Beeplants

of South Africa

Sources of nectar, pollen, honeydew and propolis for honeybees



M.F. Johannsmeier

STRELITZIA 37



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SANBI
Biodiversity for Life
South African National Biodiversity Institute

Pretoria
2016

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 partly 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.

Beeplants of South Africa

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This publication contributes to the outcomes of the Global Pollination Project and the Honeybee Forage Project, both implemented by the South African National Biodiversity Institute (SANBI). The Global Pollination Project (Conservation and Management of Pollinators for Sustainable Agriculture through an Ecosystem Approach) was implemented in seven countries – Brazil, Ghana, India, Kenya, Nepal, Pakistan and South Africa. The project was executed by the Food and Agriculture Organization of the United Nations, with financing from the Global Environment Facility (GEF) and implementation support from the United Nations Environment Programme (UNEP). The Honeybee Forage Project was a national project in South Africa funded by the Working for Water Programme, Environment Programmes, and the Department of Environmental Affairs.



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Foreword

It is the role of the South African National Biodiversity Institute (SANBI), charged by national government through the National Environmental Management: Biodiversity Act of 2004, to monitor the state of our biodiversity and the services it delivers, and provide policy advice based on good science. As such, SANBI was pleased to become the implementing agent of the GEF/UNEP/FAO Global Pollination Project, in which seven countries took part. The project aimed to provide sound policy and practical advice about sustaining the pollination services to our agricultural sector. As the project progressed in South Africa, the role of the managed honeybee as a pollinator became ever clearer. While an important part of our indigenous biodiversity and ecosystem functioning, the two subspecies of the honeybee found in South Africa are also absolutely vital to our agricultural industry. Without honeybees, our world would be a very different place: fewer food choices and more expensive agricultural production. Despite this dependence, and the shocking statistics of colony losses in the northern hemisphere, very little science and policy exists about South Africa's native honeybees. SANBI therefore decided to undertake the urgent research of what ecological infrastructure underpins the managed honeybee industry in South Africa and therefore ultimately supports a sustainable pollination service to agriculture.



'Without honeybees, our world would be a very different place: fewer food choices and more expensive agricultural production…
… but what ecological infrastructure underpins the managed honeybee industry in South Africa?'

While the pollinator-dependent crop grower is reliant on the beekeeper for the pollination service his honeybees provide to the crops during the short flowering season, the beekeepers in turn are reliant on numerous and variable forage sources and habitats that can sustain their honeybee colonies throughout the year. The Honeybee Forage Project, funded by the Department of Environmental Affairs through SANBI's Invasive Species Programme, created lists of the plant species important to beekeepers in various regions in South Africa and studied the relative importance of various indigenous and exotic plant species as vital forage resources at various times of the year. The project also linked directly to Mr Martin Johannsmeier as he completed this extensive work on the Beeplants of South Africa – the first comprehensive review of plants utilised by honeybees across the country.

As a result of the SANBI projects and Mr Johannsmeier's years of research, we have a broad understanding of honeybee forage needs and resources in South Africa. This understanding can now be used to develop management programmes for existing forage resources and to develop planting programmes that might result in new forage resources becoming available to beekeepers. This book will assist beekeepers, farmers and gardeners with more information about plants they can consider utilising, conserving or growing, and will assist practitioners to consider the bee-value of plant resources as part of environmental impact assessments or rehabilitation projects. We also hope that this book is valuable to many other audiences into the future as we learn to protect and grow our honeybee forage resources sustainably.

Dr Tanya Abrahamse
Chief Executive Officer
South African National Biodiversity Institute

Introduction

South Africa is endowed with a diversity of fauna and flora that is unparalleled in other countries of the world. This is brought about by the variety of vegetational regions – a variety that is mainly the result of different climatic factors and soil types. Rainfall, for example, is a meagre 50 mm per annum in parts of the far west, but increases to more than 800 mm per annum on the Highveld. Large temperature fluctuations, both daily and seasonal, characterise the drier regions in particular, where differences of 25°C between day and night are not unusual, and with frosts occurring up to five months a year. The vegetational variety also includes winter and summer rainfall regions, or areas with deserts, subtropical climate and highland snow. Plants have adapted well to all the challenges imposed by weather, soil and herbivores.

Honeybees are present naturally in all these different habitats, and are exposed to the same weather extremes as the plants. Changeable weather contributes to dearth periods for bee colonies. Such times of food scarcity occur regularly or irregularly in all regions of the country and in any of the seasons. Honeybees can survive by cooling down or warming up their brood nests, by storing food reserves, or by absconding and migrating to better pastures. Because they are generalist feeders, exploiting whatever food source is available, they contribute to the pollination of an innumerable number of plant species. Consequently they play an unseen but pivotal role in the sustainable functioning of ecosystems.

It is this indigenous wild bee that beekeepers tend and keep, whether for commercial honey production, for pollination services, as a profitable part-time occupation, or as a hobby. For all these beekeeping operations, the bees need pollen and nectar to maintain their colonies and to store surplus honey for themselves and for the beekeeper to harvest.

Despite the constraints imposed by irregular or low rainfall, or the patchy rather than extensive occurrence of beeplants, small-scale, non-migratory beekeeping with five to ten colonies per site is viable with native flora in all vegetational regions. More than one honey flow per season is also possible.

The present book is an attempt to provide beekeepers with information, based on existing knowledge, of South African beeplants, whether indigenous or exotic, whether grown in orchards or plantations, or whether crop plants, ornamentals or weeds. While much is known about some beeplants, such as certain crop plants, very little is known about others – sometimes we only know that their flowers are visited by honeybees. Where available, information was provided about pollination requirements, flowering time, how much nectar and pollen bees obtain, honey characteristics and weather factors that affect nectar production.

Such information may also prove useful when deciding what to plant for utility purposes, be it for shade, forage, shelter belts, timber, fire wood, soil binders, ground covers and ornamentals. If possible, the multi-purpose use of plants should be the goal when planting. It is not worthwhile to plant for honey production only. An exception would be eucalypts, particularly for small apiaries.

Colour photographs of a selection of beeplants, as well as some representatives of important honey plant groups, for example aloes, ericas and acacias, will aid as a first step in identification. An exception has been made with the eucalypts, for which drawings of flower buds and fruit have been provided to facilitate identification. At the end of the book, under the heading 'General Beeplant Literature and Aids to Identification', beekeepers will find a list of publications that they can consult for further identification from regional flower guides, tree books and horticultural manuals.

After it was partly revised, the 2005 edition of *Beeplants of the South-Western Cape* was incorporated in the present book. New beeplants from the winter rainfall region were included as well.

Inquiries have been received as to which plants can be planted where in South Africa. The book by Poynton (1984) still remains a valuable source of information. The 609 plant species appear in tables with, inter alia, the following subject matters: description, flowering season, hardiness to drought and frost, and uses. The book contains a coloured map with silvicultural zones to indicate in which climatic regions a particular plant species can be expected to succeed. Although the publication by Leech (2012) refers to Australian conditions, it is a stimulating read on improving bee forage in home gardens, cities, plantations and in the wild.

On a more personal note: because I am not a trained botanist, there is the distinct possibility that certain terminology and descriptions may not be completely correct. I take full blame for any inaccuracies that may come to light. I never had the benefit of studying bee-

plants full-time. Other bee research and beekeeping extension had priority. Therefore this book remains incomplete. It merely represents a stage on a long but pleasurable road of examining, discovering and enjoying a wondrous creation. For any person with a love for the outdoors, there remain life-long opportunities to study plant and bee interactions – much waits to be discovered.

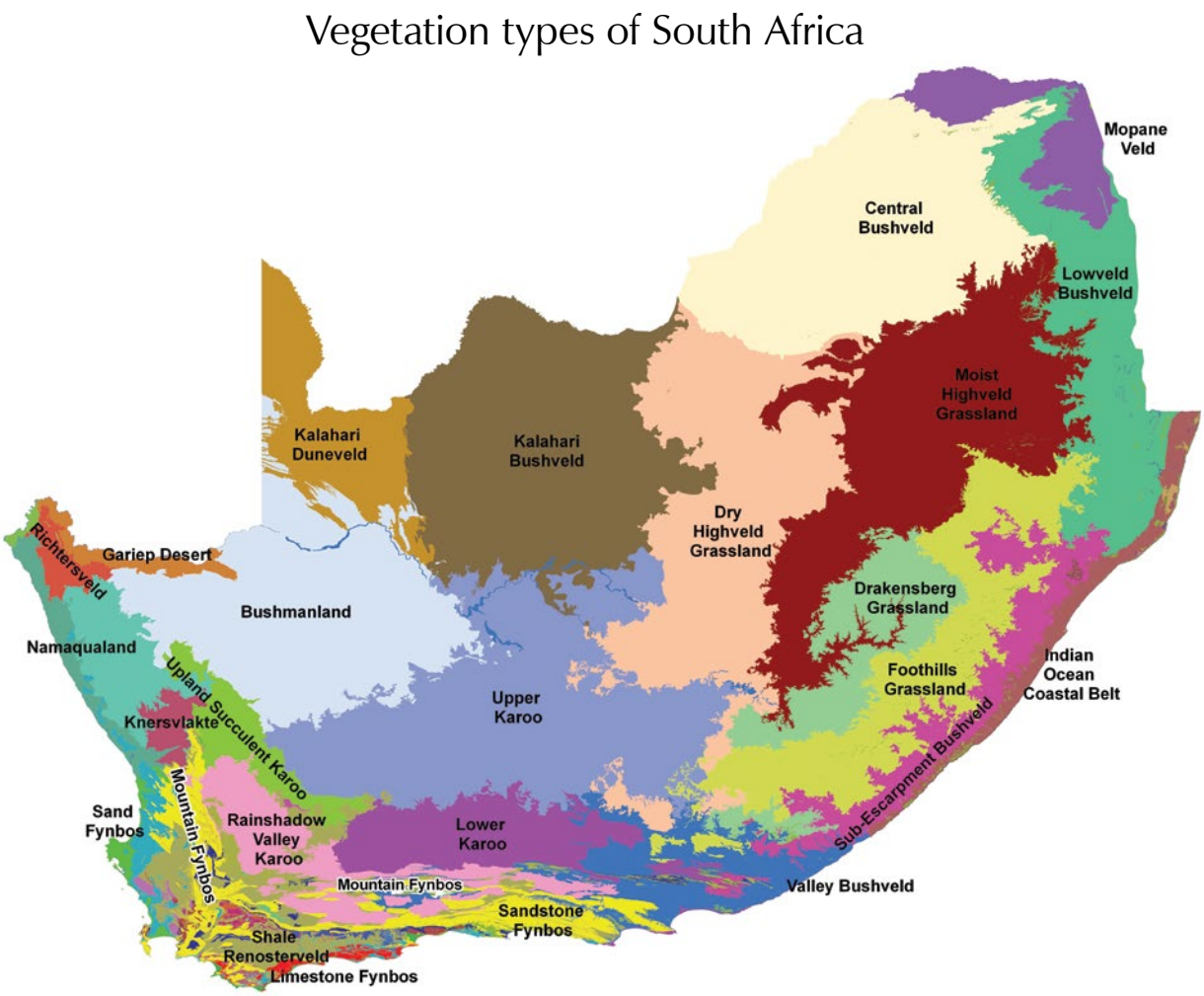


Figure 1: Simplified map of the main vegetation types of South Africa.

The map (Figure 1) shows the main veld types or vegetational regions of South Africa to which reference is made in the text. The following is a brief discussion of the different regions and their principal beeplants, both indigenous and exotic.

