sceletium, 443
crassicaule (Haw.) L.Bolus LC
emarcidum (Thunb.) L.Bolus ex H.Jacobsen LC
exalatum Gerbaulet LC
expansum (L.) L.Bolus ....**VU**
rigidum L.Bolus LC
strictum L.Bolus ....**EN**
tortuosum (L.) N.E.Br. LC
varians (Haw.) Gerbaulet ....**VU**

Schefflera
umbellifera (Sond.) Baill. LC

Schinziophyton
rautanenii (Schinz) Radcl.-Sm. LC

Schismus, 204
barbatus (Loefl. ex L.) Thell. LC
inermis (Stapf) C.E.Hubb. LC
pleuropogon Stapf ....**CR**
scaberrimus Nees LC

Schistostephium, 279
artemisiifolium Baker subsp. artemisiifolium LC
crataegifolium (DC.) Fenzl ex Harv. LC
flabelliforme Less. LC
griseum (Harv.) Hutch. LC
heptalobum (DC.) Oliv. & Hiern LC
hippiifolium (DC.) Hutch. LC
rotundifolium (DC.) Fenzl ex Harv. LC
scandens Hutch. ....**DDD**
umbellatum (L.f.) K.Bremer & Humphries LC

Schizachyrium
brevifolium (Sw.) Nees ex Büse LC
exile (Hochst.) Pilg. LC
jeffreysii (Hack.) Stapf LC
rupestre (K.Schum.) Stapf LC
sanguineum (Retz.) Alston LC
ursulus Stapf LC

Schizaea
pectinata (L.) Sw. LC
tenella Kaulf. LC

Schizocarphus
nervosus (Burch.) Van der Merwe LC

Schizochilus, 199
angustifolius Rolfe LC
bulbinella (Rchb.f.) Bolus ....**Rare**
cecilii Rolfe subsp. culveri (Schltr.) H.P.Linder ....**Rare**
cecilii Rolfe subsp. transvaalensis (Rolfe) H.P.Linder LC
crenulatus H.P.Linder ....**VU**
flexuosus Harv. ex Rolfe LC
gerrardii (Rchb.f.) Bolus ....**EN**
lilacinus Schelpe ex H.P.Linder ....**Rare**
zeyheri Sond. LC

Schizodium, 199
bifidum (Thunb.) Rchb.f. LC
flexuosum (L.) Lindl. ....**NT**
inflexum Lindl. LC
longipetalum Lindl. ....**CR**
obliquum Lindl. subsp. clavigerum (Lindl.) H.P.Linder LC
obliquum Lindl. subsp. obliquum LC
satyrioides (L.) Garay ....**Declining**

Schizoglossum, 240
amatolicum Hilliard ....**Critically Rare**
aschersonianum Schltr. var. aschersonianum LC
aschersonianum Schltr. var. longipes N.E.Br. ....DDT
aschersonianum Schltr. var. pygmaeum (Schltr.) N.E.Br. LC
aschersonianum Schltr. var. radiatum N.E.Br. ....DDT
atropurpureum E.Mey. subsp. atropurpureum LC
atropurpureum E.Mey. subsp. tridentatum (Schltr.) Kupicha LC
atropurpureum E.Mey. subsp. virens (E.Mey.) Kupicha LC
bidens E.Mey. subsp. atrorubens (Schltr.) Kupicha LC
bidens E.Mey. subsp. bidens LC
bidens E.Mey. subsp. galpinii (Schltr.) Kupicha LC
bidens E.Mey. subsp. gracile Kupicha ....**VU**
bidens E.Mey. subsp. hirtum Kupicha ....**DDD**
bidens E.Mey. subsp. pachyglossum (Schltr.) Kupicha LC
bidens E.Mey. subsp. productum (N.E.Br.) Kupicha LC
cordifolium E.Mey. LC
crassipes S.Moore LC
elingue N.E.Br. subsp. elingue LC
elingue N.E.Br. subsp. purpureum Kupicha ....**Rare**
eustegioides (E.Mey.) Druce LC
flavum Schltr. LC
garcianum Schltr. LC
hamatum E.Mey. LC
hilliardiae Kupicha LC
ingomense N.E.Br. ....Thr*
linifolium Schltr. var. centrirostratum N.E.Br. LC
linifolium Schltr. var. linifolium LC
montanum R.A.Dyer ....**Rare**
nitidum Schltr. LC
peglerae N.E.Br. ....**EN**
periglossoides Schltr. LC
quadridens N.E.Br. ....**DDD**
rubiginosum Hilliard ....**VU**
singulare Kupicha ....**VU**
stenoglossum Schltr. subsp. flavum (N.E.Br.) Kupicha LC
stenoglossum Schltr. subsp. latifolium Kupicha LC
stenoglossum Schltr. subsp. stenoglossum LC

Schlechteranthus
hallii L.Bolus LC
maximilianii Schwantes LC

Schlechteria
capensis Bolus LC

Schlechterina, 455
mitostemmatoides Harms ....**VU***

Schmidtia
glabra Pilg. LC
kalahariensis Stent LC
pappophoroides Steud. LC

Schoenefeldia
transiens (Pilg.) Chiov. LC

Schoenoplectus
articulatus (L.) Palla LC
brachyceras (Hochst. ex A.Rich.) Lye LC
confusus (N.E.Br.) Lye subsp. natalitius Browning LC
corymbosus (Roth ex Roem. & Schult.) J.Raynal LC
decipiens (Nees) J.Raynal LC
erectus (Poir.) Palla ex J.Raynal LC
leucanthus (Boeck.) J.Raynal LC
muricinux (C.B.Clarke) J.Raynal LC
muriculatus (Kük.) Browning LC
paludicola (Kunth) J.Raynal LC
pulchellus (Kunth) J.Raynal LC
scirpoides (Schrad.) Browning LC
senegalensis (Hochst. ex Steud.) Palla ex J.Raynal LC

Schoenoxiphium
altum Kukkonen LC
basutorum Turrill LC
bracteosum Kukkonen LC
burttii Kukkonen LC
distinctum Kukkonen LC
ecklonii Nees var. ecklonii LC
ecklonii Nees var. unisexuale Kük. ....DDT
filiforme Kük. LC
lanceum (Thunb.) Kük. LC
lehmannii (Nees) Steud. LC
madagascariense Cherm. LC
molle Kukkonen LC
perdensum Kukkonen LC
rufum Nees var. dregeanum (Kunth) Kük. LC
rufum Nees var. pondoense Kük. LC
rufum Nees var. rufum LC
schweickerdtii Merxm. & Podlech LC
sparteum (Wahlenb.) C.B.Clarke LC
strictum Kukkonen ....DDT

Schoenus
nigricans L. LC

Schotia
afra (L.) Thunb. var. afra LC
afra (L.) Thunb. var. angustifolia (E.Mey.) Harv. LC
brachypetala Sond. LC
capitata Bolle LC
latifolia Jacq. LC

Schrebera
alata (Hochst.) Welw. LC

Schwantesia, 443
acutipetala L.Bolus ....**VU**
borcherdsii L.Bolus ....**VU**
herrei L.Bolus LC
marlothii L.Bolus LC
pillansii L.Bolus ....**Rare**
ruedebuschii Dinter LC
speciosa L.Bolus ....DDT
triebneri L.Bolus LC

Scirpoides
burkei (C.B.Clarke) Goetgh., Muasya & D.A.Simpson LC
dioecus (Kunth) Browning LC
thunbergii (Schrad.) Soják LC

Scirpus
falsus C.B.Clarke LC
ficinioides Kunth LC
pinguiculus C.B.Clarke LC
varius C.B.Clarke LC

Scleria
achtenii De Wild. LC

angusta Nees ex Kunth LC
aterrima (Ridl.) Napper LC
bulbifera Hochst. ex A.Rich....LC
dieterlenii Turrill LC
distans Poir....LC
dregeana Kunth....LC
foliosa Hochst. ex A.Rich. LC
greigiifolia (Ridl.) C.B.Clarke LC
melanomphala Kunth....LC
natalensis C.B.Clarke....LC
pergracilis (Nees) Kunth....LC
poiformis Retz. LC
rehmannii C.B.Clarke LC
sobolifer E.F.Franklin....LC
transvaalensis E.F.Franklin LC
unguiculata E.A.Rob.....LC
welwitschii C.B.Clarke LC
woodii C.B.Clarke LC

Sclerocarya
birrea (A.Rich.) Hochst. subsp. caffra (Sond.) Kokwaro....LC

Sclerochiton, 218
apiculatus Vollesen LC
harveyanus Nees LC
ilicifolius A.Meeuse....LC
odoratissimus Hilliard....LC
sp. A....DDT
triacanthus A.Meeuse....VU

Sclerocroton
integerrimus Hochst. LC

Scolopia
flanaganii (Bolus) Sim....LC
mundii (Eckl. & Zeyh.) Warb. LC
oreophila (Sleumer) Killick....LC
stolzii Gilg & Sleumer var. stolzii LC
zeyheri (Nees) Harv. LC

Scopelogena
bruynsii Klak LC
verruculata (L.) L.Bolus....LC

Scutia
myrtina (Burm.f.) Kurz....LC

Searsia, 219
acocksii (Moffett) Moffett ....NT
albomarginata (Sond.) Moffett ....CR
angustifolia (L.) F.A.Barkley LC
batophylla (Codd) Moffett....VU
bolusii (Sond. ex Engl.) Moffett LC
burchellii (Sond. ex Engl.) Moffett LC
carnosula (Schönland) Moffett....LC
chirindensis (Baker f.) Moffett....LC
ciliata (Licht. ex Schult.) A.J.Mill....LC
crenata (Thunb.) Moffett....LC
cuneifolia (L.f.) F.A.Barkley LC
dentata (Thunb.) F.A.Barkley LC
discolor (E.Mey. ex Sond.) Moffett....LC
dissecta (Thunb.) Moffett....LC
divaricata (Eckl. & Zeyh.) Moffett LC
dracomontana (Moffett) Moffett .... Rare
dregeana (Sond.) Moffett....LC
engleri (Britten) Moffett....LC
erosa (Thunb.) Moffett....LC
fastigata (Eckl. & Zeyh.) Moffett LC
gerrardii (Harv. ex Engl.) Moffett LC
glauca (Thunb.) Moffett LC
gracillima (Engl.) Moffett var. glaberrima (Schönland) Moffett LC
gracillima (Engl.) Moffett var. gracillima ....NT
grandidens (Harv. ex Engl.) Moffett LC
gueinzii (Sond.) F.A.Barkley....LC
harveyi (Moffett) Moffett ....NT
horrida (Eckl. & Zeyh.) Moffett LC
incisa (L.f.) F.A.Barkley var. effusa (C.Presl.) Moffett....LC
incisa (L.f.) F.A.Barkley var. incisa LC
keetii (Schönland) Moffett LC
krebsiana (C.Presl ex Engl.) Moffett....LC
kwazuluana (Moffett) Moffett.... Rare
laevigata var. laevigata....LC
laevigata (L.) F.A.Barkley var. villosa (L.f.) Moffett LC
lancea (L.f.) F.A.Barkley....LC
leptodictya (Diels) T.S.Yi, A.J.Mill. & J.Wen LC
longispina (Eckl. & Zeyh.) Moffett LC
lucida (L.) F.A.Barkley LC
magalismontana (Sond.) Moffett subsp. coddii (R. & A.Fern.) Moffett....LC
magalismontana (Sond.) Moffett subsp. magalismontana....LC
magalismontana (Sond.) Moffett subsp. trifoliolata (Baker f.) Moffett....LC
maricoana (Baker f.) Moffett ....VU
montana (Diels) Moffett....LC
natalensis (Bernh. ex Krauss) F.A.Barkley LC
nebulosa (Schönland) Moffett....LC
pallens (Eckl. & Zeyh.) Moffett....LC
pendulina (Jacq.) Moffett LC
pentheri (Zahlbr.) Moffett LC
pondoensis (Schönland) Moffett....LC
populifolia (E.Mey. ex Sond.) Moffett LC
pterota (C.Presl.) Moffett LC
pygmaea (Moffett) Moffett....VU
pyroides (Burch.) Moffett var. gracilis (Engl.) Moffett....LC
pyroides (Burch.) Moffett var. integrifolia (Engl.) Moffett....LC
pyroides (Burch.) Moffett var. pyroides....LC
refracta (Eckl. & Zeyh.) Moffett....LC
rehmanniana (Engl.) Moffett var. glabrata (Sond.) Moffett....LC
rehmanniana (Engl.) Moffett var. rehmanniana....LC
rigida (Mill.) F.A.Barkley var. dentata (Engl.) Moffett....LC
rigida (Mill.) F.A.Barkley var. margaretae (Burtt Davy ex Moffett) Moffett LC
rigida (Mill.) F.A.Barkley var. rigida....LC
rimosa (Eckl. & Zeyh.) Moffett LC
rogersii (Schönland) Moffett LC
rosmarinifolia (Vahl) F.A.Barkley....LC
rudatisii (Engl.) Moffett.... EN
scytophylla (Eckl. & Zeyh.) Moffett var. dentata (Moffett) Moffett....LC
scytophylla (Eckl. & Zeyh.) Moffett var. scytophylla....LC
sekhukhuniensis (Moffett) Moffett .... Rare
stenophylla (Eckl. & Zeyh.) Moffett ....NT
tenuinervis (Engl.) Moffett....LC
tomentosa (L.) F.A.Barkley....LC
transvaalensis (Engl.) Moffett LC
tridactyla (Burch.) Moffett....LC
tumulicola var. meeuseana....LC
tumulicola (S.Moore) Moffett var. tumulicola LC
undulata (Jacq.) T.S.Yi, A.J.Mill. & J.Wen....LC
wilmsii (Diels) Moffett....LC
zeyheri (Sond.) Moffett....LC

Sebaea, 389
albens (L.f.) Roem. & Schult. LC
ambigua Cham. LC
amicorum I.M.Oliv. & Beyers....LC
aurea (L.f.) Roem. & Schult....LC
bojeri Griseb. LC
capitata Cham. & Schltdl. var. capitata LC
capitata Cham. & Schltdl. var. sclerosepala (Schinz) Marais....LC
compacta A.W.Hill....LC
elongata E.Mey....LC
erosa Schinz....LC
exacoides (L.) Schinz....LC
exigua (Oliv.) Schinz....LC
filiformis Schinz LC
fourcadei Marais ....DDT
grandis (E.Mey.) Steud. LC
grisebachiana Schinz LC
hymenosepala Gilg....LC
junodii Schinz LC
laxa N.E.Br. ....VU
leiostyla Gilg LC
longicaulis Schinz LC
macrophylla Gilg LC
marlothii Gilg....LC
membranacea A.W.Hill....LC
micrantha (Cham. & Schltdl.) Schinz var. intermedia (Cham. & Schltdl.) Marais....LC
micrantha (Cham. & Schltdl.) Schinz var. micrantha....LC
minutiflora Schinz....LC
minutissima Hilliard & B.L.Burtt LC
natalensis Schinz LC
pentandra E.Mey. var. burchellii (Gilg) Marais....LC
pentandra E.Mey. var. pentandra LC
pleurostigmatosa Hilliard & B.L.Burtt....LC
procumbens A.W.Hill....LC
pusilla Eckl. ex Cham. LC
radiata Hilliard & B.L.Burtt....LC
ramosissima Gilg....LC
rara Wolley-Dod ....NT
rehmannii Schinz LC
repens Schinz....LC
scabra Schinz....NT
schlechteri Schinz LC
sedoides Gilg var. confertiflora (Schinz) Marais....LC
sedoides Gilg var. schoenlandii (Schinz) Marais....LC
sedoides Gilg var. sedoides....LC
spathulata (E.Mey.) Steud....LC
stricta (E.Mey.) Gilg LC
sulphurea Cham. & Schltdl....LC
thodeana Gilg LC
thomasii (S.Moore) Schinz LC
zeyheri Schinz subsp. acutiloba (Schinz) Marais...LC
zeyheri Schinz subsp. cleistantha (R.A.Dyer) Marais LC
zeyheri Schinz subsp. zeyheri....LC

Secale, 204
strictum (J.Presl) J.Presl subsp. africanum (Stapf) K.Hammer.... CR

Secamone
alpini Schult. LC
delagoensis Schltr. LC
filiformis (L.f.) J.H.Ross....LC
gerrardii Harv. ex Benth....LC
parvifolia (Oliv.) Bullock LC

Securidaca
longepedunculata Fresen. var. longepedunculata.LC
longepedunculata Fresen. var. parvifolia Oliv. LC

Seddera
capensis (E.Mey. ex Choisy) Hallier f. LC
suffruticosa (Schinz) Hallier f. LC

Seemannaralia
gerrardii (Seem.) Harms LC

Seetzenia
lanata (Willd.) Bullock LC

Sehima
galpinii Stent....LC
ischaemoides Forssk. LC

Seidelia
pumila (Sond.) Baill. LC
triandra (E.Mey.) Pax LC

Selaginella
caffrorum (Milde) Hieron. var. caffrorum LC
dregei (C.Presl) Hieron. LC
imbricata (Forssk.) Spring ex Decne. LC
kraussiana (Kunze) A.Braun ex Kuhn....LC
mittenii Baker LC
pygmaea (Kaulf.) Alston LC

Selago, 550
abietina Burm.f. ....DDT
acocksii Hilliard LC
adenodes Hilliard....LC
albida Choisy....LC
albomarginata Hilliard LC
albomontana Hilliard.... Rare
angustibractea Hilliard....LC
articulata Thunb....LC
aspera Choisy....LC
atherstonei Rolfe LC
barbula Harv. ex Rolfe....LC
baurii (Hiern) Hilliard....VU
beaniana Hilliard....LC
bilacunosa Hilliard LC
bolusii Rolfe....LC
brevifolia Rolfe....LC
burchellii Rolfe....VU
burkei Rolfe....LC
canescens L.f. LC
capitellata Schltr. LC
capituliflora Rolfe....LC
cecilae (Rolfe) Eyles....LC
cedrimontana Hilliard.... Rare
centralis Hilliard....LC
chalarantha Hilliard ....VU
ciliata L.f....LC
cinerea L.f. LC
comosa E.Mey. LC
compacta Rolfe LC
comptonii Hilliard.... Rare
confusa Hilliard....LC
congesta Rolfe....DDD

corymbosa L. ... LC
crassifolia (Rolfe) Hilliard ... LC
cryptadenia Hilliard ... LC
cucullata Hilliard ... LC
cupressoides Hilliard ... LC
curvifolia Rolfe ... LC
decipiens E.Mey. ... LC
densiflora Rolfe ... LC
diabolica Hilliard ... **Rare**
diffusa Thunb. ... **VU**
dinteri Rolfe subsp. pseudodinteri Hilliard ... LC
distans E.Mey. ... LC
divaricata L.f. ... LC
dolichonema Hilliard ... **Rare**
dolosa Hilliard ... LC
dregeana Hilliard ... **Rare**
eckloniana Choisy ... LC
elongata Hilliard ... LC
elsiae Hilliard ... **DDD**
esterhuyseniae Hilliard ... **Critically Rare**
exigua Hilliard ... **Rare**
farrago Hilliard ... **Rare**
ferruginea Rolfe ... **CR**
flanaganii Rolfe ... LC
florifera Hilliard ... **Rare**
foliosa Rolfe ... LC
fourcadei Hilliard ... LC
fruticosa L. ... LC
galpinii Schltr. ... LC
geniculata L.f. ... LC
glabrata Choisy ... LC
glandulosa Choisy ... **VU**
gloiodes Hilliard ... LC
glomerata Thunb. ... LC
glutinosa E.Mey. subsp. cylindriphylla Hilliard ... LC
glutinosa E.Mey. subsp. glutinosa ... LC
gracilis (Rolfe) Hilliard ... LC
grandiceps Hilliard ... LC
griquana Hilliard ... Thr*
hermannioides E.Mey. ... LC
heterotricha Hilliard ... **EN**
hispida L.f. ... LC
hyssopifolia E.Mey. subsp. hyssopifolia ... LC
hyssopifolia E.Mey. subsp. retrotricha Hilliard ... LC
immersa Rolfe ... LC
impedita Hilliard ... DDT
inaequifolia Hilliard ... **EN**
inconstans Hilliard ... LC
innata Markötter ... LC
intermedia Hilliard ... LC
karooica Hilliard ... LC
lacunosa Klotzsch ... LC
lamprocarpa Schltr. ex Rolfe ... LC
leptothrix Hilliard ... LC
levynsiae Hilliard ... LC
lilacina Hilliard ... LC
linearifolia Rolfe ... **DDD**
linearis Rolfe ... LC
longicalyx Hilliard ... **Rare**
longiflora Rolfe ... **EN**
longipedicellata Rolfe ... LC
luxurians Choisy ... LC
lydenburgensis Rolfe ... LC
magnakarooica Hilliard ... LC
marlothii Hilliard ... **DDD**
mediocris Hilliard ... LC
melliodora Hilliard ... LC
michelliae Hilliard ... LC
micradenia Hilliard ... LC
mixta Hilliard ... LC
monticola J.M.Wood & M.S.Evans ... LC
morrisii Rolfe ... LC
mucronata Hilliard ... LC
multiflora Hilliard ... LC
multispicata Hilliard ... LC
mundii Rolfe ... LC
myriophylla Hilliard ... LC
myrtifolia Rchb. ... LC
namaquensis Schltr. ... LC
neglecta Hilliard ... **EN**
nigrescens Rolfe ... LC
nigromontana Hilliard ... **Rare**
oppositifolia Hilliard ... **Critically Rare**
oresigena Compton ... LC
pachypoda Rolfe ... LC
paniculata Thunb. ... LC
parvibractea Hilliard ... LC
peduncularis E.Mey. ... LC
perplexa Hilliard ... LC
persimilis Hilliard ... LC
pinea Link ... **EN**
pinguicula E.Mey. ... LC
polycephala Otto ex Walp ... **CR PE**
polygala S.Moore ... LC
polystachya L. ... LC
praetermissa Hilliard ... LC
procera Hilliard ... LC
prostrata Hilliard ... **EN**
psammophila Hilliard ... **EN**
pterophylla Otto ex Sweet ... DDT
pulchra Hilliard ... LC
punctata Rolfe ... **Rare**
purpurea Cels ... DDT
pustulosa Hilliard ... LC
ramosissima Rolfe ... Thr*
recurva E.Mey. ... LC
rehmannii Rolfe ... LC
retropilosa Hilliard ... **Rare**
rigida Rolfe ... LC
rotundifolia L.f. ... **VU**
rubromontana Hilliard ... **Rare**
saxatilis E.Mey. ... LC
scabribractea Hilliard ... LC
scabrida Thunb. ... LC
seticaulis Hilliard ... LC
setulosa Rolfe ... LC
singularis Hilliard ... LC
speciosa Rolfe ... LC
spectabilis Hilliard ... LC
stenostachya Hilliard ... LC
stewartiae S.Moore ... LC
subspinosa Hilliard ... LC
tarachodes Hilliard ... LC
tenuifolia (Rolfe) Hilliard ... LC
tenuis E.Mey. ... **DDD**
teucriifolia Burm.f. ... DDT
thermalis Hilliard ... **Rare**
thomii Rolfe ... LC
trauseldii Killick ... LC
trichophylla Hilliard ... **Rare**
trinervia E.Mey. ... LC
triquetra L.f. ... LC
valliscitri Hilliard ... **Rare**
variicalyx Hilliard ... LC
venosa Hilliard ... LC
verna Hilliard ... LC
villicaulis Rolfe ... **VU**
villosa Rolfe ... LC
walpersii Choisy ... DDT
welwitschii Rolfe var. australis Hilliard ... LC
welwitschii Rolfe var. holubii (Rolfe) Brenan ... LC
witbergensis E.Mey. ... LC
zeyheri Choisy ... Thr*
zuluensis Hilliard ... Thr*

Senecio, 279

abbreviatus S.Moore ... LC
abruptus Thunb. ... LC
acaulis (L.f.) Sch.Bip. ... LC
achilleifolius DC. ... LC
acutifolius DC. ... LC
adnatus DC. ... LC
affinis DC. ... LC
agapetes C.Jeffrey ... LC
albanensis DC. var. albanensis ... LC
albanensis DC. var. doroniciflorus (DC.) Harv. ... LC
albanopsis Hilliard ... LC
albifolius DC. ... **Rare**
albo-punctatus Bolus ... **DDD**
aloides DC. ... LC
anapetes C.Jeffrey ... LC
angulatus L.f. ... LC
angustifolius (Thunb.) Willd. ... LC
anomalochrous Hilliard ... LC
anthemifolius Harv. ... DDT
aquifoliaceus DC. ... DDT
arabidifolius O.Hoffm. ... LC
arenarius Thunb. ... LC
arniciflorus DC. ... LC
articulatus (L.) Sch.Bip. ... LC
asperulus DC. ... LC
austromontanus Hilliard ... **Rare**
barbatus DC. ... LC
barbertonicus Klatt ... LC
basalticus Hilliard ... LC
baurii Oliv. ... LC
bellis Harv. ... DDT
bipinnatus (Thunb.) Less. ... LC
brachypodus DC. ... LC
brevidentatus M.D.Hend. ... LC
brevilorus Hilliard ... **Rare**
bryoniifolius Harv. ... LC
bulbinifolius DC. ... LC
bupleuroides DC. ... LC
burchellii DC. ... LC
byrnensis Hilliard ... LC
cakilefolius DC. ... LC
caloneotes Hilliard ... LC
canalipes DC. ... DDT
cardaminifolius DC. ... LC
carnosus Thunb. ... LC
carroensis DC. ... LC
cathcartensis O.Hoffm. ... LC
caudatus DC. ... LC
chrysocoma Meerb. ... LC
cicatricosus Sch.Bip ... **Rare**
cinerascens Aiton ... LC
citriceps Hilliard & B.L.Burtt ... LC
citriformis G.D.Rowley ... LC
coleophyllus Turcz. ... DDT
conrathii N.E.Br. ... LC
consanguineus DC. ... LC
cordifolius L.f. ... LC
cornu-cervi MacOwan ... DDT
coronatus (Thunb.) Harv. ... LC
cotyledonis DC. ... LC
crassiusculus DC. ... LC
crassulaefolius (DC.) Sch.Bip. ... LC
crenatus Thunb. ... LC
crenulatus DC. ... DDT
crispus Thunb. ... LC
cristimontanus Hilliard ... LC
cryptolanatus Killick ... LC
decurrens DC. ... LC
deltoideus Less. ... LC
diffusus Thunb. ... DDT
digitalifolius DC. ... LC
diodon DC. ... LC
discodregeanus Hilliard & B.L.Burtt ... LC
dissidens Fourc. ... DDT
dissimulans Hilliard ... LC
diversifolius Harv. ... DDT
dregeanus DC. ... **VU**
dumosus Fourc. ... DDT
eenii (S.Moore) Merxm. ... LC
elegans L. ... LC
eminens Compton ... **DDD**
eriobasis DC. ... LC
erosus L.f. ... LC
erubescens Aiton var. crepidifolius DC. ... LC
erubescens Aiton var. dichotomus DC. ... LC
erubescens Aiton var. erubescens ... LC
erubescens Aiton var. incisus DC. ... Thr*
erysimoides DC. ... DDT
euryopoides DC. ... Thr*
evelynae Muschl. ... LC
exuberans R.A.Dyer ... **EN**
ficoides (L.) Sch.Bip. ... LC
flanaganii E.Phillips ... LC
flavus (Decne.) Sch.Bip. ... LC
foeniculoides Harv. ... **EN**
gariepiensis Cron ... **DDD**
gerrardii Harv. ... LC
giessii Merxm. ... LC
glaberrimus DC. ... LC
glabrifolius DC. ... LC
glanduloso-lanosus Thell. ... LC
glanduloso-pilosus Volkens & Muschl. ... LC
glastifolius L.f. ... LC
glutinarius DC. ... DDT
glutinosus Thunb. ... LC
gramineus Harv. ... LC
grandiflorus P.J.Bergius ... LC
gregatus Hilliard ... LC
halimifolius L. ... LC
hallianus G.D.Rowley ... **Rare**
harveianus MacOwan ... LC
hastatus L. ... LC
hastifolius (L.f.) Less. ... LC
haworthii (Sweet) Sch.Bip. ... LC
haygarthii Hilliard ... LC

hederiformis Cron ..... **Rare**
heliopsis Hilliard & B.L.Burtt.....LC
helminthioides (Sch.Bip.) Hilliard LC
hieracioides DC.....LC
hirsutilobus Hilliard LC
hirtellus DC.....DDT
hirtifolius DC. ..... **CR PE**
hochstetteri Sch.Bip. ex A.Rich.....LC
hollandii Compton.....LC
holubii Hutch. & Burtt Davy.....DDT
humidanus C.Jeffrey.....LC
hypochoerideus DC. LC
ilicifolius L.....LC
inaequidens DC.....LC
incisus Thunb.....LC
incomptus DC. LC
infirmus C.Jeffrey .....DDT
ingeliensis Hilliard LC
inornatus DC.....LC
intricatus S.Moore LC
isatideus DC.....LC
isatidioides E.Phillips & C.A.Sm. LC
junceus (DC.) Harv.....LC
juniperinus L.f. var. epitrachys (DC.) Harv. LC
juniperinus L.f. var. juniperinus.....LC
junodii Hutch. & Burtt Davy.....LC
kalingenwae Hilliard & B.L.Burtt .....**Critically Rare**
laevigatus Thunb. var. integrifolius Harv.....LC
laevigatus Thunb. var. laevigatus LC
lanceus Aiton LC
laticipes Bruyns.....LC
latifolius DC. LC
latissimifolius S.Moore .....**DDD**
laxus DC.....LC
leptophyllus DC. LC
lessingii Harv.....DDT
leucoglossus Sond. .....DDT
lineatus (L.f.) DC.....LC
linifolius L. LC
litorosus Fourc.....LC
littoreus Thunb. var. hispidulus Harv. LC
littoreus Thunb. var. littoreus LC
lobelioides DC. .....DDT
lycopodioides Schltr. ..... **VU**
lydenburgensis Hutch. & Burtt Davy.....LC
macowanii Hilliard LC
macrocephalus DC. LC
macroglossoides Hilliard.....LC
macroglossus DC. LC
macrospermus DC.....LC
madagascariensis Poir. LC
marginalis Hilliard.....LC
maritimus L.....LC
matricariifolius DC. LC
mauricei Hilliard & B.L.Burtt ..... **Rare**
maydae Merxm. LC
mbuluzensis Compton.....LC
medley-woodii Hutch. LC
microglossus DC. LC
microspermus DC. .....DDT
mimetes Hutch. & R.A.Dyer LC
mitophyllus C.Jeffrey.....LC
monticola DC. .....DDT
mooreanus Hutch. & Burtt Davy LC
mucronatus (Thunb.) Willd. .....DDT
muirii L.Bolus ..... **Rare**
multibracteatus Harv. LC
multicaulis DC.....DDT
muricatus Thunb.....DDT
napifolius MacOwan LC
natalicola Hilliard.....LC
ngoyanus Hilliard ..... **VU**
niveus (Thunb.) Willd.....LC
odontopterus DC. ..... **DDD**
oederiifolius DC.....LC
othonniflorus DC. LC
ovoideus (Compton) H.Jacobsen.....DDT
oxyodontus DC. LC
oxyriifolius DC. LC
paarlensis DC. LC
paludaffinis Hilliard.....LC
panduratus (Thunb.) Less.....LC
panduriformis Hilliard.....LC
paniculatus P.J.Bergius LC
parascitus Hilliard LC
parentalis Hilliard & B.L.Burtt LC
parvifolius DC. LC
paucicalyculatus Klatt LC
paucifloscolosus C.Jeffrey LC
pearsonii Hutch. .....DDT
pellucidus DC. .....DDT
penninervius DC. .....DDT
pentactinus Klatt.....LC
persicifolius L.....DDT
petiolaris DC. .....DDT
pillansii Levyns.....Thr*
pinguifolius (DC.) Sch.Bip. LC
pinifolius (L.) Lam. LC
pinnatifidus (P.J.Bergius) Less.....LC
pinnulatus Thunb.....LC
piptocoma O.Hoffm. LC
pleistocephalus S.Moore.....LC
polelensis Hilliard LC
polyanthemoides Sch.Bip. LC
polyodon DC. var. polyodon LC
polyodon DC. var. subglaber (Kuntze) Hilliard & B.L.Burtt.....LC
poseideonis Hilliard & B.L.Burtt .....Thr*
praeteritus Killick.....LC
prostratus Klatt.....DDT
pterophorus DC. LC
puberulus DC. LC
pubigerus L. LC
purpureus L.....LC
pyramidatus DC. LC
qathlambanus Hilliard.....LC
quinquelobus (Thunb.) DC. LC
quinquenervius Sond.....DDT
radicans (L.f.) Sch.Bip. LC
rehmannii Bolus.....DDT
repandus Thunb.....LC
reptans Turcz. LC
retortus (DC.) Benth.....LC
retrorsus DC.....LC
rhomboideus Harv. LC
rhyncholaenus DC. LC
rigidus L. LC
robertiifolius DC. LC
rosmarinifolius L.f. LC
rowleyanus H.Jacobsen.....LC
ruwenzoriensis S.Moore LC
sandersonii Harv. LC
saniensis Hilliard & B.L.Burtt ..... **Rare**
sarcoides C.Jeffrey LC
scapiflorus (L'Hér.) C.A.Sm.....LC
scaposus DC. var. addoensis (Compton) G.D.Rowley ..... **EN**
scaposus DC. var. scaposus LC
scitus Hutch. & Burtt Davy.....LC
scoparius Harv. LC
seminiveus J.M.Wood & M.S.Evans.....LC
serpens G.D.Rowley .....DDT
serratuloides DC. LC
serrulatus DC. LC
serrurioides Turcz. .....**DDD**
sisymbriifolius DC. LC
skirrhodon DC. LC
sociorum Bolus LC
sophioides DC.....LC
speciosissimus J.C.Manning & Goldblatt ..... **Rare**
speciosus Willd.....LC
spiraeifolius Thunb.....LC
striatifolius DC. LC
subcanescens (DC.) Compton LC
subcoriaceus Schltr. LC
submontanus Hilliard & B.L.Burtt LC
subrubriflorus O.Hoffm.....LC
subsinuatus DC. .....DDT
surculosus MacOwan .....DDT
tamoides DC. LC
tanacetopsis Hilliard LC
telmateius Hilliard LC
tenellus DC. .....DDT
thamathuensis Hilliard.....LC
thunbergii Harv.....DDT
tortuosus DC.....LC
toxotis C.Jeffrey .....DDT
trachylaenus Harv. .....DDT
trachyphyllus Schltr.....DDT
triodontiphyllus C.Jeffrey.....**VU**
triplinervius DC.....DDT
triqueter DC.....LC
tuberosus (DC.) Harv.....LC
tugelensis J.M.Wood & M.S.Evans LC
tysonii MacOwan LC
ulopterus Thell.....LC
umbellatus L. LC
umgeniensis Thell.....Thr*
urophyllus Conrath LC
variabilis Sch.Bip.....LC
variifolius DC. LC
venosus Harv.....LC
verbascifolius Burm.f......**EN**
vestitus (Thunb.) P.J.Bergius.....LC
villifructus Hilliard ..... **EN**
viminalis Bremek.....LC
vitalis N.E.Br. LC
waterbergensis S.Moore .....DDT
windhoekensis Merxm.....LC
wittebergensis Compton.....**DDD**

Senna
italica Mill. subsp. arachoides (Burch.) Lock LC
petersiana (Bolle) Lock.....LC

Septulina
glauca (Thunb.) Tiegh. LC
ovalis (E.Mey. ex Harv.) Tiegh. LC

Sericanthe
andongensis (Hiern) Robbr. subsp. andongensis var. andongensis.....LC

Sericocoma
avolans Fenzl LC
heterochiton Lopr. LC
pungens Fenzl.....LC

Sericorema
remotiflora (Hook.f.) Lopr. LC
sericea (Schinz) Lopr. LC

Seriphium
cinereum L. LC
incanum (Thunb.) Pers. .....DDT
plumosum L. LC

Serruria, 497
acrocarpa R.Br. LC
adscendens (Lam.) R.Br......**NT**
aemula Salisb. ex Knight..... **CR**
aitonii R.Br. LC
altiscapa Rourke..... **EN**
balanocephala Rourke.....**NT**
bolusii E.Phillips & Hutch. ..... **NT**
brownii Meisn. ..... **EN**
candicans R.Br. ..... **EN**
collina Salisb. ex Knight.....**VU**
confragosa Rourke ..... **EN**
cyanoides (L.) R.Br. ..... **EN**
cygnea R.Br.....LC
decipiens R.Br. ..... **VU**
decumbens (Thunb.) R.Br. ..... **EN**
deluvialis Rourke..... **EN**
dodii E.Phillips & Hutch. LC
effusa Rourke..... **NT**
elongata (P.J.Bergius) R.Br. ..... **NT**
fasciflora Salisb. ex Knight.....**NT**
flagellifolia Salisb. ex Knight ..... **VU**
flava Meisn. ..... **CR**
florida (Thunb.) Salisb. ex Knight ..... **CR**
foeniculacea R.Br. ..... **CR**
fucifolia Salisb. ex Knight ..... **EN**
furcellata R.Br...... **CR**
glomerata (L.) R.Br...... **VU**
gremialis Rourke LC
heterophylla Meisn. ..... **EN**
hirsuta R.Br...... **CR**
inconspicua L.Guthrie & T.M.Salter..... **VU**
incrassata Meisn..... **EN**
kraussii Meisn..... **VU**
lacunosa Rourke..... **CR**
leipoldtii E.Phillips & Hutch..... **NT**
linearis Salisb. ex Knight..... **EN**
meisneriana Schltr...... **EN**
millefolia Salisb. ex Knight ..... **VU**
nervosa Meisn. ..... **NT**
pedunculata (Lam.) R.Br. LC
phylicoides (P.J.Bergius) R.Br. LC
pinnata R.Br...... **CR**
rebeloi Rourke..... **EN**
reflexa Rourke ..... **Rare**
rosea E.Phillips..... **NT**
rostellaris Salisb. ex Knight ..... **NT**
roxburghii R.Br...... **EN**
rubricaulis R.Br...... **NT**
scoparia R.Br...... **CR**

stellata Rourke ..... **VU**
trilopha Salisb. ex Knight ..... **CR**
triternata (Thunb.) R.Br. ..... **NT**
villosa (Lam.) R.Br. ..... **Rare**
viridifolia Rourke ..... **VU**
williamsii Rourke ..... **EN**
zeyheri Meisn. ..... **EN**

Sesamothamnus
lugardii N.E.Br. ex Stapf LC

Sesamum
alatum Thonn LC
capense Burm.f. LC
triphyllum Welw. ex Asch. var. triphyllum LC

Sesbania
brevipedunculata J.B.Gillett LC
macowaniana Schinz LC
macrantha Welw. ex E.Phillips & Hutch. var. levis J.B.Gillett LC
macrantha Welw. ex E.Phillips & Hutch. var. macrantha LC
notialis J.B.Gillett LC
rogersii E.Phillips & Hutch. LC
sesban (L.) Merr. subsp. sesban var. nubica Chiov. LC
sesban (L.) Merr. subsp. sesban var. sesban LC
sesban (L.) Merr. subsp. sesban var. zambesiaca J.B.Gillett LC
tetraptera Hochst. ex Baker subsp. tetraptera LC
transvaalensis J.B.Gillett LC

Sesuvium
sesuvioides (Fenzl) Verdc. var. sesuvioides LC

Setaria
appendiculata (Hack.) Stapf LC
chevalieri Stapf subsp. racemosa de Wit LC
homonyma (Steud.) Chiov. LC
incrassata (Hochst.) Hack. LC
laeta de Wit LC
lindenbergiana (Nees) Stapf LC
megaphylla (Steud.) T.Durand & Schinz LC
nigrirostris (Nees) T.Durand & Schinz LC
obscura de Wit LC
plicatilis (Hochst.) Hack. ex Engl. LC
pumila (Poir.) Roem. & Schult. LC
rigida Stapf LC
sagittifolia (A.Rich.) Walp. LC
sphacelata (Schumach.) Stapf & C.E.Hubb. ex M.B.Moss var. sericea (Stapf) Clayton LC
sphacelata (Schumach.) Stapf & C.E.Hubb. ex M.B.Moss var. sphacelata LC
sphacelata (Schumach.) Stapf & C.E.Hubb. ex M.B.Moss var. splendida (Stapf) Clayton LC
sphacelata (Schumach.) Stapf & C.E.Hubb. ex M.B.Moss var. torta (Stapf) Clayton LC
verticillata (L.) P.Beauv. LC
woodii Hack. LC