Namaqualand, the **Knersvlakte** and the **Richtersveld** represent barren country for the greater part of the year, but come to life in spring following good winter rains. Annuals, particularly daisy types, as well as bulbous plants and mesembs (vygies) provide the main bee food. Beekeeping is restricted to a number of small apiaries.

The semi-arid, drought-prone region that encompasses the **Bushmanland** and **Karoo** (including Upper and Lower Karoo, Rainshadow Valley Karoo, Upland Succulent Karoo, and Gariep Desert) has winter rainfall in the west, which changes to summer rain in the east. The irregular honey flows are very dependent on strong showers. Honey-producing plants are *asbos*, *aarbossies*, honey thorns and mesembs, as well as some eucalypts planted on farms and in towns. There is a demand for bee colonies that are used in the pollination of vegetables and lucerne for seed production.

The **Fynbos** region (including Sand Fynbos, Mountain Fynbos, Shale Renosterveld, Sandstone Fynbos and Limestone Fynbos) with its winter rainfall has ca. 9 000 plant species, of which the greater majority are flowering plants. Fynbos honey is derived from many differ-

ent plant families, particularly the ericas and proteas. Commercial beekeeping is also dependent on eucalypt honey flows and paid pollination of deciduous fruit.

Mountain Forests are not shown on the vegetation map because of their very restricted occurrence in South Africa. The largest tract of this forest type is found in the George–Knysna region, from where it extends in areas of variable size northwards to the Soutpansberg. In the Southern Cape honey is harvested on a limited scale from ironwood, *witels* and the afforested karri gum.

Valley Bushveld consists largely of woody and succulent shrubs. The extent and timing of honey flows is primarily dependent on rainfall. The following sources of honey have been recorded: bitter aloe, cat thorn, eucalypts, *ganna* mesemb, guarri, sneezewood, *spekboom* and tree euphorbia. Beekeeping operations range from hobbyist activities to commercial enterprises.

The vegetation of the **Indian Ocean Coastal Belt** is typically a dune forest, occurring from about Port Elizabeth to Zululand. It has a minor honey production capacity from honey plants such as Brazilian pepper tree, coastal silver oak, dune aloe, waterberry and white mangrove. Plantations of sugar cane and eucalypts provide most of the honey.

Foothills Grassland is predominantly undulating grassland interspersed with wooded mountain slopes and valleys, which may accommodate some of the following honey plants: cat thorn, common hook thorn, guarri species, highveld protea, mountain aloe, paperbark thorn, sagewoods and waterberry. These can sustain small apiaries only. The Midlands eucalypt plantations are the main suppliers of honey.

Mixed Bushveld. Under this heading three veld types have been combined, including the relatively dry Lowveld Bushveld, and the moister Mountain or Sub-Escarpment Bushveld of the lower eastern slopes of the Drakensberg. The third type, the actual Mixed Bushveld or Central Bushveld covers major parts of Limpopo and North West provinces. After Fynbos, the bushveld offers the greatest variety of beeplants. Honey plants include several acacia, aloe and bushwillow species, *boekenhout*, guarri shrubs, marula, puzzle bush, star apples and wild seringa. Besides the davyana aloe, few commercial beekeepers make use of these indigenous plants. Subtropical crop plants that yield honey are avocado, macadamia, litchi and orange.

Highveld Grassland (Moist and Dry) in its natural state would provide the least honey of the different veld types. Wild honeybees are present nevertheless. Honey sources are different eucalypt species, sunflower, restricted plantings of kidney bean, and suburban vegetation of towns and cities. The establishment of new apple, berry and cherry orchards will increase the demand for pollinating honeybees in future.

Mopane Veld is dominated by mopane shrubbery and trees. It covers very extensive areas of neighbouring countries, namely Mozambique, Zimbabwe, Botswana and Namibia. It may exist in almost pure stands, or may be associated with some of the following beeplants: baobab, black thorn, bushwillows, marula, raisin bushes, shepherd's tree, sickle bush and umbrella thorn. Flowering in mopane plants is erratic and may be absent for several years. No beekeepers are known in this veld type.

Kalahari Bushveld and Duneveld is typically a thorn and grass veld on deep sand. Honey plants include trees, shrubs and herbs, such as black thorn, buffalo thorn, camel thorn, camphor bush, candle thorn, devil's thorn, false olive, honey thorn, raisin bush, rhigozum, shepherd's tree and wild sunflower. Small apiaries are scattered across this region. A number of beekeeping development projects were initiated in recent years.

Beeplant tables

The greater part of the book consists of tables in which diverse data of beeplants are recorded in four columns with remarks below them. The column headings and the type of data they comprise are discussed below.

Botanical name

Scientific names of plants and animals consist of two elements, the genus or generic name, which starts with a capital letter, and the species or specific name in small letters. In scientific literature such names are either underlined or printed in italics in general text, for example *Apis mellifera*, the honeybee, or simply shown in bold print, **Apis mellifera**, in a taxonomic treatment or list of taxa. If there is a need to distinguish natural varieties, races or subspecies, a third element is added, the subspecies name as in *Apis mellifera capensis*, the Cape honeybee.

The abbreviation in the singular for species, namely **sp**., is used after a generic name if the specific identity is not known. *Crataegus* **spp**. on the other hand, would mean more than one species of hawthorn shrubs and trees considered as a group, i.e. part of that genus.

When agronomists and horticulturalists breed or select particular varieties of crop plants and ornamentals, these are designated **cultivars**, a word derived from 'cultivated varieties' and abbreviated **cvs**. Cultivar names are written with capital letters and within single quotes, for example *Malus sylvestris* 'Golden Delicious', a well-known apple cultivar.

In the 'Botanical Name' column the genera are arranged alphabetically, with the species in alphabetical sequence under each genus. The currently accepted names are in bold and old names and synonyms are in italics. The names were checked against the PRECIS and BRAHMS databases of SANBI as well as against international databases such as The Plant List (www.theplantlist.org). A name in brackets and italics, and preceded by an equal sign (=) is a synonym of the one above it. In a few cases the older names were deliberately retained, with recent new names as alternative names below them, for example *Cassine*, *Vernonia* and *Zygophyllum*. This was done because these are the genera under which beekeepers will find the different species in the regional identification guides and the recommended literature. Names that are preceded by an asterisk (*) are exotics, i.e. not indigenous to South Africa. A species name preceded by a multiplication sign (×) indicates that the plant is a hybrid, for example the strawberry *Fragaria* × *ananassa*. Hybrids are predominantly bred by man, but sometimes occur in nature.

The plant family names are in brackets and capital letters to make it easier to distinguish them from genus and species names in the same column. Changes to the nomenclature of plants have resulted in all plant family names ending in '-aceae'. As a result three well-known names in particular have changed: Compositae is now Asteraceae, the daisy and sunflower family, and Leguminosae became Fabaceae, the legume family. This large and diverse family has been split by some botanists into the Papilionaceae (lucerne, coral tree), the Mimosaceae (thorn trees, wattles) and Caesalpiniaceae (bauhinia, *boerboon*, carob). The lily family Liliaceae is now separated into several smaller families, notably Agapanthaceae (agapanthus), Alliaceae (onion), Asparagaceae (common and wild asparagus), Asphodelaceae (aloe, red-hot-poker, bulbine), Hyacinthaceae (chinkerinchee, albuca, scilla) and Liliaceae (true lilies). True lilies do not occur naturally in southern Africa. The mesembs or vygies are placed in either the Mesembryanthemaceae or Aizoaceae by different authors. Under some species names more than one family name is given. This indicates alternative family placements in different classification systems used by botanists. SANBI uses the APG II classification (Angiosperm Phylogeny Group II 2003), represented by the first family name under a species or genus name. The book by Pienaar & Smith (2011) provides an illustrated key to plant families, which is useful to the layman.

Common name

Most plants cannot be readily identified by common names, because the same name is often used for different species, or conversely, one species may be known under different common names. Additionally, many plants do not have common names. In most cases in this book, English and Afrikaans names are given, the latter in italics. It has been beyond the scope of this book, time-wise and knowledge-wise, to include all the African language names. Some common names are included that are specifically known to and used by beekeepers locally and internationally. An index of common and scientific plant names is supplied. The index also has entries for 'Extrafloral nectar', 'Honeydew' and 'Propolis'.

Beeplant value

The information in this column refers to the nectar (**N**) and/or pollen (**P**) values of a beeplant, which are ranked from 0 to 4. The numbers denote the following: **0** = no nectar/pollen is available to, or collected by, honeybees; **1** = poor or minor source; **2** = minor to medium source; **3** = medium to good source; **4** = very good or major source. A **P0–3** rating, for example, implies that divergent pollen values were allocated by different observers, or intensity of pollen collection varied, depending on other available pollen sources, or whether there was a concomitant nectar flow, or that different weather conditions prevailed, or that pollen production differed between cultivars of the same crop plant. The highest value, in this case 3, denotes the maximum value for a particular species under ideal conditions. A **P1?** notation means that pollen is collected by honeybees, but that the pollen ranking is questionable, though probably low. **N?P** would indicate that it is uncertain whether honeybees obtain nectar, but that the plant is a pollen source of unknown value. **EN** = extrafloral nectar, which is secreted by nectaries that are outside the flower, usually on the leaves. **HD** = honeydew, a sugary solution excreted by plant-sucking insects, principally aphids. **PR** = propolis, a resinous material, usually of plant origin, used by bees to water-proof and insulate the nest, as well as to line brood cells or to cover animal matter that cannot be removed.

The designated nectar values of plants in general refer to the amount of nectar available to honeybees in a flower, and not to the surplus honey obtained by beekeepers. Thus, if there is a profusion of a N2 beeplant, for example the false dandelion, *Hypochaeris radicata*, honeybees may store surplus honey from this source. The nectar values therefore reflect more closely the

so-called 'sugar value' (Crane 1976) of plants, i.e. milligrams of sugar per flower per 24 hours, rather than the nectar sugar concentration used by some beeplant authors as an indicator of the sugar value of a plant. This latter figure is often misleading, as the nectar concentration can vary with changing temperature, wind, air humidity, and whether and how often the nectar is harvested by birds and insects. The sugar value, i.e. the actual amount of sugar that a plant produces, is dependent on both the nectar sugar concentration and the volume of the nectar available to bees. With the forager evaluation method, both these factors are determined and used (Johannsmeier 2010).

The easiest, first-step method for beekeepers to evaluate plants as sources of nectar is to assess the relative abundance of nectar-collecting bees. An absence of foragers could, however, be due to a lack of bee colonies in the area, nectar that is less attractive than other available sources at that time, or plants could be under water deficit stress and therefore not producing nectar. Nectar foraging is generally a slower action than pollen collection; the latter tends to be a quick scrambling across an inflorescence or across the stamens of an individual flower.

The pollen values are mainly based on the volume of bee-collected pollen, which is ascertained by the relative abundance of pollen foragers, size of pollen loads, or an evaluation of trapped pollen. A **P0** value does not imply that the flowers do not produce pollen, but rather that honeybees do not collect it, possibly because flower morphology makes it difficult to obtain, very little is produced, or the large size, stickiness or smell of pollen grains make them unattractive. Honeybees may also stop utilising a source of pollen if an accompanying stimulatory source of nectar is absent.