Sheilanthera, 534
pubens I.Williams ..... **Rare**

Shirakiopsis
elliptica (Hochst.) Esser LC

Sida
acuta Burm.f. subsp. acuta LC
alba L. LC
chrysantha Ulbr. LC
cordifolia L. subsp. cordifolia LC
dregei Burtt Davy LC
ovata Forssk. LC
pseudocordifolia Hochr. LC
rhombifolia L. subsp. rhombifolia LC
serratifolia R.Wilczek & Steyaert LC
spinosa L. var. spinosa LC
ternata L.f. LC

Sideroxylon
inerme L. subsp. inerme LC

Silene
bellidioides Sond. LC
crassifolia L. LC
eckloniana Sond. LC
mundiana Eckl. & Zeyh. ..... Thr*
ornata Aiton ..... DDT
pilosellifolia Cham. & Schltdl. LC
primuliflora Eckl. & Zeyh. var. ciliata Sond. ..... DDT
primuliflora Eckl. & Zeyh. var. primuliflora LC
thunbergiana Bartl. ..... DDT
undulata Aiton LC

Silicularia, 289
polygaloides (Schltr.) Marais ..... **Rare**

Siphocodon
debilis Schltr. LC
spartioides Turcz. LC

Siphonochilus, 215
aethiopicus (Schweinf.) B.L.Burtt ..... **CR**

Siphonoglossa, 218
leptantha (Nees) Immelman subsp. late-ovata (C.B.Clarke) Immelman LC
leptantha (Nees) Immelman subsp. leptantha LC
linifolia (Lindau) C.B.Clarke LC
nkandlaensis Immelman ..... **Rare**

Sisymbrium
burchellii DC. var. burchellii LC
capense Thunb. LC
turczaninowii Sond. LC

Sisyndite
spartea E.Mey. ex Sond. LC

Sisyranthus, 241
anceps Schltr. ..... **DDD**
barbatus (Turcz.) N.E.Br. LC
compactus N.E.Br. LC
fanniniae N.E.Br. ..... **VU**
franksiae N.E.Br. ..... Thr*
huttoniae (S.Moore) S.Moore LC
imberbis Harv. LC
macer (E.Mey.) Schltr. ..... **DDD**
randii S.Moore LC
saundersiae N.E.Br. LC
trichostomus K.Schum. LC
virgatus E.Mey. LC

Sium
repandum Welw. ex Hiern LC

Skiatophytum, 443
tripolium (L.) L.Bolus ..... **VU**

Smelophyllum
capense (Sond.) Radlk. LC

Smicrostigma
viride (Haw.) N.E.Br. LC

Smilax
anceps Willd. LC

Smithia
erubescens (E.Mey.) Baker f. LC

Smodingium
argutum E.Mey. ex Sond. LC

Solanecio
angulatus (Vahl) C.Jeffrey LC

Solanum, 555
aculeastrum Dunal subsp. aculeastrum LC
aculeatissimum Jacq. LC
africanum Mill. LC
anguivi Lam. LC
burchellii Dunal LC
capense L. LC
catombelense Peyr. LC
delagoense Dunal LC
giftbergense Dunal LC
giganteum Jacq. LC
goetzei Dammer LC
guineense L. LC
lichtensteinii Willd. LC
linnaeanum Hepper & Jaeger LC
litoraneum A.E.Gonç. LC
macrocarpon L. LC
namaquense Dammer LC
panduriforme E.Mey. LC
retroflexum Dunal LC
rigescens Jacq. LC
rubetorum Dunal LC
sodomaeodes Kuntze LC
supinum Dunal var. leucophaeum (Dunal) Bitter ..... **VU**
supinum Dunal var. supinum LC
terminale Forssk. subsp. terminale LC
tettense Klotzsch var. renschii (Vatke) A.E.Gonç. LC
tomentosum L. var. coccineum (Jacq.) Willd. LC
tomentosum L. var. tomentosum LC
torreanum A.E.Gonç. LC
usaramense Dammer LC
zanzibarense Vatke var. vagans (C.H.Wright) Bitter LC

Solenangis, 2000
aphylla (Thouars) Summerh. ..... **DDD**

Solenostemon
latifolius (Hochst. ex Benth.) J.K.Morton LC
rotundifolius (Poir.) J.K.Morton LC

Sonchus
dregeanus DC. LC
friesii Boulos var. friesii LC
integrifolius Harv. var. integrifolius LC
integrifolius Harv. var. schlechteri R.E.Fr. LC
jacottetianus Thell. LC
nanus Sond. ex Harv. LC
tenerrimus L. LC
wilmsii R.E.Fr. LC

Sonderina
caruifolia (Sond.) H.Wolff ..... DDT
hispida (Thunb.) H.Wolff LC
humilis (Meisn.) H.Wolff LC
tenuis (Sond.) H.Wolff LC

Sonderothamnus, 456
petraeus (W.F.Barker) R.Dahlgren ..... **Rare**
speciosus (Sond.) R.Dahlgren ..... **Rare**

Sophora
inhambanensis Klotzsch LC

Sopubia
cana Harv. var. cana LC
cana Harv. var. glabrescens Diels LC
karaguensis Oliv. var. karaguensis LC
mannii Skan var. tenuifolia (Engl. & Gilg) Hepper LC
simplex (Hochst.) Hochst. LC

Sorghastrum
stipoides (Kunth) Nash LC

Sorghum
bicolor (L.) Moench subsp. arundinaceum (Desv.) de Wet & Harlan LC
bicolor (L.) Moench subsp. drummondii (Steud.) de Wet LC
versicolor Andersson LC

Sorocephalus, 503
alopecurus Rourke ..... **EN**
capitatus Rourke ..... **NT**
clavigerus (Salisb. ex Knight) Hutch. ..... **EN**
crassifolius Hutch. ..... **CR**
imbricatus (Thunb.) R.Br. ..... **CR**
lanatus (Thunb.) R.Br. LC
palustris Rourke ..... **CR**
pinifolius (Salisb. ex Knight) Rourke ..... **EN**
scabridus Meisn. ..... **CR**
tenuifolius R.Br. ..... **EN**
teretifolius (Meisn.) E.Phillips ..... **EN**

Sparaxis, 173
auriculata Goldblatt & J.C.Manning ..... **EN**
bulbifera (L.) Ker Gawl. LC
caryophyllacea Goldblatt ..... **CR**
elegans (Sweet) Goldblatt ..... **VU**
fragrans (Jacq.) Ker Gawl. ..... **VU**
galeata Ker Gawl. ..... **VU**
grandiflora (D.Delaroche) Ker Gawl. subsp. acutiloba Goldblatt LC
grandiflora (D.Delaroche) Ker Gawl. subsp. fimbriata (Lam.) Goldblatt LC
grandiflora (D.Delaroche) Ker Gawl. subsp. grandiflora ..... **EN**
grandiflora (D.Delaroche) Ker Gawl. subsp. violacea (Eckl.) Goldblatt LC
maculosa Goldblatt ..... **CR**
metelerkampiae (L.Bolus) Goldblatt & J.C.Manning LC
parviflora (G.J.Lewis) Goldblatt ..... **NT**
pillansii L.Bolus ..... **Rare**
roxburghii (Baker) Goldblatt ..... **CR**
tricolor (Schneev.) Ker Gawl. ..... **VU**
variegata (Sweet) Goldblatt LC
villosa (Burm.f.) Goldblatt LC

Sparrmannia
africana L.f. LC
ricinocarpa (Eckl. & Zeyh.) Kuntze var. ricinocarpa LC

Spartina
maritima (Curtis) Fernald LC

Spatalla, 504
argentea Rourke ..... **EN**
barbigera Salisb. ex Knight ..... **NT**
caudata (Thunb.) R.Br. ..... **EN**
colorata Meisn. ..... **EN**

confusa (E.Phillips) Rourke LC
curvifolia Salisb. ex Knight ..... **NT**
ericoides E.Phillips ..... **EN**
incurva (Thunb.) R.Br. LC
longifolia Salisb. ex Knight ..... **NT**
mollis R.Br. ..... **Rare**
nubicola Rourke ..... **NT**
parilis Salisb. ex Knight LC
prolifera (Thunb.) Salisb. ex Knight ..... **EN**
propinqua R.Br. ..... **EN**
racemosa (L.) Druce ..... **NT**
salsoloides (R.Br.) Rourke ..... **CR**
setacea (R.Br.) Rourke LC
squamata Meisn. ..... **NT**
thyrsiflora Salisb. ex Knight ..... **VU**
tulbaghensis (E.Phillips) Rourke ..... **EN**

Spergularia
bocconii (Scheele) Asch. & Graebn. LC
hanoverensis Simon LC

Spermacoce
deserti N.E.Br. LC
natalensis Hochst. LC
senensis (Klotzsch) Hiern LC

Spetaea, 124
lachenaliiflora Wetschnig & Pfosser ..... **Rare**

Sphaeranthus
peduncularis DC. subsp. peduncularis LC

Sphaerocionium
aeruginosum (Poir.) Pic.Serm. LC
capillare (Desv.) Copel LC

Sphaerocodon
natalense (Meisn.) Hook.f. LC

Sphaerothylax
algiformis Bisch. ex C.Krauss LC

Sphedamnocarpus
pruriens (A.Juss.) Szyszyl. subsp. galphimiifolius (A.Juss.) P.D.de Villiers & D.J.Botha LC
pruriens (A.Juss.) Szyszyl. subsp. pruriens LC

Sphenoclea
zeylanica Gaertn. LC

Sphenostylis
angustifolia Sond. LC
marginata E.Mey. subsp. marginata LC

Spilanthes
mauritiana (Pers.) DC. LC

Spiloxene, 125
acida (Nel) Garside ..... DDT
aemulans (Nel) Garside ..... DDT
alba (Thunb.) Fourc. ..... **VU**
aquatica (L.f.) Fourc. LC
canaliculata Garside ..... **EN**
capensis (L.) Garside LC
curculigoides (Bolus) Garside LC
dielsiana (Nel) Garside LC
flaccida (Nel) Garside LC
linearis (Andrews) Garside ..... **VU**
maximiliani (Schltr.) Garside ..... **EN**
minuta (L.) Fourc. ..... **EN**
monophylla (Schltr.) Garside LC
nana Snijman ..... **Rare**
ovata (L.f.) Garside LC
pusilla Snijman ..... **Rare**
schlechteri (Bolus) Garside LC
scullyi (Baker) Garside LC
serrata (Thunb.) Garside var. albiflora (Nel) Garside LC
serrata (Thunb.) Garside var. serrata LC
trifurcillata (Nel) Fourc. LC
umbraticola (Schltr.) Garside ..... **DDD**

Spirodela
polyrhiza (L.) Schleid LC
punctata (G.Mey.) C.H.Thomps. LC

Spirostachys
africana Sond. LC

Sporobolus, 204
acinifolius Stapf LC
africanus (Poir.) Robyns & Tournay LC
albicans (Nees ex Trin.) Nees LC
centrifugus (Trin.) Nees LC
congoensis Franch. LC
conrathii Chiov. LC
consimilis Fresen. LC
coromandelianus (Retz.) Kunth LC
discosporus Nees LC
engleri Pilg. LC
festivus Hochst. ex A.Rich. LC
fimbriatus (Trin.) Nees LC
fourcadii Stent LC
ioclados (Trin.) Nees LC
ludwigii Hochst. LC
molleri Hack LC
natalensis (Steud.) T.Durand & Schinz LC
nebulosus Hack. LC
nervosus Hochst. LC
nitens Stent. LC
oxyphyllus L.Fish ..... **NT**
panicoides A.Rich. LC
pectinatus Hack. LC
pyramidalis P.Beauv. LC
rangei Pilg. LC
salsus Mez LC
sanguineus Rendle LC
spicatus (Vahl) Kunth LC
stapfianus Gand. LC
subtilis Kunth LC
subulatus Hack. LC
tenellus (Spreng.) Kunth LC
virginicus (L.) Kunth LC
welwitschii Rendle LC

Staavia, 291
brownii Dummer ..... **VU**
capitella (Thunb.) Sond. LC
dodii Bolus ..... **Rare**
dregeana C.Presl ..... DDT
glutinosa (L.) Dahl ..... **Rare**
phylicoides Pillans ..... **EN**
radiata (L.) Dahl LC
verticillata (L.f.) Pillans ..... **Rare**
zeyheri Sond. ..... **CR**

Staberoha, 211
aemula (Kunth) Pillans LC
banksii Pillans LC
cernua (L.f.) T.Durand & Schinz LC
distachyos (Rottb.) Kunth LC
multispicula Pillans ..... **VU**
ornata Esterh. LC
remota Pillans LC
stokoei Pillans ..... **Rare**
vaginata (Thunb.) Pillans LC

Stachys, 399
aethiopica L. LC
albiflora N.E.Br. LC
arachnoidea Codd LC
aurea Benth. LC
bolusii Skan LC
burchelliana Launert LC
caffra E.Mey. ex Benth. LC
comosa Codd ..... Thr*
cuneata Banks ex Benth. LC
cymbalaria Briq. LC
dregeana Benth. LC
erectiuscula Gürke LC
flavescens Benth. LC
flexuosa Skan LC
graciliflora C.Presl LC
grandifolia E.Mey. ex Benth. LC
humifusa Burch. ex Benth. LC
hyssopoides Burch. ex Benth. LC
kuntzei Gürke LC
lamarckii Benth. LC
linearis Burch. ex Benth. LC
malacophylla Skan LC
natalensis Hochst. var. galpinii (Briq.) Codd LC
natalensis Hochst. var. natalensis LC
nigricans Benth. LC
obtusifolia MacOwan LC
rehmannii Skan LC
reticulata Codd LC
rivularis J.M.Wood & M.S.Evans ..... **DDD**
rudatisii Skan LC
rugosa Aiton LC
scabrida Skan LC
sessilifolia E.Mey. ex Benth. LC
sessilis Gürke LC
simplex Schltr. LC
spathulata Burch. ex Benth. LC
sublobata Skan LC
thunbergii Benth. LC
tubulosa MacOwan LC
tysonii Skan LC
zeyheri Skan LC

Stadmannia
oppositifolia Lam. subsp. rhodesica Exell LC

Stangeria, 57
eriopus (Kunze) Baill. ..... **VU**

Stapelia, 241
acuminata Masson LC
arenosa C.A.Lückh. LC
asterias Masson LC
cedrimontana Frandsen LC
clavicorona I.Verd. LC
concinna Masson ..... DDT
divaricata Masson ..... **VU**
engleriana Schltr. ..... DDT
erectiflora N.E.Br. var. erectiflora LC
erectiflora N.E.Br. var. prostratiflora L.C.Leach ..... DDT
flavopurpurea Marloth LC
gettliffei R.Pott. LC
gigantea N.E.Br. LC
glanduliflora Masson ..... **VU**
grandiflora Masson LC
grandiflora Masson var. conformis (N.E.Br.) Bruyns LC
hirsuta L. var. baylissii (L.C.Leach) Bruyns LC
hirsuta L. var. gariepensis (Pillans) Bruyns LC
hirsuta L. var. hirsuta LC
hirsuta L. var. tsomoensis (N.E.Br.) Bruyns LC
hirsuta L. var. vetula (Masson) Bruyns LC
immelmaniae Pillans ..... DDT
kwebensis N.E.Br. LC
leendertziae N.E.Br. LC
montana L.C.Leach var. grossa L.C.Leach ..... **Rare**
montana L.C.Leach var. montana LC
obducta L.C.Leach LC
olivacea N.E.Br. LC
paniculata Willd. subsp. kougabergensis (L.C.Leach) Bruyns LC
paniculata Willd. subsp. paniculata ..... **NT**
paniculata Willd. subsp. scitula (L.C.Leach) Bruyns ..... **VU**
pillansii N.E.Br. var. fontinalis Nel LC
pillansii N.E.Br. var. pillansii LC
pulvinata Masson LC
rubiginosa Nel ..... **VU**
rufa Masson LC
similis N.E.Br. LC
surrecta N.E.Br. LC
unicornis C.A.Lückh. LC
villetiae C.A.Lückh. LC

Stapeliopsis, 241
breviloba (R.A.Dyer) Bruyns ..... **VU**
exasperata (Bruyns) Bruyns LC
khamiesbergensis Bruyns LC
neronis Pillans ..... **Rare**
pillansii (N.E.Br.) Bruyns LC
saxatilis (N.E.Br.) Bruyns subsp. saxatilis LC
saxatilis (N.E.Br.) Bruyns subsp. stayneri (M.B.Bayer) Bruyns ..... DDT
urniflora Lavranos LC

Stayneria, 443
neilii (L.Bolus) L.Bolus ..... **VU**

Steganotaenia
araliacea Hochst. var. araliacea LC

Stegnogramma
pozoi (Lag.) K.Iwats. LC

Steirodiscus, 282
capillaceus (Thunb.) Less. LC
gamolepis Bolus ex Schltr. ..... **EN**
linearilobus DC. ..... **DDD**
schlechteri Bolus ex Schltr. ..... **VU**
speciosus (Pillans) B.Nord. ..... **EN**
tagetes (L.) Schltr. ..... **VU**

Stemodiopsis
rivae Engl. LC

Stenochlaena
tenuifolia (Desv.) T.Moore LC

Stenoglottis
fimbriata Lindl. LC
longifolia Hook.f. LC
woodii Schltr. LC
zambesiaca Rolfe LC

Stenosemis
angustifolia E.Mey. ex Sond. LC
caffra (Eckl. & Zeyh.) Sond. LC

Stenostelma, 242
capense Schltr. LC
corniculatum (E.Mey.) Bullock LC
umbelluliferum (Schltr.) S.P.Bester & Nicholas ... NT
Stenotaphrum
dimidiatum (L.) Brongn. LC
secundatum (Walter) Kuntze LC
Stephania
abyssinica (Quart.-Dill. & A.Rich.) Walp. var. abyssinica LC
abyssinica (Quart.-Dill. & A.Rich.) Walp. var. tomentella (Oliv.) Diels LC
Sterculia, 408
alexandri Harv. ..... Rare
murex Hemsl. LC
rogersii N.E.Br. LC
Stereochlaena
cameronii (Stapf) Pilg. LC
Stiburus
alopecuroides (Hack.) Stapf LC
conrathii Hack LC
Stictocardia
laxiflora (Baker) Hallier f. LC
Stilbe, 555
albiflora E.Mey. LC
ericoides (L.) L. LC
gymnopharyngia (Rourke) Rourke ..... EN
overbergensis Rourke LC
rupestris Compton LC
serrulata Hochst. ..... VU
vestita P.J.Bergius LC
Stilpnogyne
bellidioides DC. LC
Stipa
capensis Thunb. LC
dregeana Steud. var. dregeana LC
dregeana Steud. var. elongata (Nees) Stapf LC
Stipagrostis, 204
amabilis (Schweick.) De Winter LC
anomala De Winter LC
brevifolia (Nees) De Winter LC
ciliata (Desf.) De Winter var. capensis (Trin. & Rupr.) De Winter LC
dregeana Nees LC
fastigiata (Hack.) De Winter LC
geminifolia Nees LC
hirtigluma (Steud. ex Trin. & Rupr.) De Winter subsp. patula (Hack.) De Winter LC
hochstetteriana (Beck ex Hack.) De Winter var. hochstetteriana LC
hochstetteriana (Beck ex Hack.) De Winter var. secalina (Henrard) De Winter LC
lutescens (Nees) De Winter var. lutescens LC
namaquensis (Nees) De Winter LC
obtusa (Delile) Nees LC
proxima (Steud.) De Winter ..... Rare
subacaulis (Nees) De Winter LC
uniplumis (Licht.) De Winter var. neesii (Trin. & Rupr.) De Winter LC
uniplumis (Licht.) De Winter var. uniplumis LC
zeyheri (Nees) De Winter subsp. barbata (Stapf) De Winter LC
zeyheri (Nees) De Winter subsp. macropus (Nees) De Winter LC
zeyheri (Nees) De Winter subsp. sericans (Hack.) De Winter LC
zeyheri (Nees) De Winter subsp. zeyheri LC
Stirtonanthus, 387
chrysanthus (Adamson) B.-E.van Wyk & A.L.Schutte ..... EN
insignis (Compton) B.-E.van Wyk & A.L.Schutte ..... NT
taylorianus (L.Bolus) B.-E.van Wyk & A.L.Schutte ..... VU
Stoebe, 282
aethiopica L. LC
alopecuroides (Lam.) Less. LC
capitata P.J.Bergius LC
cyathuloides Schltr. LC
fusca (L.) Thunb. LC
gomphrenoides (Lam.) P.J.Bergius ..... EN
leucocephala DC. LC
microphylla DC. LC
montana Schltr. ex Levyns ..... Rare
muirii Levyns ..... VU
nervigera (DC.) Sch.Bip. LC
phyllostachya (DC.) Sch.Bip. LC
prostrata L. LC
rosea Wolley-Dod ..... Rare
rugulosa Harv. ..... EN
schultzii Levyns ..... VU
Stoeberia
arborea Van Jaarsv. LC
beetzii (Dinter) Dinter & Schwantes LC
carpii Friedrich LC
frutescens (L.Bolus) Van Jaarsv. LC
gigas (Dinter) Dinter & Schwantes LC
utilis (L.Bolus) Van Jaarsv. LC
Stoibrax
capense (Lam.) B.L.Burtt LC
Stomatanthes
africanus (Oliv. & Hiern) R.M.King & H.Rob. LC
Stomatium
acutifolium L.Bolus LC
agninum (Haw.) Schwantes LC
alboroseum L.Bolus LC
angustifolium L.Bolus LC
beaufortense L.Bolus LC
bolusiae Schwantes LC
braunsii L.Bolus LC
bryantii L.Bolus LC
deficiens L.Bolus LC
difforme L.Bolus LC
duthiae L.Bolus LC
ermininum (Haw.) Schwantes LC
fulleri L.Bolus LC
geoffreyi L.Bolus ..... DDT
gerstneri L.Bolus LC
grandidens L.Bolus LC
integrum L.Bolus LC
jamesii L.Bolus LC
latifolium L.Bolus LC
lesliei (Schwantes) Volk LC
leve L.Bolus LC
loganii L.Bolus LC
meyeri L.Bolus LC
middelburgense L.Bolus LC
murinum (Haw.) Schwantes LC
mustellinum (Salm-Dyck) Schwantes LC
patulum H.Jacobsen LC
paucidens L.Bolus LC
peersii L.Bolus LC
pluridens L.Bolus LC
resedolens L.Bolus LC
ronaldii L.Bolus ..... DDT
rouxii L.Bolus LC
ryderae L.Bolus LC
suaveolens Schwantes LC
suricatinum L.Bolus LC
trifarium L.Bolus LC
villetii L.Bolus LC
viride L.Bolus LC
Stomatostemma
monteiroae (Oliv.) N.E.Br. LC
Streblochaete
longiarista (A.Rich.) Pilg. LC
Strelitzia, 215
alba (L.f.) Skeels LC
caudata R.A.Dyer LC
juncea Link ..... VU
nicolai Regel & Körn. LC
reginae Banks ex Aiton subsp. mzimvubuensis Van Jaarsv. LC
reginae Banks ex Aiton subsp. reginae LC
Streptocarpus, 395
baudertii L.L.Britten LC
breviflos (C.B.Clarke) C.B.Clarke LC
caeruleus Hilliard & B.L.Burtt LC
candidus Hilliard LC
confusus Hilliard subsp. confusus LC
confusus Hilliard subsp. lebomboensis Hilliard & B.L.Burtt ..... DDD
cooksonii B.L.Burtt LC
cooperi C.B.Clarke LC
cyaneus S.Moore subsp. cyaneus LC
cyaneus S.Moore subsp. longi-tommii Weigend & T.J.Edwards ..... VU
cyaneus S.Moore subsp. nigridens Weigend & T.J.Edwards LC
cyaneus S.Moore subsp. polackii (B.L.Burtt) Weigend & T.J.Edwards LC
daviesii N.E.Br. ex C.B.Clarke LC
decipiens Hilliard & B.L.Burtt ..... Rare
denticulatus Turrill ..... VU
dunnii Hook.f. LC
fanniniae Harv. ex C.B.Clarke LC
fasciatus T.J.Edwards & Kunhardt ..... VU
fenestra-dei Weigend & T.J.Edwards ..... VU
floribundus Weigend & T.J.Edwards ..... VU
formosus (Hilliard & B.L.Burtt) T.J.Edwards ..... Rare
galpinii Hook.f. LC
gardenii Hook. LC
grandis N.E.Br. subsp. grandis LC
haygarthii N.E.Br. ex C.B.Clarke LC
hilburtianus T.J.Edwards ..... VU
johannis L.L.Britten LC
kentaniensis L.L.Britten & Story ..... VU
kunhardtii T.J.Edwards LC
latens Hilliard & B.L.Burtt ..... Rare
lilliputana D.U.Bellstedt & T.J.Edwards ..... VU
longiflorus (Hilliard & B.L.Burtt) T.J.Edwards ..... VU
makabengensis Hilliard ..... VU
meyeri B.L.Burtt LC
micranthus C.B.Clarke LC
modestus L.L.Britten ..... Rare
molweniensis Hilliard subsp. eshowicus Hilliard & B.L.Burtt ..... VU
molweniensis Hilliard subsp. molweniensis ..... VU
montigena L.L.Britten ..... Rare
occultis Hilliard ..... VU
parviflorus Hook.f. subsp. parviflorus LC
parviflorus Hook.f. subsp. soutpansbergensis Weigend & T.J.Edwards LC
pentherianus Fritsch LC
pogonites Hilliard & B.L.Burtt ..... Rare
pole-evansii I.Verd. LC
polyanthus Hook. subsp. comptonii (Mansf.) Hilliard LC
polyanthus Hook. subsp. dracomontanus Hilliard LC
polyanthus Hook. subsp. polyanthus LC
polyanthus Hook. subsp. verecundus Hilliard LC
porphyrostachys Hilliard ..... NT
primulifolius Gand. LC
prolixus C.B.Clarke LC
pusillus Harv. ex C.B.Clarke LC
rexii (Bowie ex Hook.) Lindl. LC
rimicola Story LC
roseo-albus Weigend & T.J.Edwards LC
saundersii Hook. LC
silvaticus Hilliard LC
sp. nov. (*Edwards, Edwards & Styles 3231* NU) ..... VU
sp. nov. (*Edwards, Hughes & Moeller 3241* NU) ..... EN
trabeculatus Hilliard LC
vandeleurii Baker f. & S.Moore LC
wendlandii Spreng. ..... Rare
wilmsii Engl. LC
Streptopetalum
serratum Hochst. LC
Striga
asiatica (L.) Kuntze LC
bilabiata (Thunb.) Kuntze subsp. bilabiata LC
elegans Benth. LC
forbesii Benth. LC
gesnerioides (Willd.) Vatke LC
junodii Schinz LC
Strobilopsis
wrightii Hilliard & B.L.Burtt LC
Strophanthus
gerrardii Stapf LC
kombe Oliv. LC
luteolus Codd LC
petersianus Klotzsch LC
speciosus (Ward & Harv.) Reber LC
Strumaria, 75
aestivalis Snijman ..... VU
barbarae Oberm. ..... Rare
bidentata Schinz ..... EN
chaplinii (W.F.Barker) Snijman ..... EN
discifera Marloth ex Snijman subsp. bulbifera Snijman ..... NT
discifera Marloth ex Snijman subsp. discifera LC
gemmata Ker Gawl. LC
karooica (W.F.Barker) Snijman ..... Rare
karoopoortensis (D. & U.Müll.-Doblies) Snijman ..... VU

leipoldtii (L.Bolus) Snijman ... **CR**
luteoloba Snijman ... LC
massoniella (D. & U.Müll.-Doblies) Snijman ... **VU**
merxmuelleriana (D. & U.Müll.-Doblies) Snijman ... **Rare**
perryae Snijman ... **Critically Rare**
picta W.F.Barker ... **Rare**
prolifera Snijman ... **Critically Rare**
pubescens W.F.Barker ... **Rare**
pygmaea Snijman ... **Rare**
salteri W.F.Barker ... **VU**
spiralis L'Hér. ... LC
tenella (L.f.) Snijman subsp. orientalis Snijman ... LC
tenella (L.f.) Snijman subsp. tenella ... LC
truncata Jacq. ... LC
unguiculata (W.F.Barker) Snijman ... **VU**
villosa Snijman ... **Rare**
watermeyeri L.Bolus subsp. botterkloofensis (D. & U.Müll.-Doblies) Snijman ... **Rare**
watermeyeri L.Bolus subsp. watermeyeri ... **Rare**

Struthiola, 558
angustiloba B.Peterson & Hilliard ... LC
anomala Hilliard ... **VU**
argentea Lehm. ... LC
bachmanniana Gilg ... DDT
cicatricosa C.H.Wright ... DDT
ciliata (L.) Lam. ... LC
concava S.Moore ... DDT
confusa C.H.Wright ... LC
dodecandra (L.) Druce ... LC
eckloniana Meisn. ... LC
ericoides C.H.Wright ... LC
fasciata C.H.Wright ... LC
floribunda C.H.Wright ... DDT
galpinii C.H.Wright ... DDT
garciana C.H.Wright ... LC
hirsuta Wikstr. ... LC
leptantha Bolus ... LC
linearifoloba Meisn. ... **DDD**
longifolia C.H.Wright ... DDT
macowanii C.H.Wright ... LC
martiana Meisn. ... LC
mundii Eckl. ex Meisn. ... LC
myrsinites Lam. ... LC
parviflora Bartl. ex Meisn. ... LC
pondoensis Gilg ex C.H.Wright ... LC
ramosa C.H.Wright ... DDT
recta C.H.Wright ... DDT
rigida Meisn. ... LC
salteri Levyns ... LC
striata Lam. ... LC
tetralepis Schltr. var. glabricaulis Schltr. ... **DDD**
tetralepis Schltr. var. tetralepis ... LC
tomentosa Andrews ... LC
tuberculosa Lam. ... DDT

Strychnos
cocculoides Baker ... LC
decussata (Pappe) Gilg ... LC
gerrardii N.E.Br. ... LC
henningsii Gilg ... LC
madagascariensis Poir. ... LC
mitis S.Moore ... LC
potatorum L.f. ... LC
pungens Soler. ... LC
spinosa Lam. subsp. spinosa ... LC
usambarensis Gilg ... LC

Stylapterus, 456
barbatus A.Juss. ... **EN**
candolleanus (Stephens.) R.Dahlgren ... DDT
dubius (Stephens.) R.Dahlgren ... LC
ericifolius (A.Juss.) R.Dahlgren ... **Rare**
ericoides A.Juss. subsp. ericoides ... **Rare**
ericoides A.Juss. subsp. pallidus R.Dahlgren ... **Rare**
fruticulosus (L.f.) A.Juss. ... **EN**
micranthus R.Dahlgren ... **VU**
sulcatus R.Dahlgren ... **Rare**

Stylochaeton
natalensis Schott ... LC

Stylosanthes
fruticosa (Retz.) Alston ... LC

Styppeiochloa
gynoglossa (Gooss.) De Winter ... LC

Suaeda
caespitosa Wolley-Dod ... LC
fruticosa (L.) Forssk. ... LC
inflata Aellen ... LC
merxmuelleri Aellen ... LC

Suessenguthiella
scleranthoides (Sond.) Friedrich ... LC

Suregada
africana (Sond.) Kuntze ... LC
procera (Prain) Croizat ... LC
zanzibariensis Baill. ... LC

Sutera
cooperi Hiern ... LC
foetida Roth ... LC
griquensis Hiern ... LC

Sutherlandia
frutescens (L.) R.Br. ... LC
humilis E.Phillips & R.A.Dyer ... LC
microphylla Burch. ex DC. ... LC
montana E.Phillips & R.A.Dyer ... LC
speciosa E.Phillips & R.A.Dyer ... LC
tomentosa Eckl. & Zeyh. ... LC

Swertia
welwitschii Engl. ... LC

Synadenium
cupulare (Boiss.) L.C.Wheeler ... LC

Synaptolepis, 559
kirkii Oliv. ... **NT**

Syncarpha, 283
affinis (B.Nord.) B.Nord. ... LC
argentea (Thunb.) B.Nord. ... LC
argyropsis (DC.) B.Nord. ... LC
aurea B.Nord. ... Thr*
canescens (L.) B.Nord. subsp. canescens ... LC
canescens (L.) B.Nord. subsp. leucolepis (DC.) B.Nord. ... LC
canescens (L.) B.Nord. subsp. tricolor (DC.) B.Nord. ... LC
chlorochrysum (DC.) B.Nord. ... **NT**
dregeana (DC.) B.Nord. ... LC
dykei (Bolus) B.Nord. ... **Rare**
eximia (L.) B.Nord. ... LC
ferruginea (Lam.) B.Nord. ... LC
flava (Compton) B.Nord. ... LC
gnaphaloides (L.) DC. ... LC
lepidopodium (Bolus) B.Nord. ... **VU**
loganiana (Compton) B.Nord. ... LC
marlothii (Schltr.) B.Nord. ... **Rare**
milleflora (L.f.) B.Nord. ... LC
montana (B.Nord.) B.Nord. ... **Rare**
mucronata (P.J.Bergius) B.Nord. ... LC
paniculata (L.) B.Nord. ... LC
recurvata (L.f.) B.Nord. ... **EN**
sordescens (DC.) B.Nord. ... **VU**
speciosissima (L.) B.Nord. subsp. angustifolia (DC.) B.Nord. ... LC
speciosissima (L.) B.Nord. subsp. speciosissima ... LC
staehelina (L.) B.Nord. ... LC
striata (Thunb.) B.Nord. ... LC
variegata (P.J.Bergius) B.Nord. ... LC
vestita (L.) B.Nord. ... LC
virgata (P.J.Bergius) B.Nord. ... LC
zeyheri (Sond.) B.Nord. ... **Rare**

Syncolostemon, 399
albiflorus (N.E.Br.) D.F.Otieno ... LC
argenteus N.E.Br. ... LC
bolusii (N.E.Br.) D.F.Otieno ... **Rare**
concinnus N.E.Br. ... LC
densiflorus Benth. ... LC
elliottii (Baker) D.F.Otieno ... LC
eriocephalus I.Verd. ... LC
foliosus (S.Moore) D.F.Otieno ... LC
gerrardii (N.E.Br.) D.F.Otieno ... LC
incanus (Codd) D.F.Otieno ... **EN**
latidens (N.E.Br.) Codd ... **VU**
macranthus (Gürke) M.Ashby ... LC
modestus (Codd) D.F.Otieno ... LC
obermeyerae (M.Ashby) D.F.Otieno ... LC
parviflorus E.Mey. ex Benth. var. lanceolatus (Gürke) Codd ... LC
parviflorus E.Mey. ex Benth. var. parviflorus ... LC
parvifolius (Codd) D.F.Otieno ... LC
persimilis (N.E.Br.) D.F.Otieno ... LC
pretoriae (Gürke) D.F.Otieno ... LC
punctatus (Codd) D.F.Otieno ... LC
ramosus (Codd) D.F.Otieno ... **DDD**
ramulosus E.Mey. ex Benth. ... **VU**
rehmannii (Gürke) D.F.Otieno ... LC
rotundifolius E.Mey. ex Benth. ... LC
rugosifolius (M.Ashby) D.F.Otieno ... **Rare**
stalmansii (A.J.Paton & K.Balkwill) D.F.Otieno ... **Rare**
stenophyllus (Gürke) D.F.Otieno ... LC
subvelutinus (Gürke) D.F.Otieno ... LC
teucriifolius (Hochst.) D.F.Otieno ... LC
thorncroftii (N.E.Br.) D.F.Otieno ... LC
transvaalensis (Schltr.) D.F.Otieno ... LC

Syngonanthus
wahlbergii (Wikstr. ex Körn.) Ruhland var. wahlbergii ... LC

Syringodea, 174
bifucata M.P.de Vos ... LC
concolor (Baker) M.P.de Vos ... LC
derustensis M.P.de Vos ... **VU**
flanaganii Baker ... **DDD**
longituba (Klatt) Kuntze ... LC
pulchella Hook.f. ... **Rare**
saxatilis M.P.de Vos ... **VU**
unifolia Goldblatt ... LC

Syzygium, 446
cordatum Hochst. ex C.Krauss subsp. cordatum ... LC
gerrardii (Harv. ex Hook.f.) Burtt Davy ... LC
guineense (Willd.) DC. subsp. barotsense F.White ... LC
guineense (Willd.) DC. subsp. guineense ... LC
intermedium Engl. & Brehmer ... LC
legatii Burtt Davy & Greenway ... LC
pondoense Engl. ... **Rare**

T

Tabernaemontana
elegans Stapf ... LC
ventricosa Hochst. ex A.DC. ... LC

Tacazzea
apiculata Oliv. ... LC

Talbotia
elegans Balf. ... LC

Talinum
arnotii Hook.f. ... LC
caffrum (Thunb.) Eckl. & Zeyh. ... LC
crispatulum Dinter ... LC
paniculatum (Jacq.) Gaertn. ... LC
tenuissimum Dinter ... LC

Tamarix
usneoides E.Mey. ex Bunge ... LC

Tanquana, 444
archeri (L.Bolus) H.E.K.Hartmann & Liede ... **VU**
hilmarii (L.Bolus) H.E.K.Hartmann & Liede ... **CR**
prismatica (Schwantes) H.E.K.Hartmann & Liede ... LC

Tapinanthus
forbesii (Sprague) Wiens ... LC
oleifolius (J.C.Wendl.) Danser ... LC
quequensis (Weim.) Polhill & Wiens ... LC
rubromarginatus (Engl.) Danser ... LC

Tapura
fischeri Engl. ... LC

Tarchonanthus
camphoratus L. ... LC
littoralis P.P.J.Herman ... LC
minor Less. ... LC
obovatus DC. ... LC
parvicapitulatus P.P.J.Herman ... LC
trilobus DC. var. galpinii (Hutch. & E.Phillips) Paiva ... LC
trilobus DC. var. trilobus ... LC

Tarenna
junodii (Schinz) Bremek. ... LC
pavettoides (Harv.) Sim subsp. pavettoides ... LC

Tarigidia
aequiglumis (Gooss.) Stent ... LC

Tavaresia
barklyi (Dyer) N.E.Br. ... LC
meintjesii R.A.Dyer ... DDT

Teclea
gerrardii I.Verd. ... LC
natalensis (Sond.) Engl. ... LC

Tecoma
capensis (Thunb.) Lindl. ... LC

Tectaria
gemmifera (Fée) Alston ... LC

Teedia
lucida (Sol.) Rudolphi ... LC

pubescens Burch. LC

Telosma

africana (N.E.Br.) N.E.Br. LC

Tenrhynea

phylicifolia (DC.) Hilliard & B.L.Burtt LC

Tephrosia, 387

acaciifolia Baker LC
aequilata Baker subsp. australis Brummitt LC
albissima H.M.L.Forbes subsp. albissima LC
albissima H.M.L.Forbes subsp. zuluensis (H.M.L.Forbes) Schrire LC
bachmannii Harms ....VU
brummittii Schrire LC
burchellii Burtt Davy LC
capensis (Jacq.) Pers. var. acutifolia E.Mey. LC
capensis (Jacq.) Pers. var. angustifolia E.Mey. LC
capensis (Jacq.) Pers. var. capensis LC
capensis (Jacq.) Pers. var. hirsuta Harv. LC
capensis (Jacq.) Pers. var. longipetiolata H.M.L.Forbes LC
cordata Hutch. & Burtt Davy LC
dregeana E.Mey. var. dregeana LC
elongata E.Mey. var. elongata LC
elongata E.Mey. var. lasiocaulos Brummitt LC
elongata E.Mey. var. tzaneenensis (H.M.L.Forbes) Brummitt LC
euchroa I.Verd. LC
forbesii Baker subsp. interior Brummitt LC
glomeruliflora Meisn. subsp. glomeruliflora LC
glomeruliflora Meisn. subsp. meisneri (Hutch. & Burtt Davy) Schrire LC
gracilenta H.M.L.Forbes ....DDT
grandiflora (Aiton) Pers. LC
inandensis H.M.L.Forbes ....EN
kraussiana Meisn. LC
limpopoensis J.B.Gillett LC
linearis (Willd.) Pers. LC
longipes Meisn. subsp. longipes var. longipes LC
lupinifolia DC. LC
macropoda (E.Mey.) Harv. var. diffusa (E.Mey.) Schrire LC
macropoda (E.Mey.) Harv. var. macropoda LC
marginella H.M.L.Forbes LC
multijuga R.G.N.Young LC
natalensis H.M.L.Forbes subsp. natalensis LC
natalensis H.M.L.Forbes subsp. pseudocapitata (H.M.L.Forbes) Schrire ....Thr[®]
noctiflora Bojer ex Baker LC
pietersii H.M.L.Forbes ....DDT
polystachya E.Mey. var. hirta Harv. LC
polystachya E.Mey. var. latifolia Harv. LC
polystachya E.Mey. var. longidens H.M.L.Forbes LC
polystachya E.Mey. var. polystachya LC
pondoensis (Codd) Schrire ....EN
pumila (Lam.) Pers. var. pumila LC
purpurea (L.) Pers. subsp. canescens (E.Mey.) Brummitt LC
purpurea (L.) Pers. subsp. leptostachya (DC.) Brummitt var. delagoensis (H.M.L.Forbes) Brummitt LC
purpurea (L.) Pers. subsp. leptostachya (DC.) Brummitt var. leptostachya LC
purpurea (L.) Pers. subsp. leptostachya (DC.) Brummitt var. pubescens Baker LC
radicans Baker LC
reptans Baker var. reptans LC
retusa Burtt Davy LC
rhodesica Baker f. var. evansii (Hutch. & Burtt Davy) Brummitt LC
rhodesica Baker f. var. rhodesica LC
semiglabra Sond. LC
shiluwanensis Schinz LC
subulata Hutch. & Burtt Davy LC
uniflora Pers. subsp. uniflora LC
villosa (L.) Pers. subsp. ehrenbergiana (Schweinf.) Brummitt var. daviesii Brummitt LC
villosa (L.) Pers. subsp. ehrenbergiana (Schweinf.) Brummitt var. ehrenbergiana LC
virgata H.M.L.Forbes LC
vogelii Hook.f. LC
zoutpansbergensis Bremek. LC