Crude protein content of pollen is known to correspond with the nutritional value of the pollen as food for brood and emerged young bees (Kleinschmidt & Kondos 1976; Rayner & Langridge 1985). The body crude protein of bees also closely reflects the longevity of foragers and the ability of nurse bees to raise brood. The mineral and crude protein of pollen has been studied to a limited extent in South Africa (e.g. Köttner 1991). Pollen pellets contain honey, and before analysis they were usually dried and stored for varying periods of time. Their protein contents are therefore somewhat lower than those of hand-collected fresh pollen. This would partly explain the different values obtained for the same plant species by different researchers. The crude protein content of pollens collected by honeybees varies between 8 per cent and 37 per cent.

Flowering time

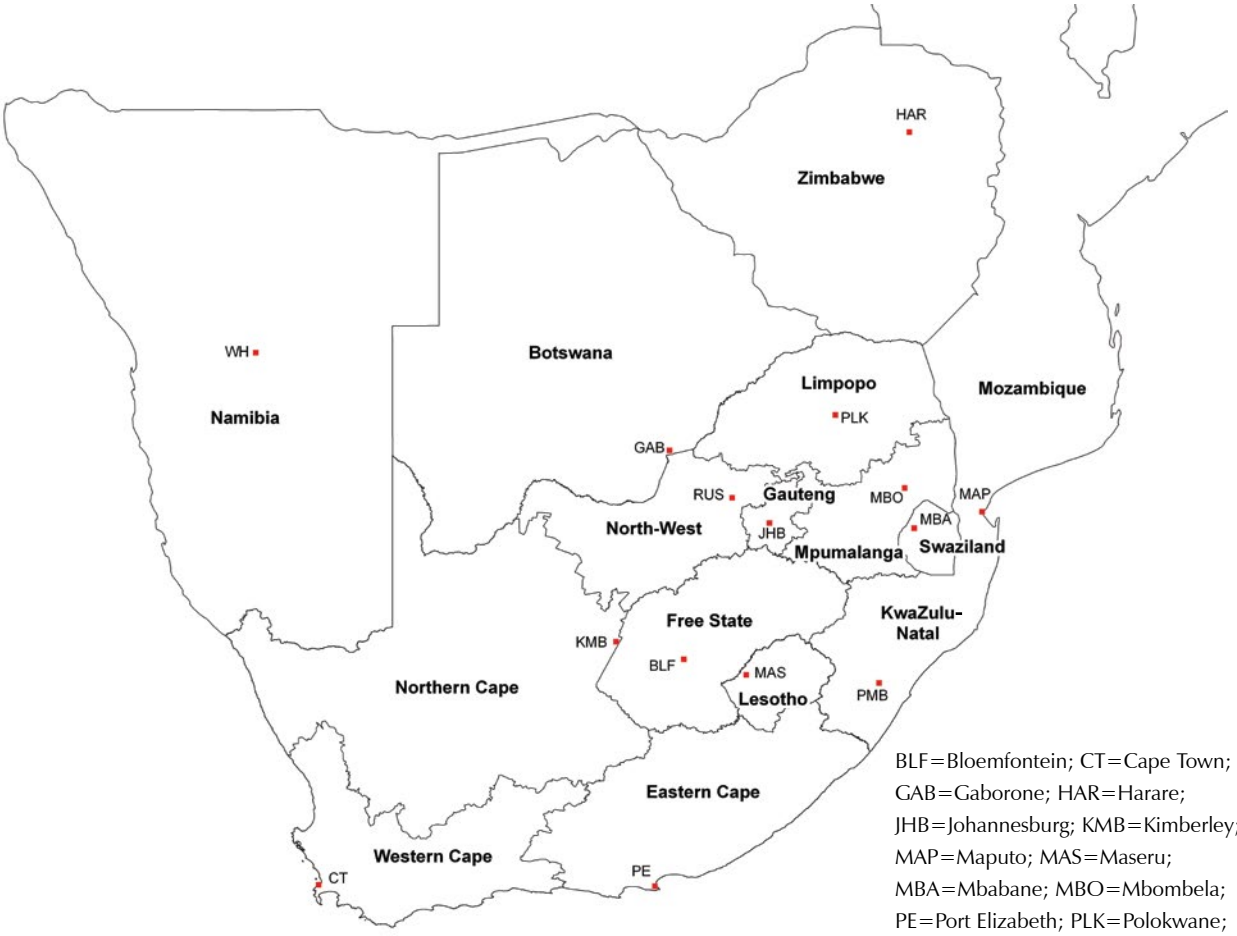
The numbers in this column refer to months of the year between which plants can be expected to flower, with those in brackets indicating the main flowering period, e.g. **(4–5)** for April to May. Some plants have more than one flowering peak. A question mark (**?**) means that the flowering time is uncertain. Plants mostly flower during particular seasons. Some plants, however, have variable flowering dates which are mainly determined by rainfall. The flower buds of some eucalypts are retained for up to one year before opening. For some species that occur in both the winter and summer rainfall regions, the flowering time differs in these two zones. This is indicated in the 'Flowering Time' column as **WR** = winter rainfall, and **SR** = summer rainfall.

For almonds, apples, cherries, peaches, pears and plums the actual weeks of flowering in the Cape are given, i.e. when the earliest cultivars start and the latest end. For example: **(Week 2/8–1/9)**, which would mean the second week of August to the first week of September. This information is for the benefit of pollinating beekeepers. It should nonetheless be noted that the flowering time of a deciduous fruit crop does not depend on the cultivar alone, but also on the weather and the lie of the orchard. Close contact should therefore be maintained between beekeeper and farmer prior to and during the pollination period, because the timing of hive movements in and out of orchards is critical.

Remarks

For exotics, this column starts with the countries of origin, except for the eucalypts, which all originate from Australia. Instead, for the eucalypts, all the provinces are named where each species has been planted or is likely to be found. The distribution of beeplant species that are indigenous to South Africa is also indicated by province. Additionally, neighbouring countries are mentioned in cases where these beeplants are also found within their borders. The following abbreviations are used: **BOT** = Botswana; **EC** = Eastern Cape; **FS** = Free State; **G** = Gauteng; **KZN** = KwaZulu-Natal; **L** = Lesotho; **LIM** = Limpopo; **MP** = Mpumalanga; **NAM** = Namibia; **NC** = Northern Cape; **northern provinces** = LIM, NW, G & MP; **NW** = North West; **S. Africa** = widely distributed or found in many parts of South Africa; **SC** = southern Cape (the southeastern region of the Western Cape province); **SZ** = Swaziland; **WC** = Western Cape; **ZIM** = Zimbabwe. The map in Figure 2 shows the provincial and country borders of South Africa.

For crop plants a limited amount of information is provided about pollination needs and recommendations. Additional pollination advice can be found in the so-called 'Blue Book', *Beekeeping in South Africa* (Johannsmeier 2001). **Bee factor**: an estimated value of the reliance on honeybee pollination of a crop plant to obtain a maximum fruit or seed set. The expres-



BLF=Bloemfontein; CT=Cape Town; GAB=Gaborone; HAR=Harare; JHB=Johannesburg; KMB=Kimberley; MAP=Maputo; MAS=Maseru; MBA=Mbabane; MBO=Mbombela; PE=Port Elizabeth; PLK=Polokwane; PMB=Pietermaritzburg; RUS=Rustenburg; WH=Windhoek.

Figure 2: Map of provincial and country boundaries of South Africa.

sion **nectar robbing** or **stealing** denotes bees obtaining nectar 'illegally' from flowers, without coming in contact with stigmas or anthers, and therefore not pollinating the flower. Narrow-tubed flowers that are pierced near their bases by carpenter bees or birds may also be visited by honeybees, which rob nectar through the resultant holes or slits. Another form of nectar robbing occurs in the family Papilionaceae with its pea-type flowers, from which the bees secure the nectar from the side of the blossom without **tripping** or releasing the taut style and filaments, which is required to facilitate cross-pollination.

A **polleniser** is the male parent or pollen source that is used in the commercial production of some fruit crops. **Dioecious**: male and female flowers occur on different plants, for example kiwi and marula. **Monoecious**: separate female and male flowers occur on the same plant, as in pumpkins and most palms. **Flower buzzing** involves the vibration of a flower by a bee to release pollen from the anthers, which is caught on the bee's hairy body, also promoting pollination. The word **surplus** refers to honey that is stored in excess of the bees' immediate requirements and is available for the beekeeper to harvest. General information of beekeeping interest is also included under 'Remarks', such as sources of **propolis**, **honeydew** and **extrafloral nectar**, or the use of plants in beekeeping for purposes other than bee-collected materials. Some plants that merit wider usage are identified.

1. Crop Plants

This heading covers all plants that are grown as a source of food, fibre or medicine for man and animals, be it for their fruit, seeds, leaves or roots. It includes plants cultivated in the home garden or on a small or large marketing scale.

From some crop plants the commercial beekeeper can derive an appreciable income, either by way of a honey yield, or from pollination fees. Although some reference to pollination is made for a number of crops under the heading 'Remarks', more detailed pollination information is provided in the so-called 'Blue Book', *Beekeeping in South Africa* (Johannsmeier 2001), to which beekeepers are referred.

It is expedient to again point out that the nectar values of plants refer to the amount of nectar sugar that is available to honeybees in a flower. Any expectation of a honey crop must therefore be related not only to the given beeplant value, but to the abundance of the crop in question, i.e. number of trees or area under cultivation, as well as to the bee load – the number of hives.

The availability of crop plants for use by beekeepers changes slowly but surely in South Africa, with positive and negative outcomes. Kidney bean, once the third most important honey plant, is presently planted on a few farms only. Buckwheat as a crop has all but disappeared. For beekeepers in the Western Cape, the cultivation of canola brought a welcome diversification, with its own challenges. It remains to be seen to what extent crambe will make inroads in the oilseed market. The greatest changes are beginning to take place on the Highveld, where deciduous fruit and different berry types are being established. Diverse legume forage crops have also started to make their appearance in summer rainfall regions.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Abelmoschus esculentus** (= *Hibiscus esculentus*) (Malvaceae)	Okra Lady's fingers	N2? EN P1?	1–12 (11–4)

Remarks

Old World Tropics. Erect annual of which the immature pods are used as a vegetable. The pods or fruit are relatively long, thin, pointed and ribbed, growing upright from leaf axils. Okra flowers resemble cotton flowers, with yellow to cream-coloured petals. They open shortly after sunrise in summer, remaining open until about noon. A plant generally produces one flower per day. Pollen is collected early in the day. Flowering time depends on planting time, which can even be during winter for irrigated plants in warm regions. One report of honeybees utilising extrafloral nectar (the location of the nectaries was not indicated). This crop is self-fertile and partly self-pollinating. In one experiment in which honeybees were used, there was an increase of 19% in seed yield, i.e. better developed pods (Free 1993). Okra is grown in some Lowveld gardens. There are also a few small commercial plantings.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Actinidia deliciosa** (= *A. chinensis*) (Actinidiaceae)	Kiwi fruit *Kiwivrug*	N0 P0–3	10–11

Remarks

China. Dioecious plants that need pollen transfer and that have no nectar. Bee factor 90%. Pellets whitish. Female flowers produce some pollen, which is sterile and sticky, but is readily collected by honeybees. Wind pollination does take place, however, the quality of the resultant fruit is not commercially acceptable. Some growers hand-pollinate. Flowering lasts about three weeks per orchard.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Agathosma betulina	Roundleaf buchu *Bergboegoe*	N P	5–11 (8–9)
A. crenulata (Rutaceae)	Oval-leaf buchu *Gewone boegoe*		

Remarks

Southwestern Cape mountain slopes. Small plantations of these two species produce oils for flavouring and medicine. Pollination needs and beeplant value unknown. Bee factor probably 45%. One honey sample containing buchu was reddish-golden and had a unique nutty-medicinal flavour.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Aleurites fordii* (= **Vernicia fordii) (Euphorbiaceae)	Tung Candle-nut tree	N2? P3?	9–12

Remarks

China. Formerly some small commercial orchards in LIM, of which a number of trees still exist. Source of tung oil. Panicles of small, pink-coloured, bell-shaped flowers. Separate male and female flowers on the same tree. Long-flowering. Honeybees are said to obtain some nectar and much pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Allium** spp. (Alliaceae)	Onion crops	N1–3 P0–2	10–2
A. porrum	Leek *Prei*		
A. schoenoprasum	Common chive *Grasui*		
A. tuberosum (= *A. odorum*)	Chinese chive *Look*		

Remarks

Temperate regions of northern hemisphere. Only of interest to beekeepers where grown for seed production. Pollination requirements are little known, but all benefit from cross-pollination by honeybees to a greater or lesser degree. Pollen pellets light grey to light brown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***A. cepa**	Onion *Ui*	N0–3 P0–2	9–12

Remarks

Asia?, Middle East? Honeybees are needed in seed production. Cross-pollination between florets is essential because of late stigma receptivity. Bee factor 95%. Male-sterile lines that produce less nectar and of lower sugar concentration than normal fertile lines may cause inadequate pollination. In some years bees are very tardy to forage on the flowers. This problem is little understood, but probably relates to nectar composition. Flowers may also be abandoned in favour of other, more attractive, beeplants. Long-flowering crop without colony build-up. Pellets light olive or biscuit-coloured. Occasionally a reddish-brown honey with a characteristic mild taste is produced.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Anacardium occidentale** (Anacardiaceae)	Cashew nut *Kasjoeneut*	N2–4 P0–1 PR	7–11 (8–10)

Remarks

Central America. Both male and bisexual flowers are found on the same panicle. Anthers dehisce some hours after stigma receptivity, therefore cross-pollination is required. Estimated bee factor is 50%. Long flowering period. Cashew honey in Brazil is dense and wine-red. Propolis is collected from young, growing parts of the tree. The sweet juice of ripe cashew 'apples' is also imbibed by bees.

Botanical Name	Common Name	Beeplant Value	Flower Time
***Ananas comosus** (= *A. sativus*) (Bromeliaceae)	Pineapple *Pynappel*	N0–1 P	1–12

Remarks

Tropical America. Pineapples need no pollination to produce fruit, and seeds are undesirable. Flowers are too narrow for honeybees to enter, but sometimes they forage for nectar between the petals at the base of the flower. It is possible to produce pineapples at any time of the year by making use of chemical blossom initiation. The inflorescence is in flower for about three weeks.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Apium graveolens** (Apiaceae)	Celery *Seldery*	N0–2 P0–1	8–3

Remarks

Europe. Biennial to perennial culinary and medicinal herb found in many gardens. Also produced commercially on a small scale. Cross-pollination necessary for seed production, but at times honeybees are not interested in the flowers. Naturalised over almost entire S. Africa in moist places.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Arachis hypogaea** (Fabaceae) (Papilionaceae)	Peanut Groundnut *Grondboontjie*	N0–1 P0–1	12–3

Remarks

Brazil. The peanut flower is not dependent on honeybee pollination to set seed. Honeybees have nevertheless been observed to visit the flowers, collecting either nectar or pollen, but this rarely happens. After fertilisation the flower stalk lengthens and forces the young pod into the soil.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Aspalathus linearis (Fabaceae) (Papilionaceae)	Bush tea Rooibos tea *Rooitee*	N0–2? P?	8–2

Remarks

Bokkeveld to Cape Peninsula in Mountain Fynbos. Shrub with needle-like leaves and small yellow pea flowers. Different kinds of solitary bees can effect pollination. At times many foraging honeybees may be seen, robbing nectar from the side of the flower, but generally bee visits are rare.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Asparagus officinalis** (Asparagaceae)	Garden asparagus *Aspersie*	N1–3 P0–4	3–5

Remarks

Europe, southwest Asia. Cold winter crop, propagated by rhizomes or seed. Three flower types: female, male and bisexual. The last two kinds produce much reddish-orange pollen. Pollen crude protein 25.6% (USA). Bee pollination is required for seed production, which is very limited in S Africa. A mild, light-coloured honey is occasionally reported from overseas.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Avena sativa** (Poaceae)	Oats *Hawer*	N0 P0–2	9

Remarks

Northern Temperate regions. Single observation of late afternoon pollen collection near Pretoria.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Averrhoea carambola** (Oxalidaceae)	Star fruit Carambola	N1–2 P0–2	1–12 (9–10) (4–6)

Remarks

Southeast Asia. Small tree grown for its yellow, 5-ridged, acidic fruit. Honeybees contribute to pollination. Some cultivars are self-incompatible. Small-scale experimental plantings and one commercial orchard in MP and KZN. Beeplant values obtained from overseas information.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Beta vulgaris** (Chenopodiaceae)	Beet crops	N0–1 P0–3	9–10
B. vulgaris var. **cicla**	Spinach beet Swiss chard *Spinasie*		
B. vulgaris var. **esculenta**	Beetroot *Rooibeet*		
B. vulgaris var. **vulgaris**	Sugar beet *Suikerbeet*		

Remarks

Mediterranean. Biennial cultivars which produce leaf, root and seed crops. In the first year the leaf rosette and the fleshy root form. These are left in the soil for seed production, and a flowering stem forms in the second year. Although wind-pollinated, honeybees contribute to increased seed set. Beetroot seed production was enhanced by 14% with honeybees in one case. Sugar beet projects have been implemented in the EC.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Borago officinalis** (Boraginaceae)	Borage *Komkommerkruid* *Bernagie*	N1–3 P1–2	8–3

Remarks

Europe and Mediterranean. Minor commercial leaf, flower and seed crop. Annual to biennial. Flowers light purple to bluish. Long-flowering. Pellets whitish to grey. Bee factor 80%. Honey in Canada.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Brassica campestris** (Brassicaceae)	Turnip rape Oil turnip Wild turnip	N1–4 P1–3	8–11

Remarks

Southern Asia. Annual or biennial oilseed crop before the introduction of canola. Established in the wild. Excellent beeplant. Australian oilseed crop, together with canola. Pollen crude protein 25.3% (USA).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***B. juncea** variety	Leaf mustard Indian mustard *Spinasie-mosterd*	N1–2 P1–3	8–5?

Remarks

Central and East Asia. Small-scale cultivation as a vegetable leaf crop in S. Africa. Oilseed and brown mustard crop in other countries. Attractive to bees like other Brassicas. Pollen pellets yellow. Established in the wild in WC, EC, KZN, FS, LIM.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***B. napus** var. **oleifera**	Oilseed rape Canola *Olieraap* *Kanola*	N2–4 P2–4	7–10 (8–9)

Remarks

Europe. Rotation crop with wheat and legumes in WC. Seed set and quality is greatly increased with honeybees. Bee factor 65%. A beeplant that is well-suited for making increases. However, rapid brood production and swarming may lead to take-over by laying workers in the southwestern Cape. Honey: light yellow colour, mild taste, quick granulation, unpleasant aroma when fresh. There is a ready market for creamed honey. Cultivars that are presently planted show a noticeable difference in nectar production. Pollen colour yellow to lemon to light olive. Crude protein 24.1–26.2% (Australia). Beekeepers have experienced some bee losses due to pesticides. There is limited seed production under irrigation in summer rainfall areas, but future commercial production is envisaged in a maize and soybean rotation.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***B. oleracea** cvs.	Cole crops *Koolgewasse* Broccoli Brussel sprouts Cabbage Cauliflower Kale Kohlrabi	N1–3 P1–4	8–11

Remarks

Europe, Mediterranean. Seed is produced in S. Africa for the vegetable industry. Cole crops are 95% cross-pollinated. In seed production the variable attractiveness of inbred lines is problematical. Pollen pellets are lemon-coloured, with 22–25% crude protein.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***B. rapa** var. **rapa**	Common turnip *Raap*	N2–3 P1–2	8–11

Remarks

Europe, western Asia. Leaf and root vegetable. Formerly used as green feed for dairy cattle. Small-scale seed production. Requires bee-pollination: almost completely self-sterile. Other cultivars that are grown in S. Africa include the Chinese white cabbage or *pak choi* and the celery cabbage or *pe tsai*.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Cajanus cajan** (= *C. indicus*) (Fabaceae) (Papilionaceae)	Pigeon pea Dhal Congo bean *Kongo-boontjie* *Duif-ertjie*	N1–2? P0–1?	4–8?

Remarks

India. Naturalised to some extent in KZN, SZ, MP, LIM, NAM. Dry bean (pulse) crop. Annual to short-lived perennial shrub with yellow to orange pea flowers. Small-scale production in rural gardens of the Lowveld. Long flowering for up to two months. Considered to be self-pollinating, but bee visits increase pollen deposition on the stigmas.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Camellia sinensis** (= *Thea sinensis*) (Theaceae)	Black tea *Gewone tee*	N0–2 P1–3	9–7 (4–6)?

Remarks

China, Japan, Taiwan. Tea plantations in LIM, MP, KZN, EC. Flowers are produced low down on the tea shrubs. They are fragrant and have numerous stamens, opening in the afternoon and staying open for two days. Nutritious pollen is produced. In S. Africa bees on flowers have rarely been reported, but very high pollen-gathering activity was nevertheless observed on a few occasions.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Capsicum annuum** (Solanaceae)	Green pepper Sweet pepper *Soetrissie*	N0–1 P0–1	11–4

Remarks

South and Central America. Of low attraction for honeybees, which gather the light grey pollen at times. Occasionally and under unknown growth conditions, nectar is secreted, which is then collected by honeybees. Bee factor an estimated 15%. A flower remains open for 2–3 days. Bee visitation is increased when colonies are provided with a stimulative sugar syrup. Small-scale bee pollination in the Cape.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Carica papaya** (Caricaceae)	Pawpaw Papaya	N0–1? P0–1	1–12 (2–5)?

Remarks

Tropical America. Separate female and male trees, or both flower types on the same tree, or rarely bisexual flowers. Neither female nor bisexual flowers appear to produce nectar. Pollination issues are far from being resolved. Pellets yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Carthamus tinctorius** (Asteraceae)	Safflower *Verfblom*	N1–3 P1–3	2–5

Remarks

Asia Minor? Oil seed crop used in rotation in the WC. Plants flower ± 90 days after planting. Flowering time as for summer rainfall conditions. Long-flowering plant. Bees can double the seed crop. Pellets dull yellow. The closely related saffron thistle, ***C. lanatus**, has become naturalised in the WC and EC, but is not widespread. It is a useful beeplant overseas.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Carya illinoinensis** (Juglandaceae)	Pecan nut *Pekanneut*	N0 P0–2	9–10

Remarks

Southern USA. Commercial plantations and many home gardens. Wind-pollinated. Occasionally a light green pollen is collected.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Casimiroa edulis** (Rutaceae)	White sapote	N1–3? P0–2	2–5?