Teramnus

labialis (L.f.) Spreng. subsp. labialis LC

Terminalia

brachystemma Welw. ex Hiern subsp. brachystemma LC
phanerophlebia Engl. & Diels LC
prunioides M.A.Lawson LC
sericea Burch. ex DC. LC

Tetrachne

dregei Nees LC

Tetradenia, 400

barberae (N.E.Br.) Codd ....Rare
brevispicata (N.E.Br.) Codd LC
riparia (Hochst.) Codd LC
tuberosa T.J.Edwards ....Rare

Tetragonia, 218

acanthocarpa Adamson LC
arbuscula Fenzl LC
caesia Adamson ....EN
calycina Fenzl LC
chenopodioides Eckl. & Zeyh. emend. Fenzl LC
decumbens Mill. LC
distorta Fenzl ....DDT
echinata Aiton LC
erecta Adamson ....DDT
fruticosa L. LC
galenioides Fenzl ....DDD
glauca Fenzl LC
halimoides Fenzl ....DDD
haworthii Fenzl LC
herbacea L. LC
hirsuta L.f. LC
lasiantha Adamson ....DDT
microptera Fenzl LC
namaquensis Schltr. LC
nigrescens Eckl. & Zeyh. LC
pillansii Adamson ....VU
portulacoides Fenzl LC
reduplicata Welw. ex Oliv. LC
robusta Fenzl LC
rosea Schltr. LC
saligna Fenzl LC
sarcophylla Fenzl LC
sphaerocarpa Adamson ....VU
spicata L.f. LC
tetragonioides (Pall.) Kuntze LC
verrucosa Fenzl LC
virgata Schltr. LC

Tetrapogon

tenellus (Roxb.) Chiov. LC

Tetraria, 106

autumnalis Levyns ....DDT
bolusii C.B.Clarke LC
brachyphylla Levyns ....NT
bromoides (Lam.) Pfeiff. LC
burmannii (Vahl) C.B.Clarke LC
capillacea (Thunb.) C.B.Clarke LC
compacta Levyns ....DDT
compar (L.) T.Lestib. LC
crassa Levyns ....DDT
crinifolia (Nees) C.B.Clarke LC
cuspidata (Rottb.) C.B.Clarke var. cuspidata LC
cuspidata (Rottb.) C.B.Clarke var. lorea (Nees) C.B.Clarke LC
exilis Levyns ....DDT
eximia C.B.Clarke LC
fasciata (Rottb.) C.B.Clarke LC
ferruginea C.B.Clarke LC
fimbriolata (Nees) C.B.Clarke LC
flexuosa (Thunb.) C.B.Clarke LC
fourcadei Turrill & Schönland LC
galpinii Schönland & Turrill LC
graminifolia Levyns ....VU
involucrata (Rottb.) C.B.Clarke LC
ligulata (Boeck.) C.B.Clarke LC
maculata Schönland & Turrill LC
microstachys (Vahl) Pfeiff. LC
nigrovaginata (Nees) C.B.Clarke LC
paludosa Levyns ....CR PE
picta (Boeck.) C.B.Clarke LC
pillansii Levyns LC
pubescens Schönland & Turrill LC
pygmaea Levyns LC
robusta (Kunth) C.B.Clarke LC
schonlandii Turrill LC
secans C.B.Clarke LC
sylvatica (Nees) C.B.Clarke var. pseudolorea Kük. LC
sylvatica (Nees) C.B.Clarke var. sylvatica LC
sylvatica (Nees) C.B.Clarke var. triflora Kük. LC
thermalis (L.) C.B.Clarke LC
triangularis (Boeck.) C.B.Clarke LC
ustulata (L.) C.B.Clarke LC
vaginata Schönland & Turrill LC
variabilis Levyns ....DDT

Tetraselago

longituba (Rolfe) Hilliard & B.L.Burtt LC
natalensis (Rolfe) Junell LC
nelsonii (Rolfe) Hilliard & B.L.Burtt LC
wilmsii (Rolfe) Hilliard & B.L.Burtt LC

Teucrium

africanum Thunb. LC
kraussii Codd LC
trifidum Retz. LC

Thalassodendron

ciliatum (Forssk.) Hartog LC

Thalictrum

minus L. LC
rhynchocarpum Quart.-Dill. & A.Rich. LC

Thaminophyllum, 283

latifolium Bond ....Rare
multiflorum Harv. ....Rare
mundii Harv. ....VU

Thamnea, 291

depressa Oliv. ....EX
diosmoides Oliv. LC
gracilis (Kuntze) Oliv. ....DDT
hirtella Oliv. ....Rare
massoniana Dummer ....VU
thesioides Dummer ....Rare
uniflora Sol. ex Brongn. ....DDT

Thamnocalamus

tessellatus (Nees) Soderstr. & R.P.Ellis LC

Thamnochortus, 211

acuminatus Pillans LC
amoena H.P.Linder ....Rare
arenarius Esterh. LC
bachmannii Mast. LC
cinereus H.P.Linder LC
dumosus Mast. ....VU
ellipticus Pillans ....VU
erectus (Thunb.) Mast. LC
fraternus Pillans ....NT
fruticosus P.J.Bergius LC
glaber (Mast.) Pillans LC
gracilis Mast. LC
guthrieae Pillans LC
insignis Mast. LC
karooica H.P.Linder ....VU
levynsiae Pillans ....Rare
lucens (Poir.) H.P.Linder LC
muirii Pillans ....VU
nutans (Thunb.) Pillans ....VU
obtusus Pillans LC
paniculatus Mast. ....NT
papyraceus Pillans ....VU
pellucidus Pillans ....VU
platypteris Kunth LC
pluristachyus Mast. ....VU
pulcher Pillans LC
punctatus Pillans ....Declining
rigidus Esterh. LC
schlechteri Pillans LC
spicigerus (Thunb.) Spreng. LC
sporadicus Pillans LC
stokoei Pillans LC

Thamnosma

africana Engl. LC

Theilera

capensis D.Y.Hong LC
guthriei (L.Bolus) E.Phillips LC

Thelypteris

confluens (Thunb.) C.V.Morton LC

Themeda

triandra Forssk. LC

Thereianthus, 174

bracteolatus (Lam.) G.J.Lewis LC
ixioides G.J.Lewis LC
juncifolius (Baker) G.J.Lewis LC
longicollis (Schltr.) G.J.Lewis ....Rare
minutus (Klatt) G.J.Lewis LC
montanus J.C.Manning & Goldblatt ....Critically Rare
racemosus (Klatt) G.J.Lewis ....Rare
spicatus (L.) G.J.Lewis LC

Thesidium
fragile (Thunb.) Sond. LC
fruticulosum A.W.Hill LC
hirtum Sond. LC
leptostachyum (A.DC.) Sond. ....DDT

Thesium, 539
abietinum Schltr. ....DDT
acuminatum A.W.Hill LC
acutissimum A.DC. LC
aggregatum A.W.Hill LC
alatum Hilliard & B.L.Burtt LC
albomontanum Compton LC
angulosum DC. LC
annulatum A.W.Hill ....DDT
archeri Compton LC
asperifolium A.W.Hill LC
asterias A.W.Hill LC
bathyschistum Schltr. ....DDT
boissierianum A.DC. ....DDT
brachygyne Schltr. ....DDT
breyeri N.E.Br. ....DDT
burchellii A.W.Hill LC
capitatum L. LC
capitellatum A.DC. LC
capituliflorum Sond. LC
carinatum A.DC. var. carinatum LC
carinatum A.DC. var. pallidum A.W.Hill LC
celatum N.E.Br. ....DDT
commutatum Sond. LC
congestum R.A.Dyer LC
cordatum A.W.Hill LC
coriarium A.W.Hill ....DDT
cornigerum A.W.Hill ....DDT
costatum A.W.Hill var. costatum LC
costatum A.W.Hill var. juniperinum A.W.Hill LC
costatum A.W.Hill var. paniculatum N.E.Br. LC
cupressoides A.W.Hill LC
cymosum A.W.Hill LC
davidsonae Brenan ....VU
deceptum N.E.Br. LC
decipiens Hilliard & B.L.Burtt LC
densiflorum A.DC. LC
densum N.E.Br. ....DDT
disciflorum A.W.Hill LC
disparile N.E.Br. ....DDT
dissitiflorum Schltr. LC
diversifolium Sond. ....DDT
dumale N.E.Br. LC
durum Hilliard & B.L.Burtt LC
ecklonianum Sond. ....EN
elatius Sond. LC
equisetoides Welw. ex Hiern LC
ericaefolium A.DC. LC
euphorbioides L. LC
euphrasioides A.DC. LC
exile N.E.Br. LC
fallax Schltr. ....EN
fimbriatum A.W.Hill ....DDT
flexuosum A.DC. LC
foliosum A.DC. LC
frisea L. var. frisea ....DDT
frisea L. var. thunbergii A.DC. LC
fructicosum A.W.Hill LC
funale sensu L., non Sond. LC
galioides A.DC. LC
glaucescens A.W.Hill ....DDT
glomeratum A.W.Hill ....DDT
glomeruliflorum Sond. LC
gnidiaceum A.DC. var. gnidiaceum LC
gnidiaceum A.DC. var. zeyheri Sond. ....DDT
goetzeanum Engl. LC
gracilarioides A.W.Hill LC
gracile A.W.Hill LC
gracilentum N.E.Br. ....VU
griseum Sond. LC
gypsophiloides A.W.Hill LC
hillianum Compton ....DDT
hirsutum A.W.Hill LC
hispidulum Lam. ex Sond. var. hispidulum LC
hispidulum Lam. ex Sond. var. subglabrum A.W.Hill ....DDT
hollandii Compton ....DDT
horridum Pilg. ....DDT
hystricoides A.W.Hill LC
hystrix A.W.Hill LC
imbricatum Thunb. LC
impeditum A.W.Hill LC
inversum N.E.Br. ....DDT
jeanae Brenan ....Rare
junceum Bernh. var. junceum LC
junceum Bernh. var. mammosum A.W.Hill ....DDT
junceum Bernh. var. plantagineum A.W.Hill ....DDT
juncifolium DC. LC
junodii A.W.Hill ....DDT
karooicum Compton LC
lacinulatum A.W.Hill LC
leptocaule Sond. ....DDT
lesliei N.E.Br. LC
lineatum L.f. LC
lisae-mariae Stauffer ....DDT
litoreum Brenan ....CR
lobelioides A.DC. LC
macrogyne A.W.Hill LC
macrostachyum A.DC. LC
magalismontanum Sond. LC
marlothii Schltr. ....DDT
microcephalum A.W.Hill ....DDT
micromeria A.DC. LC
micropogon A.DC. ....DDD
mossii N.E.Br. ....DDT
multiramulosum Pilg. LC
namaquense Schltr. LC
natalense Sond. LC
nationae A.W.Hill ....DDT
nigromontanum Sond. LC
nigrum A.W.Hill LC
nudicaule A.W.Hill LC
occidentale A.W.Hill LC
oresigenum Compton LC
orientale A.W.Hill LC
pallidum A.DC. LC
paniculatum L. LC
paronychioides Sond. LC
patersonae A.W.Hill ....DDD
patulum A.W.Hill LC
penicillatum A.W.Hill LC
phyllostachyum Sond. LC
pinifolium A.DC. LC
pleuroloma A.W.Hill ....DDT
polycephalum Schltr. LC
polygaloides A.W.Hill ....VU
pottiae N.E.Br. LC
procerum N.E.Br. LC
prostratum A.W.Hill LC
pseudovirgatum Levyns LC
pubescens DC. LC
pungens A.W.Hill LC
pycnanthum Schltr. LC
quinqueflorum Sond. ....DDT
racemosum Bernh. LC
rariflorum Sond. ....DDT
rasum (A.W.Hill) N.E.Br. LC
repandum A.W.Hill ....DDD
resedoides A.W.Hill LC
resinifolium N.E.Br. ....DDT
rogersii A.W.Hill LC
rufescens A.W.Hill ....DDT
scabrum L. LC
scandens Sond. LC
schumannianum Schltr. ....DDD
scirpioides A.W.Hill LC
sedifolium A.DC. ex Levyns LC
selagineum A.DC. ....DDT
semotum N.E.Br. LC
sertulariastrum A.W.Hill ....DDT
sonderianum Schltr. ....DDT
spartioides A.W.Hill LC
spicatum L. LC
spinosum L.f. LC
spinulosum A.DC. LC
squarrosum L.f. LC
strictum P.J.Bergius LC
subnudum Sond. var. foliosum A.W.Hill LC
subnudum Sond. var. subnudum LC
subsimile N.E.Br. ....DDD
susannae A.W.Hill ....Rare
translucens A.W.Hill LC
transvaalense Schltr. LC
triflorum Thunb. ex L.f. LC
umbelliferum A.W.Hill LC
urceolatum A.W.Hill ....DDT
utile A.W.Hill LC
vahrmeijeri Brenan ....DDT
virens E.Mey. ex A.DC. LC
virgatum Lam. LC
viridifolium Levyns LC
whitehillensis Compton LC
zeyheri A.DC. LC

Thesmophora, 555
scopulosa Rourke ....VU

Thespesia
acutiloba (Baker f.) Exell & Mendonça LC

Thilachium
africanum Lour. LC

Thlaspeocarpa, 289
capensis (Sond.) C.A.Sm. LC
namaquensis Marais ....Rare

Thorncroftia, 400
longiflora N.E.Br. ....Rare
lotterii T.J.Edwards ....VU
media Codd ....Critically Rare
succulenta (R.A.Dyer & E.A.Bruce) Codd LC
thorncroftii (S.Moore) Codd ....VU

Thunbergia, 218
alata Bojer ex Sims LC
amoena C.B.Clarke LC
atriplicifolia E.Mey. ex Nees LC
aurea N.E.Br. LC
capensis Retz. LC
dregeana Nees LC
natalensis Hook. LC
neglecta Sond. LC
pondoensis Lindau LC
purpurata Harv. ex C.B.Clarke LC
venosa C.B.Clarke ....Rare

Tiliacora
funifera (Miers) Oliv. LC

Tinnea
barbata Vollesen LC
galpinii Briq. LC
rhodesiana S.Moore LC

Tinospora
caffra (Miers) Troupin LC
fragosa (I.Verd.) I.Verd. & Troupin LC
tenera Miers LC

Titanopsis
calcarea (Marloth) Schwantes LC

Tittmannia, 292
esterhuyseniae Powrie ....VU
hispida Pillans ....DDT
laevis Pillans LC
laxa (Thunb.) C.Presl var. langebergensis Pillans ....Rare
laxa (Thunb.) C.Presl var. laxa LC

Toddalia
asiatica (L.) Lam. LC

Toddaliopsis
bremekampii I.Verd. LC

Todea
barbara (L.) T.Moore LC

Tolpis
capensis (L.) Sch.Bip. LC

Torenia
thouarsii (Cham. & Schltdl.) Kuntze LC

Trachyandra, 101
acocksii Oberm. LC
adamsonii (Compton) Oberm. LC
affinis Kunth LC
arenicola J.C.Manning & Goldblatt LC
aridimontana J.C.Manning ....Rare
asperata Kunth var. asperata LC
asperata Kunth var. basutoensis (Poelln.) Oberm. LC
asperata Kunth var. carolinensis Oberm. LC
asperata Kunth var. macowanii (Baker) Oberm. LC
asperata Kunth var. nataglencoensis (Kuntze) Oberm. LC
asperata Kunth var. stenophylla (Baker) Oberm. LC
asperata Kunth var. swaziensis Oberm. LC
brachypoda (Baker) Oberm. LC
bulbinifolia (Dinter) Oberm. LC
burkei (Baker) Oberm. LC
capillata (Poelln.) Oberm. LC
chlamydophylla (Baker) Oberm. LC
ciliata (L.f.) Kunth LC
dissecta Oberm. LC
divaricata (Jacq.) Kunth LC
erythrorrhiza (Conrath) Oberm. ....NT

esterhuysenae Oberm. ..... **Rare**
falcata (L.f.) Kunth LC
filiformis (Aiton) Oberm. LC
flexifolia (L.f.) Kunth LC
gerrardii (Baker) Oberm. LC
giffenii (F.M.Leight.) Oberm. LC
gracilenta Oberm. ..... **Rare**
hirsuta (Thunb.) Kunth LC
hirsutiflora (Adamson) Oberm. LC
hispida (L.) Kunth LC
involucrata (Baker) Oberm. LC
jacquiniana (Roem. & Schult.) Oberm. LC
karrooica Oberm. LC
laxa (N.E.Br.) Oberm. var. laxa LC
laxa (N.E.Br.) Oberm. var. rigida (Suess.) Roessler LC
margaretae Oberm. LC
montana J.C.Manning & Goldblatt ..... **Critically Rare**
muricata (L.f.) Kunth LC
oligotricha (Baker) Oberm. LC
paniculata Oberm. ..... Thr*
patens Oberm. LC
prolifera P.L.Perry ..... **VU**
reflexipilosa (Kuntze) Oberm. LC
revoluta (L.) Kunth LC
sabulosa (Adamson) Oberm. LC
saltii (Baker) Oberm. var. oatesii (Baker) Oberm. LC
saltii (Baker) Oberm. var. saltii LC
saltii (Baker) Oberm. var. secunda (K.Krause & Dinter) Oberm LC
scabra (L.f.) Kunth LC
smalliana Hilliard & B.L.Burtt ..... DDT
tabularis (Baker) Oberm. LC
thyrsoidea (Baker) Oberm. LC
tortilis (Baker) Oberm. LC
zebrina (Schltr. ex Poelln.) Oberm LC

Trachypogon
spicatus (L.f.) Kuntze LC

Tragia
collina Prain LC
dioica Sond. LC
glabrata (Müll.Arg.) Pax & K.Hoffm. var. glabrata LC
incisifolia Prain LC
kirkiana Müll.Arg. LC
meyeriana Müll.Arg. LC
minor Sond. LC
okanyua Pax LC
physocarpa Prain LC
prionoides Radcl.-Sm. LC
rogersii Prain LC
rupestris Sond LC
sonderi Prain LC
wahlbergiana Prain LC

Tragiella
natalensis (Sond.) Pax & K.Hoffm. LC

Tragus
berteronianus Schult LC
koelerioides Asch. LC
racemosus (L.) All. LC

Trapa
natans L. var. pumila Nakano ex Verdc. LC

Treichelia
longebracteata (H.Buek ex Eckl. & Zeyh.) Vatke LC

Trema
orientalis (L.) Blume LC

Trianoptiles, 106
capensis (Steud.) Harv. LC
solitaria (C.B.Clarke) Levyns ..... **CR**
stipitata Levyns LC

Trianthema
parvifolia E.Mey. ex Sond. var. parvifolia LC
parvifolia E.Mey. ex Sond. var. rubens (Sond.) Adamson LC
portulacastrum L. LC
salsoloides Fenzl ex Oliv. var. salsoloides LC
salsoloides Fenzl ex Oliv. var. stenophylla Adamson LC
salsoloides Fenzl ex Oliv. var. transvaalensis (Schinz) Adamson LC
triquetra Willd. ex Spreng. subsp. triquetra var. triquetra LC

Triaspis
glaucophylla Engl. LC
hypericoides (DC.) Burch. subsp. canescens (Engl.) Immelman LC
hypericoides (DC.) Burch. subsp. hypericoides LC
hypericoides (DC.) Burch. subsp. nelsonii (Oliv.) Immelman LC

Tribolium, 204
acutiflorum (Nees) Renvoize LC
brachystachyum (Nees) Renvoize LC
ciliare (Stapf) Renvoize ..... **VU**
echinatum (Thunb.) Renvoize LC
hispidum (Thunb.) Desv. LC
obliterum (Hemsl.) Renvoize LC
obtusifolium (Nees) Renvoize LC
pusillum (Nees) H.P.Linder & Davidse LC
uniolae (L.f.) Renvoize LC
utriculosum (Nees) Renvoize LC

Tribulocarpus
dimorphanthus (Pax) S.Moore LC

Tribulus
cristatus C.Presl LC
pterophorus C.Presl LC
terrestris L. LC
zeyheri Sond. subsp. zeyheri LC

Tricalysia, 521
africana (Sim) Robbr. ..... **EN**
cacondensis Hiern LC
capensis (Meisn. ex Hochst.) Sim var. capensis LC
capensis (Meisn. ex Hochst.) Sim var. transvaalensis Robbr. LC
delagoensis Schinz LC
junodii (Schinz) Brenan var. junodii LC
junodii (Schinz) Brenan var. kirkii (Hook.f.) Robbr. LC
lanceolata (Sond.) Burtt Davy LC
maputensis Bridson & A.E.van Wyk LC
sonderiana Hiern var. sonderiana LC

Trichilia
dregeana Sond. LC
emetica Vahl subsp. emetica LC

Trichocephalus
stipularis (L.) Brongn. LC

Trichocladus
crinitus (Thunb.) Pers. LC
ellipticus Eckl. & Zeyh. subsp. ellipticus LC
grandiflorus Oliv. LC

Trichodesma
africanum (L.) Lehm. LC
angustifolium Harv. subsp. angustifolium LC
physaloides (Fenzl) A.DC. LC
zeylanicum (Burm.f.) R.Br. LC

Trichodiadema, 444
attonsum (L.Bolus) Schwantes LC
aureum L.Bolus ..... **VU**
barbatum (L.) Schwantes LC
burgeri L.Bolus ..... **VU**
calvatum L.Bolus LC
decorum (N.E.Br.) Stearn ex H.Jacobsen LC
densum (Haw.) Schwantes LC
emarginatum L.Bolus LC
fergusoniae L.Bolus LC
fourcadei L.Bolus LC
gracile L.Bolus LC
hallii L.Bolus ..... DDT
hirsutum (Haw.) Stearn LC
imitans L.Bolus LC
intonsum (Haw.) Schwantes LC
introrsum (Haw. ex Hook.f.) Niesler ..... DDT
littlewoodii L.Bolus LC
marlothii L.Bolus LC
mirabile (N.E.Br.) Schwantes LC
obliquum L.Bolus ..... DDT
occidentale L.Bolus ..... Thr*
olivaceum L.Bolus LC
orientale L.Bolus ..... DDT
peersii L.Bolus ..... DDT
pomeridianum L.Bolus LC
pygmaeum L.Bolus ..... **VU**
rogersiae L.Bolus ..... DDT
rupicola L.Bolus ..... DDT
ryderae L.Bolus LC
setuliferum (N.E.Br.) Schwantes LC
stayneri L.Bolus ..... Thr*
strumosum (Haw.) L.Bolus ..... DDT

Trichogyne, 284
ambigua (L.) Druce LC
candida (Hilliard) Anderb. LC
decumbens (Thunb.) Less. LC
lerouxiae Beyers ..... **Rare**
paronychioides DC. LC
pilulifera (Schltr.) Anderb. LC
polycnemoides (Fenzl) Anderb LC
repens (L.) Anderb LC
verticillata (L.f.) Less. LC

Tricholaena
capensis (Licht. ex Roem. & Schult.) Nees subsp. capensis LC
monachne (Trin.) Stapf & C.E.Hubb. LC

Trichomanes
erosum Willd. var. aerugineum (Bosch) C.Chr. ex Bonap. LC
reptans Sw. LC

Trichoneura
grandiglumis (Nees) Ekman LC

Trichopteryx
dregeana Nees LC

Tricliceras
glanduliferum (Klotzsch) R.Fern. LC
laceratum (Oberm.) Oberm. LC
longepedunculatum (Mast.) R.Fern. var. longepedunculatum LC
mossambicense (A. & R.Fern.) R.Fern. LC
schinzii (Urb.) R.Fern. subsp. schinzii var. juttae (Dinter & Urb.) R.Fern. LC
tanacetifolium (Klotzsch) R.Fern. LC

Tridactyle
bicaudata (Lindl.) Schltr. subsp. bicaudata LC
bicaudata (Lindl.) Schltr. subsp. rupestris H.P.Linder LC
gentilii (De Wild.) Schltr. LC
tricuspis (Bolus) Schltr. LC
tridentata (Harv.) Schltr. LC

Tridentea, 242
dwequensis (C.A.Lückh.) L.C.Leach LC
gemmiflora (Masson) Haw. LC
jucunda (N.E.Br.) L.C.Leach LC
marientalensis (Nel) L.C.Leach subsp. marientalensis LC
pachyrrhiza (Dinter) L.C.Leach LC
parvipuncta (N.E.Br.) L.C.Leach subsp. parvipuncta LC
parvipuncta (N.E.Br.) L.C.Leach subsp. truncata (C.A.Lückh.) Bruyns LC
peculiaris (C.A.Lückh.) L.C.Leach LC
virescens (N.E.Br.) L.C.Leach ..... **Rare**

Trieenea, 553
elsiae Hilliard ..... **Rare**
frigida Hilliard ..... **Critically Rare**
glutinosa (Schltr.) Hilliard LC
lanciloba Hilliard ..... **Rare**
lasiocephala Hilliard ..... **Rare**
laxiflora Hilliard ..... **Rare**
longipedicellata Hilliard ..... **Rare**
schlechteri (Hiern) Hilliard ..... **Rare**
taylorii Hilliard ..... **Rare**

Trifolium
africanum Ser. var. africanum LC
africanum Ser. var. lydenburgense J.B.Gillett LC
burchellianum Ser. subsp. burchellianum LC
burchellianum Ser. subsp. johnstonii (Oliv.) Cufod. ex J.B.Gillett LC
stipulaceum Thunb. LC

Triglochin
bulbosa L. LC
striata Ruíz & Pav. LC

Trigonella
anguina Delile LC

Trigonocapnos
lichtensteinii (Cham. & Schltdl.) Lidén LC

Trilepisium
madagascariense DC. LC

Trimeria
grandifolia (Hochst.) Warb. subsp. grandifolia LC
trinervis Harv. LC

Tripogon
minimus (A.Rich.) Steud. LC

Tripteris
aghillana DC. var. aghillana LC
aghillana DC. var. integrifolia Harv. LC
amplexicaulis (Thunb.) Less. LC

auriculata S.Moore....LC
crassifolia O.Hoffm....LC
dentata (Burm.f.) Harv....LC
microcarpa Harv. subsp. microcarpa....LC
oppositifolia (Aiton) B.Nord....LC
pinnatilobata (Norl.) B.Nord....LC
polycephala DC....LC
rosulata (Norl.) B.Nord....DDT
sinuata DC. var. linearis (Harv.) B.Nord....LC
sinuata DC. var. sinuata....LC
spathulata DC....Thr*
spinigera Norl....DDT

Triraphis
andropogonoides (Steud.) E.Phillips....LC
purpurea Hack....LC
ramosissima Hack....LC
schinzii Hack....LC

Tristachya
biseriata Stapf....LC
leucothrix Trin. ex Nees....LC
pallida Stent....LC
rehmannii Hack....LC

Tristicha
trifaria (Bory ex Willd.) Spreng. subsp. trifaria....LC

Tritonia, 174
atrorubens (N.E.Br.) L.Bolus....DDD
bakeri Klatt subsp. bakeri....LC
bakeri Klatt subsp. lilacina (L.Bolus) M.P.de Vos....LC
chrysantha Fourc....LC
cooperi (Baker) Klatt subsp. cooperi....LC
cooperi (Baker) Klatt subsp. quadrialata M.P.de Vos....LC
crocata (L.) Ker Gawl....LC
delpierrei M.P.de Vos....VU
deusta (Aiton) Ker Gawl. subsp. deusta....LC
deusta (Aiton) Ker Gawl. subsp. miniata (Jacq.) M.P.de Vos....LC
disticha (Klatt) Baker subsp. disticha....LC
disticha (Klatt) Baker subsp. rubrolucens (R.C.Foster) M.P.de Vos....LC
drakensbergensis M.P.de Vos....LC
dubia Eckl. ex Klatt....NT
flabellifolia (D.Delaroche) G.J.Lewis var. flabellifolia....LC
flabellifolia (D.Delaroche) G.J.Lewis var. major (Ker Gawl.) M.P.de Vos....LC
flabellifolia (D.Delaroche) G.J.Lewis var. thomasiae M.P.de Vos....CR PE
florentiae (Marloth) Goldblatt....Rare
gladiolaris (Lam.) Goldblatt & J.C.Manning....LC
kamisbergensis Klatt....Rare
karooica M.P.de Vos....LC
lancea (Thunb.) N.E.Br....EN
laxifolia (Klatt) Benth. ex Baker....LC
marlothii M.P.de Vos....LC
nelsonii Baker....LC
pallida Ker Gawl. subsp. pallida....LC
pallida Ker Gawl. subsp. taylorae (L.Bolus) M.P.de Vos....VU
parvula N.E.Br....LC
securigera (Aiton) Ker Gawl. subsp. securigera....LC
securigera (Aiton) Ker Gawl. subsp. watermeyeri (L.Bolus) J.C.Manning & Goldblatt....Rare
squalida (Aiton) Ker Gawl....NT
strictifolia (Klatt) Benth. ex Klatt....LC
tugwelliae L.Bolus....LC
undulata (Burm.f.) Baker....LC

Tritoniopsis, 177
antholyza (Poir.) Goldblatt....LC
bicolor J.C.Manning & Goldblatt....VU
burchellii (N.E.Br.) Goldblatt....LC
caffra (Ker Gawl. ex Baker) Goldblatt....LC
caledonensis (R.C.Foster) G.J.Lewis....VU
dodii (G.J.Lewis) G.J.Lewis....LC
elongata (L.Bolus) G.J.Lewis....EN
flava J.C.Manning & Goldblatt....Critically Rare
flexuosa (L.f.) G.J.Lewis....EN
intermedia (Baker) Goldblatt....LC
lata (L.Bolus) G.J.Lewis var. lata....LC
lata (L.Bolus) G.J.Lewis var. longibracteata (L.Bolus) G.J.Lewis....LC
latifolia G.J.Lewis....Rare
lesliei L.Bolus....Rare
nemorosa (E.Mey. ex Klatt) G.J.Lewis....LC
nervosa (Baker) G.J.Lewis....LC
parviflora (Jacq.) G.J.Lewis var. angusta (L.Bolus) G.J.Lewis....LC
parviflora (Jacq.) G.J.Lewis var. parviflora....LC
pulchella G.J.Lewis var. alpina G.J.Lewis....LC
pulchella G.J.Lewis var. pulchella....LC
pulchra (Baker) Goldblatt....LC
ramosa (Eckl. ex Klatt) G.J.Lewis var. ramosa....LC
ramosa (Eckl. ex Klatt) G.J.Lewis var. robusta G.J.Lewis....LC
ramosa (Eckl. ex Klatt) G.J.Lewis var. unguiculata (Baker) G.J.Lewis....LC
revoluta (Burm.f.) Goldblatt....LC
toximontana J.C.Manning & Goldblatt....Critically Rare
triticea (Burm.f.) Goldblatt....LC
unguicularis (Lam.) G.J.Lewis....LC
williamsiana Goldblatt....Critically Rare

Triumfetta
angolensis Sprague & Hutch....LC
annua L....LC
dekindtiana Engl....LC
obtusicornis Sprague & Hutch....LC
pentandra A.Rich. var. pentandra....LC
pilosa Roth var. effusa (E.Mey. ex Harv.) Wild....LC
pilosa Roth var. pilosa....LC
pilosa Roth var. tomentosa Szyszyl. ex Sprague & Hutch....LC
rhomboidea Jacq. var. rhomboidea....LC
sonderi Ficalho & Hiern....LC
welwitschii Mast. var. hirsuta (Sprague & Hutch.) Wild....LC
welwitschii Mast. var. welwitschii....LC

Trochomeria
debilis (Sond.) Hook.f....LC
hookeri Harv....LC
macrocarpa (Sond.) Hook.f. subsp. macrocarpa....LC
sagittata (Harv. ex Sond.) Cogn....LC

Troglophyton, 284
acocksianum Hilliard....Rare
capillaceum (Thunb.) Hilliard & B.L.Burtt subsp. capillaceum....LC
capillaceum (Thunb.) Hilliard & B.L.Burtt subsp. diffusum (DC.) Hilliard....LC
elsiae Hilliard....Rare
leptomerum Hilliard....LC
parvulum (Harv.) Hilliard & B.L.Burtt....LC
tenellum Hilliard....LC

Tromotriche, 242
aperta (Masson) Bruyns....LC
baylissii (L.C.Leach) Bruyns....LC
choanantha (Lavranos & H.Hall) Bruyns....LC
herrei (Nel) Bruyns....Rare
pedunculata (Masson) Bruyns subsp. longipes....LC
pedunculata (Masson) Bruyns subsp. pedunculata....LC
revoluta (Masson) Haw....LC
thudichumii (Pillans) L.C.Leach....LC
umdausensis (Nel) Bruyns....LC

Tulbaghia, 63
acutiloba Harv....LC
alliacea L.f....LC
capensis L....LC
cernua Avé-Lall....LC
coddii Vosa & Burb....VU
cominsii Vosa....VU
dregeana Kunth....LC
galpinii Schltr....LC
leucantha Baker....LC
ludwigiana Harv....LC
montana Vosa....LC
natalensis Baker....LC
nutans Vosa....LC
pretoriensis Vosa & Condy....DDT
simmleri P.Beauv....LC
tenuior K.Krause & Dinter....LC
transvaalensis Vosa....LC
verdoornia Vosa & Burb....LC
violacea Harv. var. maritima Vosa....LC
violacea Harv. var. violacea....LC

Turraea, 408
floribunda Hochst....LC
nilotica Kotschy & Peyr....LC
obtusifolia Hochst....LC
pulchella (Harms) T.D.Penn....VU
streyi F.White & Styles....CR PE

Tylecodon, 310
albiflorus Bruyns....Rare
atropurpureus Bruyns....Rare
bayeri Van Jaarsv....LC
bleckiae G.Will....DDT
boddleyi Van Jaarsv....Rare
buchholzianus (Schuldt & P.Stephan) Toelken subsp. buchholzianus....LC
buchholzianus (Schuldt & P.Stephan) Toelken subsp. fasciculatus G.Will....Rare
cacalioides (L.f.) Toelken....LC
cordiformis G.Will....Critically Rare
decipiens Toelken....Rare
ellaphieae Van Jaarsv....Rare
faucium (Poelln.) Toelken....Rare
fragilis (R.A.Dyer) Toelken....EN
grandiflorus (Burm.f.) Toelken....LC
hallii (Toelken) Toelken....LC
hirtifolius (W.F.Barker) Toelken....Rare
jarmilae Halda....DDT
kritzingeri Van Jaarsv....Rare
leucothrix (C.A.Sm.) Toelken....Rare
longipes Van Jaarsv. & G.Will....Critically Rare
mallei G.Will....LC
nigricaulis G.Will. & Van Jaarsv....Rare
nolteei Lavranos....VU
occultans (Toelken) Toelken....LC
paniculatus (L.f.) Toelken....LC
pearsonii (Schönland) Toelken....LC
peculiaris Van Jaarsv....Critically Rare
pusillus Bruyns....LC
pygmaeus (W.F.Barker) Toelken....Thr*
racemosus (Harv.) Toelken....LC
reticulatus (L.f.) Toelken subsp. phyllopodium Toelken....LC
reticulatus (L.f.) Toelken subsp. reticulatus....LC
rubrovenosus (Dinter) Toelken....LC
scandens Van Jaarsv....Rare
schaeferianus (Dinter) Toelken....LC
similis (Toelken) Toelken....LC
stenocaulis Bruyns....Rare
striatus (Hutchison) Toelken....LC
suffultus Bruyns ex Toelken....Critically Rare
sulphureus (Toelken) Toelken var. armianus Van Jaarsv....Rare
sulphureus (Toelken) Toelken var. sulphureus....LC
tenuis (Toelken) Bruyns....Rare
torulosus Toelken....VU
tribblei Van Jaarsv....LC
tuberosus Toelken....Rare
ventricosus (Burm.f.) Toelken....LC
viridiflorus (Toelken) Toelken....Rare
wallichii (Harv.) Toelken subsp. ecklonianus (Harv.) Toelken....LC
wallichii (Harv.) Toelken subsp. wallichii....LC

Tylophora, 242
anomala N.E.Br....LC
badia (E.Mey.) Schltr. var. badia....DDT
badia (E.Mey.) Schltr. var. latifolia N.E.Br....LC
coddii Bullock....Rare
cordata (Thunb.) Druce....LC
flanaganii Schltr....LC
lycioides (E.Mey.) Decne....LC
simiana Schltr....LC
umbellata Schltr....LC

Tylosema
esculentum (Burch.) A.Schreib....LC
fassoglensis (Schweinf.) Torre & Hillc....LC

Typha
capensis (Rohrb.) N.E.Br....LC

U

Umtiza, 387
listeriana Sim....VU

Unigenes
humifusa A.DC....LC

Urelytrum
agropyroides (Hack.) Hack....LC

Urera
trinervis (Hochst.) Friis & Immelman....LC

Urginea, 124
epigea R.A.Dyer....LC
lydenburgensis R.A.Dyer....NT

Urochloa
brachyura (Hack.) Stapf....LC
mosambicensis (Hack.) Dandy....LC

oligotricha (Fig. & De Not.) Henrard LC
stolonifera (Gooss.) Chippind. LC
trichopus (Hochst.) Stapf LC

Ursinia, 284
abrotanifolia (R.Br.) Spreng. LC
alpina N.E.Br. LC
anethoides (DC.) N.E.Br. LC
anthemoides (L.) Poir. subsp. anthemoides LC
anthemoides (L.) Poir. subsp. versicolor (DC.) Prassler LC
brachyloba (Kunze) N.E.Br. ..... DDT
cakilefolia DC. LC
caledonica (E.Phillips) Prassler ..... VU
calenduliflora (DC.) N.E.Br. LC
chrysanthemoides (Less.) Harv. LC
coronopifolia (Less.) N.E.Br. ..... Rare
dentata (L.) Poir. LC
discolor (Less.) N.E.Br. LC
dregeana (DC.) N.E.Br. ..... Rare
eckloniana (Sond.) N.E.Br. LC
filipes (E.Mey. ex DC.) N.E.Br. ..... Rare
frutescens Dinter LC
heterodonta (DC.) N.E.Br. LC
hispida (DC.) N.E.Br. ..... VU
macropoda (DC.) N.E.Br. LC
merxmuelleri Prassler ..... Critically Rare
montana DC. subsp. apiculata (DC.) Prassler LC
montana DC. subsp. montana LC
nana DC. subsp. leptophylla Prassler LC
nana DC. subsp. nana LC
nudicaulis (Thunb.) N.E.Br. LC
oreogena Schltr. ex Prassler ..... Rare
paleacea (L.) Moench LC
pilifera (P.J.Bergius) Poir. LC
pinnata (Thunb.) Prassler LC
punctata (Thunb.) N.E.Br. LC
pygmaea DC. ..... Rare
quinquepartita (DC.) N.E.Br. LC
rigidula (DC.) N.E.Br. LC
saxatilis N.E.Br. LC
scariosa (Aiton) Poir. subsp. scariosa LC
scariosa (Aiton) Poir. subsp. subhirsuta (DC.) Prassler LC
sericea (Thunb.) N.E.Br. LC
serrata (L.f.) Poir. LC
speciosa DC. LC
subflosculosa (DC.) Prassler ..... EN
tenuifolia (L.) Poir. subsp. ciliaris (DC.) Prassler LC
tenuifolia (L.) Poir. subsp. tenuifolia LC
tenuiloba DC. LC
trifida (Thunb.) N.E.Br. LC