Remarks

Central America. This medium-sized tree belongs to the citrus family and bears edible juicy fruit up to 70 mm in diameter. Small-scale test plantings in MP subtropics. Flowers worked by bees all day. Occasional high pollen foraging observed. Little information on pollination requirements, but bees can effect the necessary cross-pollination.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Cassia angustifolia** (Fabaceae) (Caesalpiniaceae)	Senna	N? P?	12–5 (1–2)

Remarks

East Africa. Shrub cultivated for its seeds and leaves, which have well-known laxative properties. Known not to be visited by honeybees where grown commercially. In cage tests on 10 ha of senna in Vendaland, saturation pollination resulted in a 12% increase in seeds. The flowers had a little nectar, collected by ants. (P.O. Hunter, pers. comm., 1983-06-22).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Castanea sativa** (Fagaceae)	Sweet chestnut *Soet kastaiing*	N1–4 P1–3	9–11

Remarks

Southern Europe. Small new plantings in southwestern Cape. Old trees can be found in some towns and on farms in the foothills of the Drakensberg, and even on the Witwatersrand. The nuts of trees on two farms in LIM were found to be hollow. Flowers are self-sterile and need cross-pollination. Bee factor 45%. Pollen pellets yellow to beige to light olive, with 23.9% crude protein (Maurizio & Grafl 1980). Beeplant value from Europe, where trees are a source of honey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Citrullus lanatus (Cucurbitaceae)	Watermelon *Waatlemoen*	N0–2 P0–2	8–3

Remarks

Indigenous and widespread in southern Africa. The watermelon was bred from the wild watermelon, also known as *tsamma* in the Kalahari, or as *karkoer* and *makataan* elsewhere. *Tsammas* are a source of water for man and animals, including bees, in the Kalahari. In southeast Botswana bees converted the sweet watermelon juice into honey (very minor source). Pollen transfer by bees is essential, except for commercial pipless cultivars. Bee factor 80%. Plants have relatively few flowers: no honey surplus. More male than female flowers. Pellets yellow. Kalahari melons flower during summer–autumn. Early flowering only under cultivation in warm bushveld locations.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Citrus** spp. (Rutaceae)	Citrus fruits *Sitrusvrugte*	N0–3 P0–2	7–10 (9–10)
C. limon	Lemon *Suurlemoen* 'Eureka' 'Lisbon'		
C. × paradisi	Grapefruit *Pomelo* 'Ray Ruby' 'Star Ruby'		
C. reticulata	Mandarin *Naartjie* 'Satsuma' 'Clementine'		
C. reticulata × paradisi	Tangelo 'Minneola' 'Ellendale'		
C. reticulata × sinensis	Tangor 'Ortanique'		
C. sinensis	Orange *Lemoen* 'Navel' 'Valencia'		

Remarks

Southeast Asia. The list of citrus fruits includes species and cultivars most widely grown in S. Africa – it is not comprehensive. Most of the cultivars, for example, have modern sub-cultivars. Hot and humid weather is necessary for maximal nectar secretion. Dry heat can lead to flower and fruit drop. Spring drought may cause late November–December flowering in oranges in the Lowveld. Flowering periods for the same orchard vary from season to season, with a range of 2–6 weeks. Lemons may be found to flower as late as April. The amount of nectar secreted in flowers of the different species and cultivars varies much. For example, Free (1993) published the following results from Cuba: 'Valencia' oranges, 'Orlando' tangelos and 'Ortanique' tangors produced 19.2 mg, 7.4 mg and 5.9 mg of nectar per flower per day respectively. The sugar concentration of the nectar varied only between 35% and 39%. The best honey producers in S. Africa are oranges, followed by lemons and grapefruit. Mandarin honeys are unknown. A high-quality honey of excellent aroma and taste is produced from oranges. It is light straw-coloured, of high density, and very slow to granulate. An ester-

type of chemical compound, methyl-anthranilate, gives orange blossoms and honey their characteristic aroma. Pollen pellets are yellow to brownish yellow in colour. Generally speaking, most cultivars do not need insect visits to set fruit. They produce fertile pollen, are self-compatible, and some auto-pollination occurs when anthers touch the stigmas. However, some of the so-called 'soft citrus' mandarin and tangelo cultivars such as 'Clementine', 'Minneola' and 'Orlando' need cross-pollination with a suitable polleniser to set a commercial crop. It has been recommended that 2½ colonies/ha are used for cultivars that need cross-pollination. 'Navel' oranges are parthenocarpic, i.e. they set fruit without pollen. As a general rule for citrus cultivars, honeybee pollination increases seed numbers (which is undesirable), but also results in a greater set of bigger fruit. There is one record of honeybees removing the white wax of the citrus wax scale, *Ceroplastes destructor*, in their corbiculae.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Cocos nucifera** (Arecaceae)	Coconut *Kokosneut*	N0–2? EN P0–3	1–12 (9–3)

Remarks

Western Pacific Islands. Found along tropical seashores around the world, but now also cultivated far inland. Coconut palms have been established on the Makatini Flats, Zululand. A new leaf and an inflorescence form about once each month, therefore the reported pollen collection by honeybees throughout the year. Away from the equator flowering slows down during winter months. The palm is monoecious, i.e. separate female and male flowers on the same flowering panicle. Both have active nectar glands, which are attended by bees. It has also been observed that extrafloral nectar is collected from scars where flowers had been shed, as well as from the surface of very young fruit. Light-coloured honey is reported from Mexico. Pollination is essential, but not cross-pollination. Pellets are cream-coloured. On the African East Coast bee swarms are known to nest in the palm crowns for a lack of other nesting sites.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Coffea arabica** (Rubiaceae)	Coffee *Koffie*	N2–3 P0–2	9–5 (10–12)

Remarks

Tropical East Africa. Commercial coffee plantations, though relatively small, are found in KZN, MP and LIM. Flowers are small, white, star-shaped, fragrant, and with a corolla tube of about 8 mm, allowing honeybees to reach the nectar. Several flowering bursts in succession, each lasting about a week. 'Waiting' flower buds open about 8–14 days after a good rain shower. Pollen is eagerly collected, although a limited amount is available. Honey is reported to be light in colour, quick-granulating and with a mild taste. Available information strongly suggests that honeybees should be provided for pollination to obtain a greater yield of berries from this self-fertile crop.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Coriandrum sativum** (Apiaceae)	Coriander *Koljander*	N1–3 P0–2	8–10

Remarks

Eastern Mediterranean. Seed production in southwestern Cape and northern bushveld. Cross-pollination essential. Bee factor 85%. Amber, aniseed-taste honey reported from NW. Small, dark-coloured pellets.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Coronilla varia** (Fabaceae) (Papilionaceae)	Crown vetch *Kroonwiek*	N1–3? P1–3?	10–4

Remarks

Europe. Crown vetch is suitable for stabilising road cuttings or dry banks, but in S. Africa it has a limited use as a pasture crop in the FS and EC. It is a spreading, long-lived, winter-hardy, drought-tolerant herbaceous legume. The foliage is fern-like. The pinkish or white pea flowers are visited by honeybees for nectar and pollen. The bees can trip the blooms to pollinate them. The common name refers to the characteristic crown-like shape of the cluster of flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Corylus avellana** (Betulaceae)	Hazel nut *Haselneut*	N0 P2	7–8

Remarks

Eurasia. A number of test orchards have been established in the EC, FS and MP. Large monoecious shrubs that are wind-pollinated and have no nectaries. They flower before the leaves appear. Pellets are dull yellow to biscuit-coloured, with 14.2% crude protein (Maurizio & Grafl 1980).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Crambe hispanica** subsp. **abyssinica** (Brassicaceae)	Crambe Abyssinian mustard	N1–3 P1–2	8–11?

Remarks

Mediterranean. Grown in the southwestern Cape, with fewer plantings in KZN, where it has become established in the wild to a limited extent. Further developments are planned. An annual herb that is grown for its seed oil, which is used industrially. Many thin, leafless, branched, upright flowering stems, studded with small, cream-coloured, four-petalled flowers. Not attacked by snails in the southwestern Cape as happens with canola.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Cucumis melo** (Cucurbitaceae)	Sweet melon Musk melon *Spanspek*	N1–2 P1–2	8–3

Remarks

Middle East? A crop that is produced in the summer and winter rainfall regions. Bisexual and staminate flowers, which give the colonies some support. Self-compatible, but honeybee pollination necessary with a bee factor of 80%. Long flowering period of several weeks. Southwestern Cape pollination mainly December–February. Earliest flowering in northern LIM.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***C. sativus**	Cucumber Gherkin *Komkommer* *Agurkie*	N1–2 P0–1	10–4?

Remarks

India, China. Home garden, hothouse and field production for fruit or seed. Flowers generally not very appealing to bees, with nectar the prime attraction, not pollen. Anther dehiscence begins at 17°C. Bee pollination very profitable. Pickle cucumbers or gherkins also need pollination. No pollination is wanted for the smooth, long, pipless English cultivars – the fruit develops parthenocarpically. Pollen pellets light brownish-yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Cucurbita maxima**	Pumpkin	N1–3	1–12
&	Squash	P0–3	(11–4)
***C. pepo**	Marrow		
(CUCURBITACEAE)	Butternut		
	Pampoen		
	Skorsie		
	Murgpampoen		

Remarks

North and South America. From home gardens to fields with mixed crops to commercial plantings for fruit or seed production. Pollen transfer by bees essential for fruit and seed set. Miniature pumpkins also need pollination. Honey is harvested during summer months. It has a light yellow colour, a bland taste and crystallises quickly with a fine grain. Gem squashes only yield small honey crops occasionally. The nutritious pumpkin pollen, in shades of yellow, is sometimes ignored when other more attractive sources are available. With its 26.4% crude protein it has been recorded to sustain high levels of brood-rearing.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Cyclopia genistoides	Honeybush tea	N?	7–12
(FABACEAE)	*Heuningtee*	P?	(9–11)
(PAPILIONACEAE)	*Kustee*		

Remarks

Malmesbury to Albertinia. Seasonally marshy flats and lower mountain slopes. Twigs harvested for tea from wild plants and commercial plantations. Possible honey source (1923 report). Bee value and pollination needs are unknown. **Cyclopia subternata**, or *vleitee*, is also grown commercially.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. maculata	*Riviertee*	N3?	9–10
	Heuningtee	P?	

Remarks

Southwestern to SC. Lower slopes near streams. One report of major bee activity near Riversdale. Several other **Cyclopia** species, including **C. intermedia** or *bergtee*, are veld-harvested for tea. Their beeplant values are also unknown. They flower in spring or autumn.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Cydonia oblonga**	Quince	N1–2	9–10
(ROSACEAE)	*Kweper*	P2–3	

Remarks

Asia Minor. Hardy deciduous garden shrub used for its fruit and as a hedge. Cultivars are self-fertile to mainly cross-pollinated. Winter chilling required for flowering. Bee factor 85%. Pellets light lemon or light yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Cynara scolymus**	Globe artichoke	N1–2?	11–3
(= *C. cardunculus*)	Cardoon	P2	
(ASTERACEAE)	*Artisjok*		
	Kardoen		

Remarks

Mediterranean. Perennial ornament or vegetable, i.e. edible flower head in bud stage. Unknown how much nectar bees obtain in the very long corolla of florets. Honeybees increase seed set; bee factor 60%. Pellets yellow to light orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Cyphomandra betacea** (Solanaceae)	Tree tomato Tamarillo *Boomtamatie*	N0 P0–1	1–12 (8–10)

Remarks

Peru. Naturalised on a small scale in KZN. Honeybees rarely collect pollen. Pollination needs unknown. Bee factor possibly 45%. Active flower buzzing by carpenter bees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Daucus carota** (Apiaceae)	Carrot *Geelwortel*	N0–3 P0–2	10–1 (11–12)

Remarks

Afghanistan. Biennial vegetable and seed crop. Garden escape along roadsides. Seed production mainly along the lower Orange River, but also in the eastern FS. From large fields honey may sometimes be obtained. It is reddish-golden and has a sickly-sweet aroma when fresh. Pellets have a dark beige colour and a mild taste.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Desmanthus virgatus** (Fabaceae) (Mimosaceae)	Desmanthus	N2? P1?	2–5?

Remarks

Tropical America. Promising fodder legume for arid subtropical regions of S. Africa. Inflorescence not the typical catkin or puffball of the Mimosaceae, but a flower head with five white florets on a long stalk. Frequent foraging for pollen and nectar by honeybees has been documented.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Desmodium intortum**	Greenleaf desmodium	N2? P1?	4–6
***D. uncinatum** (Fabaceae) (Papilionaceae)	Silverleaf desmodium		

Remarks

South America. Excellent grazing plants or cover crops for the subtropics. Ground creepers that give rise to dense forage, e.g. utilised in the EC. They grow in summer and flower in autumn–winter, i.e. they are short-day plants. Very little information on plant/bee interaction. Self-compatible, but seem to benefit from bee pollination for the otherwise problematic seed set. It is unknown whether the flowers of the more cold-tolerant Döhne desmodium, ***D. subsericium***, are visited by bees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Diospyros kaki** (Ebenaceae)	Oriental persimmon Sharon *Tamatiepruim*	N2? P0–2?	10

Remarks

Japan, China. Only small plantings in S. Africa, some under hail nets. Trees are mostly dioecious, but bisexual flowers also occur. Little information on pollination needs, which seem to vary, for example the few seedless parthenocarpic cultivars. Recommendation for plantations: 1 male to 8 female trees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Eriobotrya japonica** (= *Photinia japonica*) (ROSACEAE)	Loquat *Lukwart*	N1–3 P1–2	2–8 (4–6)

Remarks

China, where it is a source of honey. Invasive in some coastal locations of S. Africa. Found in gardens and a few small plantations. Has gone out of favour, partly because it is a winter host to fruit flies. Pollen light lemon to yellow. Long-flowering. Bee factor 60%.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Eruca vesicaria** (= *E. sativa*) (BRASSICACEAE)	Salad rocket Rocket cress *Slaai eruca*	N2–3 P1–2	1–12 (9–10)

Remarks

Mediterranean. Minor leaf crop in S. Africa, but also used medicinally. Some escapes in G and FS. Hardy annual with deeply-lobed leaves. The white to cream-coloured, four-petalled flowers look like little propellers. Petals are marked with fine brown to purplish veins. When sown at different times, or left to self-seed, some flowers can be expected throughout the year. Main flowering time is spring.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Fagopyrum esculentum** (POLYGONACEAE)	Buckwheat *Bokwiet*	N1–4 P1–2	12–4 (1–2)

Remarks

China. Few fields remain of what once was a major honey crop for Highveld beekeepers. Occasional patches of naturalised plants. Honey: very dark, strongly-flavoured, characteristic musty aroma. Pollen light yellow to light greyish-yellow, with 14.6% crude protein (Maurizio & Grafl 1980).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Foeniculum vulgare** (APIACEAE)	Fennel *Vinkel*	N1–3 P1–2	11–4

Remarks

Mediterranean, Asia Minor. Naturalised biennial or semi-perennial. Minor seed and garden crop. Cross-pollination required. Bee factor 60%. Pellets brownish-yellow or golden yellow. (See also under WEEDS).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Fragaria × ananassa** (ROSACEAE)	Strawberry *Aarbei*	N0–1 P0–2	1–12 (7–11)

Remarks

Garden origin of American parents. Fruit set and quality increased with bees. Bee factor 75%. Flowers not very attractive to bees. Pollen pale yellow or biscuit-coloured; crude protein 19.5% (Maurizio & Grafl 1980). Beekeepers in the Cape provide colonies to growers for pollination

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Glycine max** (= *Soja max*) (FABACEAE) (PAPILIONACEAE)	Soya bean *Sojaboon*	N0–2 P0–1	12–3 (2)

Remarks

Southeast Asia. Mostly grown in FS, followed by MP and NW. Cultivars differ in attractiveness to bees, and in some the flowers remain closed. The small pea-type flowers undergo auto-pollination and self-fertilisation, despite the presence of distinct nectar guides. In the USA in some cultivars and in some years only, seed production was increased between 2% and 16% when honeybees were deployed. Bees have proven useful in the production of hybrid seed. Highest nectar secretion occurs with maximum temperatures above 25°C for a number of days, and night temperatures not below 20°C. High humidity also seems to promote nectar secretion. With cultivars used in S. Africa, and under local growing conditions, honeybees are rarely seen on flowers. A few reports have nevertheless been received of noticeable bee activity.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Gossypium barbadense**	Long staple cotton Pima cotton *Langvesel katoen*	N1–2 EN0–2 P0–1	12–5
***G. hirsutum** (MALVACEAE)	Upland cotton Short staple cotton *Kortvesel katoen*		

Remarks

Tropical America. At present most cotton is grown under irrigation along the Orange River, but dryland production is increasing elsewhere. Extrafloral nectar is more attractive than floral nectar at times, but it is unknown under what conditions. Few reports of honey from LIM. It is assumed that a light-coloured honey results from floral nectaries and reddish honey from extrafloral nectar. All foragers in flowers get dusted with pollen, particularly on their undersides. This whitish pollen may be collected or actively removed from bodies. Honeybee pollination is essential when seed is produced using male sterile lines, but colony strength then declines. Hybrid seed production necessitates change of colonies. Cotton is long-flowering – which may last two months.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Helianthus annuus** (ASTERACEAE)	Sunflower *Sonneblom*	N0–3 P0–3	11–4

Remarks

North America. No nectar if plants are under moisture deficit stress. After March the low temperatures on the Highveld inhibit nectar secretion. Honey: light yellow colour, bland taste, quick granulation. Freshly-capped honeycombs have a light yellow colour, derived from the minute droplets of yellow oil on the surface of pollen grains. Pollen pellets are yellow to orange and have a medium nutritive value, e.g. 15.7% crude protein (Australia) or 17.6% (Europe). Colonies maintain their breeding activities. For commercial crops the bee factor is 60% and for seed production 95%. Inbred breeding lines produce little nectar, which compromises pollination, particularly where competitive bee forage is present.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Hibiscus sabdariffa** (MALVACEAE)	Roselle *Rozella*	N0–3 EN0–1 P0–1?	1–4

Remarks

Old World Tropics. An annual crop with small commercial plantings in the subtropics; also home gardens. Red crisp flower calyces are used in sauces, jellies, jams and drinks. Bees collect floral as well as extrafloral nectar on flower bracts and leaves. Very high bee activity on this crop in the midlands of KZN, which ensures a good yield of viable seeds.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Humulus lupulus** (Cannabaceae)	Hops *Hop*	N0 P0–2	1–2

Remarks

Europe. Grown in the SC. Only the female inflorescence or cone is used in beer brewing. Male plants are scarce; they are merely used for breeding purposes. Bees are not needed for pollen transfer, but they collect the pollen readily if they have the opportunity.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Hylocereus undatus** (Cactaceae)	Dragon fruit Pitaya Strawberry cactus pear	N2? P2?	12–4

Remarks

Central America. Small commercial orchards in KZN, MP and LIM. Fruit with red or white flesh is eaten fresh, or used as a fruit juice base. Flowers open during the evening and wilt mid-forenoon next day. At sunrise the flowers are actively visited by bees for nectar and pollen. Honeybees are regarded as essential pollinators. Hand-pollination is applied in some overseas countries.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Ipomoea batatas** (Convolvulaceae)	Sweet potato *Soetpatat*	N0–3 P0–2	1–6

Remarks

USA to Argentina. Some sweet potato types or cultivars in S. Africa flower in autumn, and are then visited by bees. Small white pollen pellets are collected. The high beeplant values were obtained from overseas sources.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Juglans regia** (Juglandaceae)	Walnut *Okkerneut*	N0 P0–2	9–10

Remarks

Southeastern Europe. Small orchards, new and old, in the Karoo. Old trees are still found in towns and on farms in the interior. Wind-pollinated trees that have no need for insect pollination. Honeybees collect large, pale yellow pollen pellets. Crude protein 23.1% (USA).

Botanical Name	Common Name	Beeplant Value	Flowering Time
Lablab purpureus (= *Dolichos lablab*) (Fabaceae) (Papilionaceae)	Dolichos bean Hyacinth bean	N0–1 P0–1	1–4

Remarks

Pantropical. Grown only on a small scale as human food and cattle fodder. Cultivated plants are bee-visited, but rarely. The indigenous wild subspecies has never been seen with bees. No pollination information, except 'insect-pollinated'.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Lactuca sativa** (Asteraceae)	Lettuce *Blaarslaai*	N0–1 P0–2	11–3?

Remarks

European garden origin. Well-known annual leaf crop. The flower head has no disc florets, only 15–25 ray florets. All of them open simultaneously and only last for ½–2 hours, never to re-open. The stigmas are largely self-pollinated. Honeybees collect pollen and apparently some nectar, contributing an unknown level of pollination. When male-sterile lines are used in seed-breeding, honeybee pollination becomes essential.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Lagenaria siceraria (Cucurbitaceae)	Calabash Gourd *Kalbas* *Maranka*	N0–2? P0–2?	12–4

Remarks

Tropical Africa. Night-flowering, but visited by bees in the morning. Nectar: water-white colour; no smell. Pollen pellets light brown. Needs cross-pollination. Bee factor 35%.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Lavandula angustifolia** (= *L. vera*) (= *L. officinalis*) (Lamiaceae)	English lavender *Engelse laventel*	N2–4 P0–1	10–2

Remarks

Western Europe, where it is grown commercially for the production of lavender oil. The linear leaves have ± smooth margins. The plants are heat-sensitive. No pollen in some S. African cultivars. Bee factor 55% generally for lavenders. One recent record from the Cape of surplus honey: light colour and very pleasant taste.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***L. dentata**	French lavender Toothed lavender *Franse laventel*	N1–3 P1	1–12 (9–11)

Remarks

Western Mediterranean. Less attractive to bees than English lavender. A hardy herb that is long-flowering if cut back regularly. Pollen yellow or light brown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***L.** × **intermedia** cv. 'Margaret Roberts'	Lavandin Intermedia	N3 P0	1–12 (9–11)

Remarks

Sterile hybrid of **L. angustifolia** × **L. latifolia**. Tough, weather-resistant and long-flowering lavender with small purplish-blue flowers. Locally bred.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***L. stoechas**	Spanish lavender *Spaanse laventel* *Haasoor laventel*	N2–4 P0–1	8–12

Remarks

Mediterranean. Hardy small shrub with flowers pink to mauve to deep purple to almost black in different cultivars. Most cultivars seem sterile. Diagnostic feature: four-sided flower cone, i.e. inflorescence. Small brownish-orange pollen pellets.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Lens culinaris** (= *L. esculenta*) (Fabaceae) (Papilionaceae)	Lentil *Lensie*	N P	7–9

Remarks

Mediterranean. Grown as an irrigated winter crop in western parts of the summer rainfall region. An annual legume with bluish-white pea flowers. Each pod with only one or two seeds. The flowers are self-fertile and mostly self-pollinating, but they are visited by honeybees. Their possible role in pollination has not been ascertained.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Lespedeza cuneata* (= **L. juncea var. **sericea**) (Fabaceae) (Papilionaceae)	Poor man's lucerne Prosperity lucerne *Armmanslusern*	N0–3 P0–2	2–4

Remarks

East Asia. Hardy forage and hay crop for the Highveld, from the EC to MP, but also grown in the SC. Perennial semi-woody shrub with cream-coloured to purplish pea flowers. Beeplant value from overseas information. Bee-pollination is recommended for seed production.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Leucaena leucocephala** (= *L. glauca*) (Fabaceae) (Mimosaceae)	Leucaena	N0–1? P0–2	1–12 (1–3)?