Urtica
lobulata Blume LC

Utricularia
arenaria A.DC. LC
australis R.Br. LC
benjaminiana Oliv. LC
bisquamata Schrank LC
cymbantha Oliv. LC
firmula Welw. ex Oliv. LC
foliosa L. LC
gibba L. LC
inflexa Forssk. LC
livida E.Mey. LC
prehensilis E.Mey. LC
reflexa Oliv. LC
sandersonii Oliv. LC
scandens Benj. LC
stellaris L.f. LC
subulata L. LC
welwitschii Oliv. LC

Uvaria
caffra E.Mey. ex Sond. LC
gracilipes N.Robson LC
lucida Benth. subsp. virens (N.E.Br.) Verdc. LC

V

Vaccinium
exul Bolus LC

Vahlia
capensis (L.f.) Thunb. subsp. capensis LC
capensis (L.f.) Thunb. subsp. ellipticifolia Bridson LC
capensis (L.f.) Thunb. subsp. vulgaris Bridson var. latifolia Burtt Davy ..... DDT
capensis (L.f.) Thunb. subsp. vulgaris Bridson var. linearis E.Mey. ex Bridson LC
capensis (L.f.) Thunb. subsp. vulgaris Bridson var. longifolia (Gand.) Bridson LC
capensis (L.f.) Thunb. subsp. vulgaris Bridson var. vulgaris LC

Valeriana
capensis Thunb. var. capensis LC
capensis Thunb. var. lanceolata N.E.Br. LC
capensis Thunb. var. nana B.L.Burtt LC

Vallisneria
spiralis L. LC

Vangueria, 521
esculenta S.Moore LC
infausta Burch. subsp. infausta LC
madagascariensis J.F.Gmel. LC
randii S.Moore subsp. chartacea (Robyns) Verdc. LC
soutpansbergensis N.Hahn ..... Rare

Vanheerdea
primosii (L.Bolus) L.Bolus ex H.E.K.Hartmann LC
roodiae (N.E.Br.) L.Bolus ex H.E.K.Hartmann LC

Vanilla, 200
roscheri Rchb.f. ..... NT*

Vanwykia
remota (Baker & Sprague) Wiens LC

Vanzijlia
annulata (A.Berger) L.Bolus LC

Vellereophyton, 284
dealbatum (Thunb.) Hilliard & B.L.Burtt LC
felinum Hilliard ..... Rare
gracillimum Hilliard LC
lasianthum (Schltr. & Moeser) Hilliard ..... DDD
niveum Hilliard LC
pulvinatum Hilliard ..... DDD
vellereum (R.A.Dyer) Hilliard LC

Veltheimia
bracteata Harv. ex Baker LC
capensis (L.) DC. LC

Vepris
carringtoniana Mendonça LC
lanceolata (Lam.) G.Don LC
reflexa I.Verd. LC

Vernonia, 285
acuminatissima S.Moore LC
africana (Sond.) Druce ..... EX
amygdalina Delile LC
bainesii Oliv. & Hiern subsp. bainesii LC
capensis (Houtt.) Druce LC
centaureoides Klatt LC
cinerascens Sch.Bip. LC
colorata (Willd.) Drake subsp. colorata LC
crataegifolia Hutch. LC
dregeana Sch.Bip. LC
fastigiata Oliv. & Hiern LC
flanaganii (E.Phillips) Hilliard LC
galpinii Klatt LC
gerberiformis Oliv. & Hiern subsp. macrocyanus (O.Hoffm.) C.Jeffrey LC
gerrardii Harv. LC
glabra (Steetz) Vatke var. glabra LC
glabra (Steetz) Vatke var. laxa (Steetz) Brenan LC
hirsuta (DC.) Sch.Bip. ex Walp. LC
inhacensis G.V.Pope LC
meiostephana C.Jeffrey LC
mespilifolia Less. LC
myriantha Hook.f. LC
natalensis Sch.Bip. ex Walp. LC
nestor S.Moore LC
obionifolia O.Hoffm. subsp. obionifolia LC
oligocephala (DC.) Sch.Bip. ex Walp. LC
poskeana Vatke & Hildebr. subsp. botswanica G.V.Pope LC
rhodanthoidea Muschl. LC
schlechteri O.Hoffm. LC
staehelinoides Harv. LC
steetziana Oliv. & Hiern LC
sutherlandii Harv. LC
thodei E.Phillips LC
tigna Klatt LC
triflora Bremek. LC
wollastonii S.Moore LC

Veronica
anagallis-aquatica L. LC

Vexatorella, 506
alpina (Salisb. ex Knight) Rourke ..... NT
amoena (Rourke) Rourke LC
latebrosa Rourke ..... CR
obtusata (Thunb.) Rourke subsp. albomontana (Rourke) Rourke LC
obtusata (Thunb.) Rourke subsp. obtusata LC

Vigna
friesiorum Harms var. friesiorum LC
frutescens A.Rich. subsp. frutescens var. frutescens LC
kokii B.J.Pienaar LC
luteola (Jacq.) Benth. var. luteola LC
marina (Burm.) Merr. LC
mudenia B.J.Pienaar LC
nervosa Markötter LC
oblongifolia A.Rich. var. oblongifolia LC
oblongifolia A.Rich. var. parviflora (Baker) Verdc. LC
unguiculata (L.) Walp. subsp. dekindtiana (Harms) Verdc. var. dekindtiana LC
unguiculata (L.) Walp. subsp. dekindtiana (Harms) Verdc. var. huillensis (Welw. ex Baker) B.J.Pienaar LC
unguiculata (L.) Walp. subsp. protracta (E.Mey.) B.J.Pienaar LC
unguiculata (L.) Walp. subsp. stenophylla (Harv.) Maréchal, Mascherpa & Stainier LC
unguiculata (L.) Walp. subsp. tenuis (E.Mey.) Maréchal, Mascherpa & Stainier var. ovata (E.Mey.) B.J.Pienaar LC
unguiculata (L.) Walp. subsp. tenuis (E.Mey.) Maréchal, Mascherpa & Stainier var. tenuis LC
unguiculata (L.) Walp. subsp. unguiculata LC
vexillata (L.) A.Rich. var. angustifolia (Schumach. & Thonn.) Baker LC
vexillata (L.) A.Rich. var. davyi (Bolus) B.J.Pienaar LC
vexillata (L.) A.Rich. var. ovata (E.Mey.) B.J.Pienaar LC
vexillata (L.) A.Rich. var. vexillata LC

Villarsia, 408
capensis (Houtt.) Merr. LC
goldblattiana Ornduff ..... VU
manningiana Ornduff LC

Viola
abyssinica Steud. ex Oliv. LC
decumbens L.f. var. decumbens LC
decumbens L.f. var. scrotiformis (DC.) Jessop LC

Virgilia
divaricata Adamson LC
oroboides (P.J.Bergius) T.M.Salter subsp. ferruginea B.-E.van Wyk LC
oroboides (P.J.Bergius) T.M.Salter subsp. oroboides LC

Viscum
anceps E.Mey. ex Sprague LC
capense L.f. LC
combreticola Engl. LC
continuum E.Mey. ex Sprague LC
crassulae Eckl. & Zeyh. LC
dielsianum Dinter ex Neusser LC
hoolei Wiens LC
menyharthii Engl. & Schinz LC
minimum Harv. LC
obovatum Harv. LC
obscurum Thunb. LC
oreophilum Wiens LC
pauciflorum L.f. LC
rotundifolium L.f. LC
schaeferi Engl. & K.Krause LC
subserratum Schltr. LC
triflorum DC. LC
tuberculatum A.Rich. LC
verrucosum Harv. LC

Vitellariopsis, 540
dispar (N.E.Br.) Aubrév. ..... Rare
marginata (N.E.Br.) Aubrév. LC

Vitex
ferruginea Schumach. & Thonn. LC
harveyana H.Pearson LC
obovata E.Mey. subsp. obovata LC
obovata E.Mey. subsp. wilmsii (Gürke) C.L.Bredenkamp & D.J.Botha LC
patula E.A.Bruce LC

pooara Corbishley....LC
rehmannii Gürke....LC
zeyheri Sond.....LC

Vittaria
isoetifolia Bory....LC

Vlokia, 444
ater S.A.Hammer....Critically Rare

Voacanga
thouarsii Roem. & Schult.....LC

W

Wachendorfia, 110
brachyandra W.F.Barker....VU
multiflora (Klatt) J.C.Manning & Goldblatt....LC
paniculata Burm.....LC
thyrsiflora Burm.....LC

Wahlenbergia, 296
abyssinica (Hochst. ex A.Rich.) Thulin subsp. abyssinica....LC
acaulis E.Mey.....LC
acicularis Brehmer....DDT
acuminata Brehmer....LC
adamsonii Lammers....Rare
adpressa (Thunb.) Sond.....LC
albens (Spreng. ex A.DC.) Lammers....LC
albicaulis (Sond.) Lammers....DDT
androsacea A.DC.....LC
annularis A.DC.....LC
annuliformis Brehmer....DDT
appressifolia Hilliard & B.L.Burtt....LC
asparagoides (Adamson) Lammers....VU
asperifolia Brehmer....DDT
axillaris (Sond.) Lammers....LC
banksiana A.DC.....LC
bolusiana Schltr. & Brehmer....DDT
bowkerae Sond.....DDT
brachiata (Adamson) Lammers....DDT
brachycarpa Schltr.....DDD
brachyphylla (Adamson) Lammers....Rare
brehmeri Lammers....DDD
brevisquamifolia Brehmer....DDT
buseriana Schltr. & Brehmer....Rare
calcarea (Adamson) Lammers....LC
campanuloides (Delile) Vatke....LC
capensis (L.) A.DC....LC
capillacea (L.f.) A.DC. subsp. capillacea....LC
capillata Brehmer....LC
capillifolia E.Mey. ex Brehmer....LC
cernua (Thunb.) A.DC....LC
cinerea (L.f.) Lammers....LC
clavata Brehmer....LC
clavatula Brehmer....DDT
compacta Brehmer....DDT
congestifolia Brehmer....LC
constricta Brehmer....DDD
cooperi Brehmer....LC
cordata (Adamson) Lammers....LC
costata A.DC.....LC
cuspidata Brehmer....LC
debilis H.Buek....DDT
decipiens A.DC....LC
dentata Brehmer....LC
denticulata (Burch.) A.DC. var. denticulata....LC
denticulata (Burch.) A.DC. var. transvaalensis (Adamson) W.G.Welman....LC
denudata A.DC.....LC
depressa J.M.Wood & M.S.Evans....LC
desmantha Lammers....LC
dichotoma A.DC.....DDT
dieterlenii (E.Phillips) Lammers....LC
dilatata Brehmer....LC
distincta Brehmer....DDT
divergens A.DC.....DDT
doleritica Hilliard & B.L.Burtt....Rare
dunantii A.DC....DDT
ecklonii H.Buek....LC
effusa (Adamson) Lammers....DDD
epacridea Sond.....LC
exilis A.DC....LC
fasciculata Brehmer....LC
filipes Brehmer....LC
fistulosa Brehmer....LC
floribunda Schltr. & Brehmer....DDT
fruticosa Brehmer....LC
galpiniae Schltr.....LC
glandulifera Brehmer....LC
gracilis E.Mey.....LC
grandiflora Brehmer....LC
hispidula (Thunb.) A.DC.....LC
huttonii (Sond.) Thulin....LC
ingrata A.DC....LC
juncea (H.Buek) Lammers....LC
kowiensis R.A.Dyer....Rare
krebsii Cham. subsp. krebsii....LC
lasiocarpa Schltr. & Brehmer....LC
laxiflora (Sond.) Lammers....LC
levynsiae Lammers....EN
lobata Brehmer....LC
lobulata Brehmer....LC
longifolia (A.DC.) Lammers var. corymbosa (Adamson) W.G.Welman....DDT
longifolia (A.DC.) Lammers var. longifolia....LC
longisepala Brehmer....DDT
longisquamifolia Brehmer....LC
lycopodioides Schltr. & Brehmer....LC
macrostachys (A.DC.) Lammers....LC
maculata Brehmer....DDT
madagascariensis A.DC.....LC
magaliesbergensis Lammers....LC
massonii A.DC.....DDT
meyeri A.DC.....LC
microphylla (Adamson) Lammers....VU
minuta Brehmer....Rare
mollis Brehmer....DDT
namaquana Sond.....DDD
nana Brehmer....LC
neorigida Lammers....LC
neostricta Lammers....Thr*
nodosa (H.Buek) Lammers....LC
obovata Brehmer....LC
oligantha Lammers....DDD
oligotricha Schltr. & Brehmer....DDT
oocarpa Sond.....DDT
orae Lammers....LC
oxyphylla A.DC.....LC
pallidiflora Hilliard & B.L.Burtt....LC
paniculata (Thunb.) A.DC.....LC
parvifolia (P.J.Bergius) Lammers....LC
patula A.DC.....LC
paucidentata Schinz....LC
pauciflora A.DC.....LC
pilosa H.Buek....DDD
pinifolia N.E.Br.....DDT
pinnata Compton....NT*
polyantha Lammers....VU
polyclada A.DC.....DDD
polytrichifolia Schltr. subsp. dracomontana Hilliard & B.L.Burtt....LC
polytrichifolia Schltr. subsp. polytrichifolia....LC
procumbens (Thunb.) A.DC.....LC
prostrata A.DC.....LC
psammophila Schltr.....LC
pseudoandrosacea Brehmer....LC
pseudoinhambanensis Brehmer....LC
pseudonudicaulis Brehmer....DDT
pulvillus-gigantis Hilliard & B.L.Burtt....LC
pyrophila Lammers....LC
ramifera Brehmer....DDT
ramulosa E.Mey.....DDT
rara Schltr. & Brehmer....DDT
rhytidosperma Thulin....LC
riversdalensis Lammers....CR
rivularis Diels....LC
robusta Sond....DDT
roelliflora Schltr. & Brehmer....DDT
rubens (H.Buek) Lammers var. brachyphylla (Adamson) W.G.Welman....DDT
rubens (H.Buek) Lammers var. rubens....LC
rubioides (Banks ex A.DC.) Lammers var. rubioides....LC
rubioides (Banks ex A.DC.) Lammers var. stokoei (Adamson) W.G.Welman....DDT
saxifragoides Brehmer....DDT
schistacea Brehmer....DDT
schlechteri Brehmer....DDT
scopella Brehmer....DDT
serpentina Brehmer....DDT
sessiliflora Brehmer....LC
sonderi Lammers....Thr*
sphaerica Brehmer....DDT
squamifolia Brehmer....LC
squarrosa Brehmer....LC
stellarioides Cham. & Schltdl.....LC
subfusiformis Brehmer....LC
subpilosa Brehmer....DDT
subrosulata Brehmer....LC
subtilis Brehmer....DDT
subulata (L'Hér.) Lammers var. congesta (Adamson) W.G.Welman....VU
subulata (L'Hér.) Lammers var. subulata....LC
subulata (L'Hér.) Lammers var. tenuifolia (Adamson) W.G.Welman....DDD
subumbellata Markgr.....LC
tenella (L.f.) Lammers var. palustris (Adamson) W.G.Welman....LC
tenella (L.f.) Lammers var. stokoei (Adamson) W.G.Welman....LC
tenella (L.f.) Lammers var. tenella....LC
tenerrima (H.Buek) Lammers var. montana (Adamson) W.G.Welman....LC
tenerrima (H.Buek) Lammers var. tenerrima....LC
tenuis A.DC.....Thr*
tetramera Thulin....Rare
thulinii Lammers....LC
thunbergiana (H.Buek) Lammers....LC
tomentosula Brehmer....DDT
tortilis Brehmer....LC
transvaalensis Brehmer....DDT
tumida Brehmer....DDD
uitenhagensis (H.Buek) Lammers var. debilis (Sond.) W.G.Welman....LC
uitenhagensis (H.Buek) Lammers var. filifolia (Adamson) W.G.Welman....Rare
uitenhagensis (H.Buek) Lammers var. uitenhagensis....LC
umbellata (Adamson) Lammers....VU
undulata (L.f.) A.DC.....LC
unidentata (L.f.) Lammers....LC
virgata Engl.....LC
virgulta Brehmer....LC
wyleyana Sond.....LC

Walleria, 215
gracilis (Salisb.) S.Carter....Rare
nutans J.Kirk....LC

Waltheria
indica L.....LC

Warburgia, 298
salutaris (G.Bertol.) Chiov.....EN

Warneckea
sousae (A.Fern. & R.Fern.) A.E.van Wyk....LC

Watsonia, 178
aletroides (Burm.f.) Ker Gawl.....NT
amabilis Goldblatt....CR
amatolae Goldblatt....Rare
angusta Ker Gawl.....LC
bachmannii L.Bolus....VU
bella N.E.Br. ex Goldblatt....LC
borbonica (Pourr.) Goldblatt subsp. ardernei (Sander) Goldblatt....VU
borbonica (Pourr.) Goldblatt subsp. borbonica....LC
canaliculata Goldblatt....EN
coccinea Herb. ex Baker....LC
confusa Goldblatt....LC
densiflora Baker....LC
distans L.Bolus....EN
dubia Eckl. ex Klatt....EN
elsiae Goldblatt....VU
emiliae L.Bolus....Rare
fergusoniae L.Bolus....VU
fourcadei J.W.Mathews & L.Bolus....LC
galpinii L.Bolus....LC
gladioloides Schltr.....LC
humilis Mill.....CR
hysterantha J.W.Mathews & L.Bolus....NT
inclinata Goldblatt....VU
knysnana L.Bolus....LC
laccata (Jacq.) Ker Gawl.....LC
latifolia N.E.Br. ex Oberm.....LC
lepida N.E.Br.....LC
marginata (L.f.) Ker Gawl.....LC
marlothii L.Bolus....LC
meriana (L.) Mill. var. bulbillifera (J.W.Mathews & L.Bolus) D.A.Cooke....LC
meriana (L.) Mill. var. meriana....LC
minima Goldblatt....VU
mtamvunae Goldblatt....VU

occulta L.Bolus....LC
paucifolia Goldblatt....LC
pillansii L.Bolus....LC
pondoensis Goldblatt....EN
pulchra N.E.Br. ex Goldblatt....LC
rogersii L.Bolus....NT
rourkei Goldblatt....Critically Rare
schlechteri L.Bolus....LC
spectabilis Schinz....LC
stenosiphon L.Bolus....LC
stokoei L.Bolus....LC
strictiflora Ker Gawl.....CR
strubeniae L.Bolus....LC
tabularis J.W.Mathews & L.Bolus....LC
transvaalensis Baker....LC
vanderspuyiae L.Bolus....LC
versfeldii J.W.Mathews & L.Bolus....NT
vittata J.W.Mathews & L.Bolus....DDT
watsonioides (Baker) Oberm....LC
wilmaniae J.W.Mathews & L.Bolus....LC
wilmsii L.Bolus....LC
wordsworthiana J.W.Mathews & L.Bolus....DDT
zeyheri L.Bolus....LC

Wellstedia
dinteri Pilg. var. dinteri....LC

Wiborgia, 287
fusca Thunb. subsp. fusca....LC
fusca Thunb. subsp. macrocarpa R.Dahlgren....EN
humilis (Thunb.) R.Dahlgren....EN
incurvata E.Mey....LC
leptoptera R.Dahlgren subsp. cedarbergensis R.Dahlgren....LC
leptoptera R.Dahlgren subsp. leptoptera....LC
monoptera E.Mey....LC
mucronata (L.f.) Druce....LC
obcordata (P.J.Bergius) Thunb....LC
sericea Thunb....LC
tenuifolia E.Mey....NT
tetraptera E.Mey....LC

Widdringtonia, 57
cedarbergensis J.A.Marsh....CR
nodiflora (L.) Powrie....LC
schwarzii (Marloth) Mast.....NT

Willdenowia, 212
affinis Pillans....EX
arescens Kunth....LC
bolusii Pillans....LC
glomerata (Thunb.) H.P.Linder....LC
humilis Mast....LC
incurvata (Thunb.) H.P.Linder....LC
purpurea Pillans....VU
rugosa Esterh.....VU
stokoei Pillans....LC
sulcata Mast....LC
teres Thunb....LC

Wimmerella, 405
arabidea (C.Presl) L.Serra, M.B.Crespo & Lammers....LC
bifida (Thunb.) L.Serra, M.B.Crespo & Lammers....DDD
frontidentata (E.Wimm.) L.Serra, M.B.Crespo & Lammers....Rare
hederacea (Sond.) L.Serra, M.B.Crespo & Lammers....DDT
hedyotidea (Schltr.) L.Serra, M.B.Crespo & Lammers....DDD
longitubus (E.Wimm.) L.Serra, M.B.Crespo & Lammers....DDD
mariae (E.Wimm.) L.Serra, M.B.Crespo & Lammers....LC
pygmaea (Thunb.) L.Serra, M.B.Crespo & Lammers....LC
secunda (L.f.) L.Serra, M.B.Crespo & Lammers....LC