Remarks

Tropical America. Introduced into rural areas for stock fodder, firewood or construction poles. Usually a multi-stemmed large shrub or a small tree that resembles a wattle. Generally holds little attraction to honeybees. Pellets light biscuit to cream-coloured. Invasive, particularly in coastal KZN.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Linum usitatissimum** (Linaceae)	Flax Linseed *Flas* *Lynsaad*	N0–2 P0–1	9–2

Remarks

Probably Mediterranean. Minor oilseed and fibre crop of WC, EC and KZN. The blue flowers have little attraction for bees, but they increase seed set. Bee factor 10%? For the production of hybrid seed, bee-pollination is needed. Pellets light grey to greyish-blue. A small honey surplus is obtained in Eastern Europe. No records yet of honeybees on indigenous yellow-flowered **Linum** spp. of the WC.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Litchi chinensis** (Sapindaceae)	Litchi *Lietsjie*	N1–3 P0–2	8–10

Remarks

China to Cambodia. Subtropical fruit tree grown in Lowveld and escarpment areas of MP and LIM. Three flower types on the same tree: male, female and bisexual. Their ratios vary with cultivar and season. They all yield nectar. Light golden honey with a pleasant mild flavour, akin to the taste of the fruit. Generally a dependable honey producer. Best flowering when average maximum winter temperatures do not exceed 20°C. Bees collect fruit juice if the opportunity exists.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Lotus** spp. (Fabaceae) (Papilionaceae)	Bird's-foot Trefoil *Lotus klawer*	N1–3 P1–2	11–3
L. corniculatus	Common bird's-foot		
L. pedunculatus (= *L. uliginosus*)	Greater bird's-foot Marsh bird's-foot		
L. subbiflorus (= *L. hispidus*)	Hairy bird's-foot Boyd's clover		

Remarks

Mediterranean, Eurasia. Perennial grazing legumes, except for the annual hairy bird's-foot. This species has established itself in the EC, particularly in lawns. The trefoils are suited to acidic soils and cooler climates of high-lying areas of MP, FS and KZN. A long thin taproot increases drought resistance. Small scale establishment as a crop up to now. Yellow to orange pea-type flowers in bunches at the top of long stems. Predominantly self-sterile. The pods are thin, straight, brown to purplish, and at a 90° angle to the flower stem, resembling the toes of a fowl. Light grey to deep yellow to light brown to khaki pellet colours recorded. Honey in Europe described as 'light yellow colour, characteristic acidic taste, rapid granulation'.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Luffa aegyptiaca** (= *L. cylindrica*) (Cucurbitaceae)	Loofah Sponge gourd *Vadoekplant*	N2? P1?	10–12

Remarks

Tropical Africa and Asia. Annual climber with typical yellow pumpkin-type flowers. House gardens and minor crop in the subtropics of S. Africa. Female and male flowers occur separately on the same plant, both producing nectar. Honeybees are needed for pollination and resultant fruit set.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Lupinus** spp. (Fabaceae) (Papilionaceae)	Lupin *Lupiene*	N0? P0–2	8–9

Remarks

Mediterranean. Mainly a seed and forage crop of the winter rainfall region. Also a minor winter crop under irrigation in summer rainfall areas. Mostly self-pollinating. Few cases overseas of increased seed set with honeybees. Bee factor 15%. Also carpenter bee visits. The use of lupins by honeybees as a source of nectar is disputed. Pollen pellets brownish-orange. Crude protein 32.6% (Australia).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Lycopersicon esculentum** (SOLANACEAE)	Tomato *Tamatie*	N0 P0–1	1–12

Remarks

Peru. Tomato flowers have no nectar. Bees only collect the pollen from the six yellow anthers when they have no choice of other forage, as in greenhouses. Hybrid seed production under field conditions is problematical, and feeding sugar syrup helps if there are no other plant competitors. Because the stigma in a flower is only receptive before the anthers release the pollen, cross-pollination is necessary to produce the many seeds in a fruit.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Macadamia integrifolia** (PROTEACEAE)	Macadamia nut *Makadamia neut*	N1–3 P0–2	7–9

Remarks

Queensland. Many tubular bisexual flowers on a drooping spike. The stigma, covered in its own pollen, is not receptive at first, and bees remove the pollen. In subsequent searches for pollen on stigmas, honeybees deposit some pollen grains on the now receptive stigma, which leads to fertilisation. Pellet colour off-white. Pollen crude protein 16–22% (Australia). The nectar production is better with a high relative humidity. The honey is very light in colour, has a mild taste and granulates slowly. The main flowering period lasts 2–3 weeks, followed by another period with a small flower load, some four weeks or so later.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Macroptilium atropurpureum** (FABACEAE) (PAPILIONACEAE)	Siratro	N2? P1?	8–4

Remarks

South and Central America. Tropical legume used for pasture in the subtropics. Deep-rooted, mat-forming perennial. Pea flowers purple to red, opening in pairs at a time. Flower formation initiated by drought, i.e. it can be controlled by irrigation to some extent. Not grown much in S. Africa yet. Visited by honeybees in the EC. Single statement in literature: 'self-pollinating'.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Malus pumila** & **M. domestica** (ROSACEAE)	Apple *Appel*	N1–3 P1–3	9–11 (Week 1/9–1/11)

Remarks

Central Asia. Commercial crops need cross-pollination with compatible pollenisers, in which case the bee factor is 90%. With a low hive stocking rate, a honey crop is sometimes obtained, particularly from 'old' cultivars. Pollen pellets in shades of yellow to dark beige. High crude protein levels of pollen around 28% promote brood rearing. Generally there is a decrease in honey and pollen stores, as well as in the amount of brood in colonies on apples. Hail netting in MP and eastern FS hinders bee flight and makes bee management more difficult. There is circumstantial evidence that systemic insecticides applied to apple trees in MP, killed honeybees via the nectar in flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Mangifera indica** (ANACARDIACEAE)	Mango *Mango*	N0–2 EN P0–1 PR	6–9

Remarks

Burma/Myanmar. Mainly self-compatible, but pollinators are essential. Fruit set generally poor. Bee factor most likely 85%. Problems arise when the flowering time of more attractive competitors such as citrus, litchi and saligna overlap. Nectar foraging takes place mainly during mornings. A small surplus of reddish honey is rarely gathered with low hive densities. Better nectar production in coastal locations. Only one anther per flower produces pollen. Pellets small, dark brown to purplish. Dark extrafloral nectar is collected in leaf axils where developing inflorescences are growing. Bees collect this in large crop loads during early morning. Foragers also imbibe the juice of damaged ripe fruit. One report of propolis collection.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Manihot esculenta** (= *M. utilissima*) (EUPHORBIACEAE)	Manioc Cassava *Broodwortel*	N0–2 EN P0–1	1–12? (11–1) (4–6)

Remarks

Brazil. Subsistence crop in eastern S. Africa, but commercial plantings are being established. Short-lived perennial woody shrub with thick, high-starch, edible roots. Separate female and male flowers on the same panicle. Frequent and regular flowering in some cultivars, but non-existent in others. Pollen light yellow. One record from the Congo of extrafloral nectar taken on the leaf stalks.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Marrubium vulgare** (LAMIACEAE)	Horehound *Marvel* *Koorsbossie*	N2–3 P0–2	11–3

Remarks

Eurasia. Small, perennial, woolly, medicinal herb that is infrequently cultivated. Established in Lesotho and the EC, where it was introduced by European settlers. Small, white, hairy flowers in several whorls on a stem. Bee factor 70%. Pollen dirty white. Honey in Europe, Australia and New Zealand.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Matricaria recutita* (= **M. chamomilla) (ASTERACEAE)	True chamomile German chamomile *Egte kamille*	N1? P1?	9–4?

Remarks

France to Iraq. Found in many gardens, but grown commercially only on a small scale. An annual herb with finely feathered foliage. Used mainly for medicinal teas, for which the flowers are harvested. White daisies with petals pointing down. The yellow central disc is characteristically raised into a conical shape. Flowering time depends on sowing time.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Medicago** spp. (FABACEAE) (PAPILIONACEAE)	Medicks	N1–3? P0–2?	7–10
M. littoralis	Coastal medick		
M. polymorpha	Rough medick Burr clover		
M. truncatula	Barrel medick		

Remarks

Europe, Asia Minor. Annual pasture legumes of the southwestern Cape and SC. The small yellow pea flowers benefit greatly from honeybee pollination. The pods of medicks are curled or curved to a greater or lesser degree. These dry pods are eaten by sheep in summer. All the listed species have different cultivars, of which new ones are still being tested. Flowering time depends on rainfall and cultivar. Beekeepers make little use of this potential honey source because of the flowering time, but a few reports have been received of a high quality, light honey being harvested. More information is needed. (See also WEEDS).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***M. sativa**	Lucerne *Lusern*	N0–3 P0–2	11–3

Remarks

Asia Minor. Planted extensively throughout S. Africa for grazing, hay and seed production. The honey is light-coloured, mild-tasting and slow-granulating. It is obtained from areas where the rainfall during summer is low, both in winter and summer rainfall regions. The Little Karoo is the prime production area. Flowers are less attractive to bees after rain, presumably because of lower nectar sugar and more difficult flower tripping. Pollen is only available from tripped flowers. In tripping, the staminal column strikes the ventral side of the forager with considerable force. Bees then try to steal nectar from the side of flowers. Tripping is essential for seed production, therefore more than one batch of bees is recommended. Pellets are olive coloured or light brownish-yellow. Pollen crude protein 19–24% (Australia).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Melissa officinalis** (LAMIACEAE)	Lemon balm *Sitroenkruid*	N0–2 P0–1	12–6

Remarks

Europe to Iran. Perennial culinary and medicinal herb, grown in gardens. Small white flowers in whorls on an upright stem. May flower for several months. Pellets light grey. Aromatic lemon scent that is very similar to Nasonov pheromone – the plant strongly attracts swarms when used in trap hives.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Mentha** spp. (Lamiaceae)	Mint *Ment*	N1–3 P0–1	12–4
M. arvensis	Field mint *Akkerment*		
M. piperita	Pepper mint *Peperment*		
M. spicata	Spear mint *Kruisement*		
M. suaveolens	Apple mint *Appelment*		

Remarks

Eurasia. Perennial herbs with a creeping growth habit. The listed species are those most often encountered in gardens, where they are grown primarily for their culinary, but also medicinal uses. **Mentha piperita** is a commercial crop plant in the southwestern Cape and SC. Mints easily hybridise, which is the reason for the wide diversity of types. They are therefore propagated by root divisions or stem cuttings. Some species and cultivars flower profusely, others more sparingly. Mints provide little pollen, but they are honey sources where grown on a large scale in other countries.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Moringa oleifera** (Moringaceae)	Horseradish tree *Spinasieboom*	N1–3 P0–3	11–5?