Wissadula
rostrata (Schumach.) Hook.f....LC

Withania
somnifera (L.) Dunal....LC

Witsenia, 180
maura Thunb....Declining

Wolffia
arrhiza (L.) Horkel ex Wimm....LC
globosa (Roxb.) Hartog & Plas....LC

Wolffiella, 180
denticulata (Hegelm.) Hegelm.....VU
welwitschii (Hegelm.) Monod....LC

Woodia, 242
mucronata (Thunb.) N.E.Br....LC
singularis N.E.Br.....Rare
verruculosa Schltr.....VU

Woodsia
angolensis Schelpe....LC
montevidensis (Spreng.) Hieron....LC

Wooleya, 444
farinosa (L.Bolus) L.Bolus....VU

Wrightia
natalensis Stapf....LC

Wurmbea, 102
angustifolia B.Nord....LC
burttii B.Nord....LC
capensis Thunb.....VU
compacta B.Nord....VU
dolichantha B.Nord....LC
elatior B.Nord....LC
elongata B.Nord....LC
glassii (C.H.Wright) J.C.Manning & Vinn....LC
hiemalis B.Nord....VU
inusta (Baker) B.Nord.....VU
kraussii Baker....LC
marginata (Desr.) B.Nord....LC
minima B.Nord....LC
monopetala (L.f.) B.Nord....LC
punctata (L.) J.C.Manning & Vinn....LC
pusilla E.Phillips....LC
recurva B.Nord....LC
robusta B.Nord.....CR PE
spicata (Burm.f.) T.Durand & Schinz var. spicata....LC
spicata (Burm.f.) T.Durand & Schinz var. ustulata (B.Nord.) B.Nord....LC
stricta (Burm.f.) J.C.Manning & Vinn....LC
tenuis (Hook.f.) Baker subsp. australis B.Nord....LC
variabilis B.Nord....LC

X

Xanthocercis
zambesiaca (Baker) Dumaz-le-Grand....LC

Xenoscapa, 180
fistulosa (Spreng. ex Klatt) Goldblatt & J.C.Manning....LC
uliginosa Goldblatt & J.C.Manning....Critically Rare

Xenostegia
tridentata (L.) D.F.Austin & Staples subsp. angustifolia (Jacq.) Lejoly & Lisowski....LC

Xerocladia
viridiramis (Burch.) Taub....LC

Xeroderris
stuhlmannii (Taub.) Mendonça & E.C.Sousa....LC

Xerophyta, 215
equisetoides Baker var. equisetoides....LC
equisetoides Baker var. pauciramosa L.B.Sm. & Ayensu....LC
humilis (Baker) T.Durand & Schinz....LC
longicaulis Hilliard....Critically Rare
retinervis Baker....LC
schlechteri (Baker) N.L.Menezes....LC
villosa (Baker) L.B.Sm. & Ayensu....LC
viscosa Baker....LC

Ximenia
americana L. var. microphylla Welw. ex Oliv....LC
caffra Sond. var. caffra....LC
caffra Sond. var. natalensis Sond....LC

Xiphotheca, 388
canescens (Thunb.) A.L.Schutte & B.-E.van Wyk....VU
cordifolia A.L.Schutte & B.-E.van Wyk....VU
elliptica (DC.) A.L.Schutte & B.-E.van Wyk....NT
fruticosa (L.) A.L.Schutte & B.-E.van Wyk....VU
guthriei (L.Bolus) A.L.Schutte & B.-E.van Wyk....EN
lanceolata (E.Mey.) Eckl. & Zeyh.....EN
phylicoides A.L.Schutte & B.-E.van Wyk....CR
reflexa (Thunb.) A.L.Schutte & B.-E.van Wyk....EN
sp. nov. (*Helme 2086* NBG).....CR
tecta (Thunb.) A.L.Schutte & B.-E.van Wyk....LC

Xylia
torreana Brenan....LC

Xylocarpus
granatum J.König....LC

Xylopia
parviflora (A.Rich.) Benth....LC

Xylotheca
kraussiana Hochst....LC

Xymalos
monospora (Harv.) Baill....LC

Xyris
anceps Lam. var. anceps....LC
capensis Thunb....LC
congensis Büttner....LC
gerrardii N.E.Br....LC
natalensis L.A.Nilsson....LC
obscura N.E.Br....LC
rehmannii L.A.Nilsson....LC
rubella Malme....LC

Xysmalobium, 242
acerateoides (Schltr.) N.E.Br....LC
asperum N.E.Br....LC
baurii N.E.Br.....EX
brownianum S.Moore....LC
carinatum (Schltr.) N.E.Br....LC
confusum Scott-Elliot....LC
fluviale Bruyns.....Rare
gerrardii Scott-Elliot....LC
gomphocarpoides (E.Mey.) D.Dietr. var. gomphocarpoides....LC
gomphocarpoides (E.Mey.) D.Dietr. var. parvilobum Bruyns....LC
involucratum (E.Mey.) Decne....LC
orbiculare (E.Mey.) D.Dietr....LC
parviflorum Harv. ex Scott-Elliot....LC
pearsonii L.Bolus....DDD
prunelloides Turcz....LC
stockenstromense Scott-Elliot....LC
tysonianum (Schltr.) N.E.Br....LC
undulatum (L.) Aiton f. var. ensifolium Burch. ex Scott-Elliot....LC
undulatum (L.) Aiton f. var. undulatum....LC
winterbergense N.E.Br.....CR PE
woodii N.E.Br.....Rare
zeyheri N.E.Br....LC

Y

Ypsilopus
erectus (P.J.Cribb) P.J.Cribb & J.L.Stewart....LC

Z

Zaleya
pentandra (L.) C.Jeffrey....LC

Zaluzianskya, 554
acrobareia Hilliard.....Rare
acutiloba Hilliard....LC
affinis Hilliard....LC
angustifolia Hilliard & B.L.Burtt....LC
bella Hilliard....LC
benthamiana Walp....LC
capensis (L.) Walp....LC
chrysops Hilliard & B.L.Burtt....LC
cohabitans Hilliard....LC
collina Hiern....LC
crocea Schltr....LC
diandra Diels....LC
distans Hiern....LC
divaricata (Thunb.) Walp....LC
elongata Hilliard & B.L.Burtt....LC
glandulosa Hilliard.....Rare
glareosa Hilliard & B.L.Burtt....LC
gracilis Hilliard....LC
inflata Diels.....Rare
isanthera Hilliard.....Rare
kareebergensis Hilliard....DDD
karrooica Hilliard....LC
katharinae Hiern....LC
lanigera Hilliard....DDD
maritima (L.f.) Walp....LC
marlothii Hilliard....DDD
microsiphon (Kuntze) K.Schum....LC
minima (Hiern) Hilliard....LC
mirabilis Hilliard.....Rare
muirii Hilliard & B.L.Burtt....LC
natalensis Bernh....LC
ovata (Benth.) Walp....LC
pachyrrhiza Hilliard & B.L.Burtt....LC
parviflora Hilliard.....NT
peduncularis (Benth.) Walp....LC
pilosa Hilliard & B.L.Burtt....DDT
pilosissima Hilliard....LC

pulvinata Killick LC
pumila (Benth.) Walp LC
pusilla (Benth.) Walp. LC
rubrostellata Hilliard & B.L.Burtt LC
sanorum Hilliard LC
schmitziae Hilliard & B.L.Burtt LC
spathacea (Benth.) Walp LC
sutherlandica Hilliard ..... DDD
synaptica Hilliard LC
turritella Hilliard & B.L.Burtt LC
vallispiscis Hilliard LC
venusta Hilliard LC
villosa F.W.Schmidt LC
violacea Schltr. LC

Zamioculcas
zamiifolia (Lodd.) Engl. LC

Zannichellia
palustris L. LC

Zantedeschia, 78
aethiopica (L.) Spreng. LC
albomaculata (Hook.) Baill. subsp. albomaculata LC
albomaculata (Hook.) Baill. subsp. macrocarpa (Engl.) Letty LC
elliottiana (W.Watson) Engl. ..... DDT
jucunda Letty ..... VU
odorata P.L.Perry ..... Rare
pentlandii (R.Whyte ex W.Watson) Wittm. ..... VU
rehmannii Engl. LC
valida (Letty) Y.Singh ..... Rare

Zanthoxylum
capense (Thunb.) Harv. LC
davyi (I.Verd.) P.G.Waterman LC
humile (E.A.Bruce) P.G.Waterman LC
leprieurii Guill. & Perr. LC
thorncroftii (I.Verd.) P.G.Waterman LC

Zehneria
marlothii (Cogn.) R. & A.Fern. LC
parvifolia (Cogn.) J.H.Ross LC
scabra (L.f.) Sond. subsp. scabra LC

Zeuktophyllum, 444
calycinum (L.Bolus) H.E.K.Hartmann LC
suppositum (L.Bolus) N.E.Br. ..... EN

Zeuxine, 200
africana Rchb.f. ..... EN*

Ziziphus
mucronata Willd. subsp. mucronata LC
rivularis Codd LC
zeyheriana Sond. LC

Zornia
capensis Pers. subsp. capensis LC
glochidiata Rchb. ex DC. LC
linearis E.Mey. LC
milneana Mohlenbr. LC

Zostera
capensis Setch. LC

Zoutpansbergia
caerulea Hutch. LC

Zygophyllum, 559
botulifolium Van Zyl LC
chrysopteron Retief LC
clavatum Schltr. & Diels LC
cordifolium L.f. LC
cuneifolium Eckl. & Zeyh. LC
debile Cham. & Schltdl. LC
decumbens Delile var. decumbens LC
dichotomum Cham. & Schltdl. LC
divaricatum Eckl. & Zeyh. ..... EN
dregeanum Sond. LC
flexuosum Eckl. & Zeyh. LC
foetidum Schrad. & J.C.Wendl. LC
fulvum L. LC
fuscatum Van Zyl ..... VU
incrustatum E.Mey. ex Sond. LC
leptopetalum E.Mey. ex Sond. LC
leucocladum Diels LC
lichtensteinianum Cham. & Schltdl. LC
longicapsulare Schinz LC
macrocarpon Retief LC
maculatum Aiton LC
maritimum Eckl. & Zeyh. LC
maximiliani Schltr. LC
microcarpum Licht. ex Cham. & Schltdl. LC
microphyllum L.f. LC
morgsana L. LC
prismatocarpum E.Mey. ex Sond. LC
pterocaule Van Zyl LC
pubescens Schinz LC
pygmaeum Eckl. & Zeyh. LC
retrofractum Thunb. LC
rigidum Schinz LC
rogersii Compton LC
sessilifolium L. LC
simplex L. LC
sonderi H.Eichler LC
spinosum L. LC
tenue P.E.Glover LC
teretifolium Schltr. LC

Zyrphelis, 285
burchellii (DC.) Kuntze ..... DDT
decumbens (Schltr.) G.L.Nesom ..... Rare
ecklonis (DC.) Kuntze LC
foliosa (Harv.) Kuntze LC
lasiocarpa (DC.) Kuntze LC
microcephala (Less.) Nees LC
montana (Schltr.) G.L.Nesom ..... Rare
perezioides (Less.) G.L.Nesom LC
sp. nov. (*Barker 10860* NBG) ..... VU
sp. nov. (*Esterhuysen 33669* NBG) ..... Rare
taxifolia (L.) Nees ..... Rare

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Definitions

Area of Occupancy (AOO)
Area of Occupancy is the area within a taxon's Extent of Occurrence (EOO) that is occupied by it. The measure reflects the fact that a taxon will not usually occur throughout the area of its extent of occurrence, which may contain unsuitable or unoccupied habitats.

Continuing Decline
A continuing decline is a recent, current or projected future decline (which may be smooth, irregular or sporadic) that is liable to continue unless remedial measures are taken. Fluctuations will not normally count as continuing declines, but an observed decline should not be considered a fluctuation unless there is evidence for it.

Extent of Occurrence (EOO)
Extent of Occurrence is defined as the area contained within the shortest continuous boundary that can be drawn to encompass all the known, inferred or projected sites of present occurrence of a taxon. This measure may exclude discontinuities or large disjunctions within the overall distributions of taxa, e.g. large areas of obviously unsuitable habitat. For this publication, Extent of Occurrence was calculated within a Geographic Information System (GIS) using a minimum convex polygon (the smallest polygon that contains all sites of occurrence but where no internal angle exceeds 180°).

Extreme Fluctuations
Extreme fluctuations occur when population size or distribution area varies widely, rapidly and frequently, typically with a variation greater than one order of magnitude. Extreme fluctuations are unusual in plant populations, and have been applied in this assessment only to reseeding species in the family Proteaceae, based on observations of large population fluctuations following irregular fires.

Generation Length
Generation length is the average age of parents of the current cohort (i.e. newborn individuals in the population). Generation length reflects the turnover rate of breeding individuals in a population. It is greater than the age at first flowering and less than the age of oldest flowering individuals, except in taxa that only flower once. When generation length varies under threat, the more natural, i.e. predisturbance, generation length should be used in assessments.

Location
The term location refers to a geographically or ecologically distinct area in which a single threatening event can rapidly affect all individuals of the taxon present. The size of the location depends on the size of the impact of the threatening event and may include part of one or many subpopulations. Where a taxon is affected by more than one threatening process, location should be defined by considering the most serious threat.

Mature Individuals
The number of mature individuals is the number of individuals known, estimated or inferred to be capable of reproduction. When estimating this quantity, the following points should be borne in mind:

- Mature individuals that will never produce new recruits should not be counted, e.g. where densities are too low for successful pollination, or where specialist pollinators have become locally extinct in small habitat fragments.
- Where populations have biased sex ratios in mature individuals, it is appropriate to use lower estimates of number of mature individuals to take this into account.
- Where the population size fluctuates, an estimate lower than the mean population size should be used.
- Reproducing units within a clone should be counted as separate mature individuals.
- In the case of taxa that naturally lose all or a subset of their mature (breeding) individuals at some point in their life cycle, e.g. some geophytes that only flower after a fire and remain dormant for long periods, the estimate should be made when mature individuals are available for breeding.
- Reintroduced individuals must have produced viable offspring before they can be counted as mature individuals.

Myrmecochorous
Referring to seed dispersal by ants. Some species that employ this mode of dispersal are vulnerable to alien ant invasion, particularly in fire-prone vegetation. Native ant species bury seeds underground where they are protected from fire, but alien species do not. In areas where alien ants have out-competed native ant species, reseeding plants that rely on soil-stored seed banks for postfire regeneration, decline because seeds remaining above ground are damaged by fire and fail to germinate.

Population and Population Size
The term 'population' is used in a specific sense in the IUCN Red List Criteria that is different from its common biological use. Population is here defined as the global total number of mature individuals of a taxon.

Quantitative Analysis
A quantitative analysis is defined as any form of analysis that estimates the probability of extinction of a taxon based on known life history, habitat requirements, threats and any specified management options. Population viability analysis (PVA) is one such technique.

Reduction
A reduction is a decline in the number of mature individuals of at least the amount (%) stated under the applicable criterion over the particular time period specified, although the decline does not have to be continuing. A reduction should not be interpreted as part of a fluctuation unless there is good evidence for it. The downward phase of a fluctuation will not automatically count as a reduction.

Reseeder
In this publication, the term reseeder is used specifically in the context of fire-prone vegetation types, where all mature individuals are killed by fire and the population relies on either soil- or canopy-stored seed reserves to regenerate after fire. Such plants are particularly vulnerable to increasingly shorter fire cycles, because not enough time is allowed between fires for seed reserves to accumulate, and populations decline as a result. In slow-maturing reseeders, a fire before plants have reached reproductive maturity can lead to local extinction.

Resprouter
Resprouters are plants that survive fire by resprouting from underground woody stems (such as suffrutices) or rootstocks that are not killed by fire, and are generally assumed to be very long-lived, although there are very few data on exactly how long such plants live. Expert opinion varies between 50 and 100 years, to perhaps 1 000 years. They generally reproduce from seed very seldom, and the population is therefore extremely vulnerable to habitat loss, even over long periods of time. These plants may seem common, because very old individuals tend to persist in small habitat fragments. Many, however, have declined significantly over the past 100 years in habitats that are now highly transformed, such as renosterveld and coastal grassland, and have been listed under Criterion A.

Severely Fragmented
The phrase 'severely fragmented' refers to a situation where the extinction risk of a taxon is increased as a result of most of its mature individuals occurring in small and relatively isolated subpopulations. These small subpopulations can easily go extinct, with a reduced probability of recolonisation. Widely dispersed taxa are considered less vulnerable to isolation through habitat fragmentation. Taxa that produce only small numbers of seeds, very large seeds or do not have efficient long-distance dispersal mechanisms are more easily fragmented.

Subpopulations
Subpopulations are geographically or otherwise distinct groups of individuals in the population between which there is little or no demographic or genetic exchange.

Summary of criteria for the IUCN 3.1 categories of threat

To qualify for a category of threat—Critically Endangered (CR), Endangered (EN) or Vulnerable (VU)—under one of the five main criteria (A–E), available data on a taxon have to meet all the requirements for at least one of the Level 1 (numerical) subcriteria for A, B and C. See Appendix I for a detailed explanation of the IUCN criteria.

Main criteria		Subcriteria			Quantitative thresholds		
		Level 1	Level 2	Level 3	CR	EN	VU
A	Rapid population reduction in relation to the life history of the taxon	**1**	% population reduction observed, estimated, inferred or suspected over the past 10 years or 3 generations where the causes of the reduction are clearly reversible AND understood AND have ceased		> 90%	> 70%	> 50%
		2	% population reduction observed, estimated, inferred or suspected over the past 10 years or 3 generations where the reduction or its causes have not ceased OR are not understood OR not reversible		> 80%	> 50%	> 30%
		3	% population reduction projected or suspected to be met within the next 10 years or 3 generations up to a maximum of 100 years into the future		> 80%	> 50%	> 30%
		4	% population reduction observed, estimated, inferred, projected or suspected over any 10-year or 3-generation period, which includes both the past and the future and where the reduction or its causes are not reversible OR are not understood OR have not ceased.		> 80%	> 50%	> 30%
		AND specifying under A1, A2, A3 and/or A4 that % population reduction is based on at least one of the following (a–e):					
			a	Direct observation (not applicable to A3)			
			b	An index of abundance appropriate to the taxon			
			c	A decline in area of occupancy, extent of occurrence and/or quality of habitat			
			d	Actual or potential levels of exploitation			
			e	The effects of introduced taxa, hybridisation, pathogens, pollutants, competitors or parasites			
B	Small geographic range and decline, population fluctuation or fragmentation	**1**	Extent of occurrence (EOO)		< 100 km²	<5 000 km²	<20 000 km²
		2	Area of occupancy (AOO)		< 10 km²	<500 km²	<2 000 km²
		AND specifying under B1 and/or B2 at least two of the following three (a–c):					
			a	Severely fragmented OR number of locations	1	≤ 5	≤ 10
			b	Continuing decline in at least one of the following (i–v):			
				i Extent of occurrence			
				ii Area of occupancy			
				iii Area, extent and/or quality of habitat			
				iv Number of locations or subpopulations			
				v Number of mature individuals			
			c	Extreme fluctuations in at least one of the following (i–iv):			
				i Extent of occurrence			
				ii Area of occupancy			
				iii Number of locations or subpopulations			
				iv Number of mature individuals			
C	Small population size and decline	Number of mature individuals in global population			< 250	< 2 500	< 10 000
		AND at least one of C1 or C2:					
		1	Estimated continuing decline in number of mature individuals		25%	20%	10%
			over a time period of (up to a maximum of 100 years):		3 years or 1 generation	5 years or 2 generations	10 years or 3 generations
		2	Continuing decline in number of mature individuals AND at least one of the following two (a OR b):				
			a	Subpopulation structure in the form of either i OR ii:			
				i Number of mature individuals in largest subpopulation	< 50	< 250	< 1 000
				ii % of mature individuals in one subpopulation	90–100%	95–100%	100%
			b	Extreme fluctuations in the number of mature individuals			
D	Very small population size or very restricted range	Number of mature individuals in global population			< 50	< 250	**1** < 1 000
		Restricted area of occupancy or number of locations:					
				Area of occupancy OR number of locations			**2** 20 km² ≤ 5
					AND plausible potential threats (only under VU D2)		
E	Quantitative analysis	Probability of extinction in the wild at least			50% in 10 years or 3 generations	20% in 20 years or 5 generations	10% in 100 years