Remarks

India. Small, deciduous, semi-succulent tree. Young pods, flowers and leaves are eaten as vegetables (important constituent of Madras curry). Roots are used as a horseradish seasoning. Grown as part of small development projects in MP and KZN. Established commercial ventures in Vendaland and southern KZN produce leaf powder. Sprays of small, white and gold, honey-scented flowers. Flowering time is partly determined by the cultivar. Beeplant value from overseas information.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Morus alba/nigra** (Moraceae)	Mulberry *Moerbei*	N0 P0–2	8–9

Remarks

China. Widely grown in gardens. Serious invader in KZN and northern provinces. Separate female and male 'catkins' on the same tree, with males much fewer in number. A forceful discharge of pollen from the minute flowers has been documented. Pellets in shades of grey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Mucuna pruriens** (= *Stizolobium deeringianum*) (Fabaceae) (Papilionaceae)	Velvet bean *Fluweelboontjie*	N0–2? P?	2–3

Remarks

Asia. Vigorous annual with purple flowers and black velvety pods. Used in subtropical fruit orchards as a cover crop to suppress weeds, or as green manure. Bees have seldom been observed on the flowers. Nectar secretion is possibly dependent on strong showers and loamy soils. Absence of seeds reported in higher-lying areas of S. Africa. Honey only from some sites in the southern USA.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Musa* × *sapientium* (= **M. paradisiaca & **M. acuminata**) (MUSACEAE)	Banana *Piesang*	N0–3? P? PR0–1	1–12 (4–7)? (11–5)?

Remarks

Southeast Asia. Large hanging inflorescence (bunch) with female flowers (small bananas) at the top, and male flowers at the bottom. The latter only flower after the females have completed their development. Bananas develop parthenocarpically. Bees visit the male flowers for their plentiful nectar, which may have a sugar content as low as 14%. The five large anthers do not seem to release any pollen. The male part of the inflorescence may flower for up to three months. Propolis is sometimes collected from the tips of the very large red bracts that initially cover the developing flowers. (The above observations were made in Pretoria. Male flowers of 'Dwarf Cavendish' bananas in the Lowveld had no nectar).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Nicotiana tabacum** (SOLANACEAE)	Turkish tobacco Virginian tobacco *Tabak*	N0–2 P0–1	10–3

Remarks

South and Central America. Production in summer and winter rainfall regions. Anthers dehisce mid-forenoon. Pellets light beige or cream-coloured. Verbal reports of small honey crops in the past. Aztec tobacco, ***N. rustica**, was previously grown on a limited commercial scale. It is still found in home gardens in summer rainfall regions. The yellow flowers are short-tubed and bees can access the nectar readily.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Ocimum basilicum** (LAMIACEAE)	Sweet basil *Soet balsem* *Basilikum*	N1–3? P0–2	12–5 (2–4)

Remarks

Old World Tropics. Garden and minor commercial crop. Small bushy annual with white to light purple flowers in whorls around an upright flowering stem. Bee-pollinated. Bee factor 80%. Pellets dirty cream. The sacred basil, ***O. tenuifolium** (= *O. sanctum*), is infrequently grown in S. Africa. It has a somewhat similar beeplant value and flowering time as sweet basil. Its pollen colour has been noted as 'yellowish-brown'.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Olea europaea** subsp. **europaea** (OLEACEAE)	Olive *Olyf*	N1? P0–2	10–12

Remarks

Mediterranean. Variance in pollination requirements of cultivars, of which some need cross-pollination. The fragrant flowers have low bee attractivity. They secrete 'little, if any, nectar' – this needs investigation. Each flower has only two stamens. Bees collect pollen reluctantly or very actively in the Cape. Pollen crude protein 16.7% (USA).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Onobrychis viciifolia** (= *O. sativa*) (FABACEAE) (PAPILIONACEAE)	Sainfoin *Esparset*	N1–4 P1–3	8–3 (9–11)

Remarks

Western and central Europe. Perennial summer legume, best suited to cooler Highveld, i.e. frost tolerant. Grown in MP, FS and EC. Dryland crop for grazing, hay and silage. Tall heads with pink pea flowers. Honey crop from the FS; light yellow, quick granulation. The oily pollen forms sticky pellets that stain fresh combs a pale yellow colour. Pellets in shades of brown. The crude protein content of fresh pollen is ± 28%. Honeybee pollination greatly increases seed set.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Opuntia ficus-indica** (CACTACEAE)	Prickly pear Cactus pear *Gewone turksvy*	N0–2 P0–3	10–12 3–5

Remarks

Mexico. Used for edible fruit, hedges and stock fodder. Different cultivars for fruit production. Sweet fruit relished by humans, birds, baboons and bees. Previously a widespread weed, now under bio-control. Autumn flowering possible in managed orchards with nitrogen fertiliser, or when the first flower crop is removed. Pollen cream to lemon-coloured. Flowers are self-compatible and some self-pollination also takes place. Visits by pollinators increase seed set, which again increases fruit weight. No reports of honey from orchard plants. (See this species under WEEDS).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Origanum** spp. (LAMIACEAE)	Marjoram Oregano *Marjolein*	N2–3 P0–2	12–4

Remarks

Mediterranean, central Europe. Well-known perennial culinary herbs; garden and small-scale commercial cultivation. Propagated by division, but for seed production cross-pollination by honeybees is required. Bee factor 75%. White or pink two-lipped flowers. Pellets in shades of grey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Ornithopus compressus**	Yellow seradella *Geel seradella*	N1–3 P0–1	5–12 (8–10)
***O. pinnatus**	Slender seradella *Fyn seradella*		
***O. sativus** (FABACEAE) (PAPILIONACEAE)	Common seradella *Pienk seradella*		

Remarks

Europe. Grown mainly in the southwestern Cape, but also in EC, FS, MP. Excellent annual pasture legumes on poor, acid, sandy soils. Grown for seed production as well. Hard-seeded yellow seradella does not require replanting. Pollination biology unknown, but bee factor estimated at 65%. Light mild honey from Cape West Coast.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Papaver somniferum** (Papaveraceae)	Medicinal poppy Opium poppy *Olie papawer*	N0 P2–3	7–10?

Remarks

Western Asia, southeastern Europe. Narcotic analgesic grown in the WC. In other parts of the world it is grown for opium, poppy seeds and seed oil. Seeds contain no harmful alkaloids. Pollen is eagerly collected by bees. Bee factor 5%.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Passiflora edulis** (Passifloraceae)	Granadilla Passionfruit *Grenadella*	N1–2 P0–2	1–12 (9–10) (2–3)

Remarks

South America. Commercial and well-known garden crop. Most flowers are self-sterile and need cross pollination. Bee factor 85%. Carpenter bees and honeybees are effective pollinators, but the latter are often absent from the flowers. Pollen pellets yellowish. Spring and summer flowering peaks. Unknown whether extrafloral leafstalk nectaries are visited by bees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Pastinaca sativa** (Apiaceae)	Parsnip *Witwortel*	N1–2? P0–1	10–1?

Remarks

Europe, western Asia. Minor biennial root or seed crop. Stigma receptive about five days after anthers dehisce, i.e. pollen transfer from another flower is needed for seed production. Pellets greenish-yellow. Occasional escape in most provinces in moist situations.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Pennisetum glaucum** (= *P. americanum*) (= *P. typhoides*) (Poaceae)	Pearl millet *Babala*	N0 HD P0–3	12–3

Remarks

Tropical Africa. Tufted annual grass used for grazing and silage, as well as grain in rural areas. One or usually more upright stems, 1–3 m high. Different cultivars are grown in LIM, NW, FS, KZN. Inflorescence is a dense, erect spike on which bees run up and down to collect pollen. Good seed crops without bees, but set increased significantly with honeybee pollination in one case. Bees collect honeydew – information from outside S. Africa.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Persea americana** (Lauraceae)	Avocado *Avokado*	N1–4 P1–3	5–10 (8–9)

Remarks

Central America. The cultivars grown in S. Africa are self-compatible to a greater or lesser degree, but need maximum pollination for commercial crops. Bee factor 85%. Low and high production years alternate. The highest nectar value was obtained during the afternoon from foragers on female-phase flowers. There is a noticeable reduction in foraging around midday generally, which may be tied to the change of flower phases. Pollen pellets have a mild taste and a yellowish to biscuit colour. Pollen crude protein 24.4% (Australia). Colony strength is maintained on this crop. Honey: dark reddish-brown, low viscosity, slow granulation, strong but pleasant aroma and flavour – a hint of molasses.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Petroselinum crispum** (Apiaceae)	Parsley *Pietersielie*	N1–2 P0–2?	12–2?

Remarks

Central Europe. Widely grown culinary and medicinal annual. It is a biennial if used for seed production, when cross-pollination is profitable. Bee factor 55%. Pollen pellets a dirty cream colour.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Phaseolus coccineus** (= *P. multiflorus*) (Fabaceae) (Papilionaceae)	Kidney bean *Nierboontjie*	N0–4 P0–1	1–4 (2–3)

Remarks

Mexico to Panama. Pulse (dry bean) crop of MP and FS, but plantings are strongly decreasing. In other parts of the world it is grown as a green vegetable bean, known as the runner bean. Self-compatible, but cross-pollination increases seed set. High temperatures during flowering cause flower drop. The usually low April temperatures on the Highveld suppress nectar secretion. Quality honey: light straw colour, mild flavour, little aroma, good body.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Phoenix dactylifera** (Arecaceae)	Date palm *Dadelpalm*	N? P1–3	7–9

Remarks

Western Asia, North Africa. Grown near the lower Orange River. Separate male and female plants, with plantation ratios of 2–5 males to 100 females. Hand or mechanical pollination is applied. A whitish to light yellow pollen is eagerly collected by honeybees. Crude protein 35.5% (USA). Information on possible pollen transfer by bees is lacking. No attempts seem to have been made to apply attractants to inflorescences.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Physalis peruviana** (Solanaceae)	Cape gooseberry *Appelliefie*	N0–2? P0–1	1–12 (1–5) SR (3–8)? WR

Remarks

South America. Garden plant, minor commercial crop and escape. A perennial treated as an annual or biennial. Pollination needs unknown, but bee factor is near 50%. A commercial venture in Zimbabwe increased production with honeybees, which were reported to be 'roaring' in the fields at times. Nectar is water-white.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Pimpinella anisum** (Apiaceae)	Aniseed *Anys*	N P	10–4

Remarks

Mediterranean, Asia Minor. Small scale seed production in S. Africa; also a general garden plant. An annual with many small, white, bisexual flowers in loose flattish clusters. Flowering time depends on planting time. No information on beeplant value or pollination needs, other than flowers that are attractive to honeybees, and that it would be wise to provide hives in fields (McGregor 1976).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Pistacia vera** (ANACARDIACEAE)	Pistachio nut *Pimperneut*	N0 P0–3	8–9

Remarks

Iran to Central Asia. Commercial orchards in NC. Small to medium size, deciduous tree. Established in plantations in a ratio of 1 male to 8 female trees. Known as an alternate bearer; many new flower buds may be shed with a heavy nut crop. Pollen light yellow with a mild taste. Very high pollen-gathering activity observed, with bees landing on adjacent female inflorescences, which would account for some pollen dispersal besides the natural wind-pollination.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Pisum sativum** (FABACEAE) (PAPILIONACEAE)	Garden pea Field pea *Tuinertjie* *Veldertjie*	N0–1 P0–2	6–8?

Remarks

Eurasia. Used fresh, canned, dry and as hay. Self-pollinating, but bee factor nevertheless near 20%. Visited by bees if other food is scarce. Pollen light orange-brown. Bees rarely attempt to access the nectar in the base of the keel.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Prunus armeniaca** (ROSACEAE)	Apricot *Appelkoos*	N1–2 P1–2	8–9 (Week 3/8–4/9)

Remarks

China to western Asia. Commercial orchards in summer and winter rainfall regions. Cultivars are mostly self-compatible, i.e. fruit set is generally not a problem in S. Africa. Growers very seldom hire bee colonies. There is at least one new cultivar, however, that needs a polleniser. Apricot × plum hybrids, called 'pluots' and 'plumcots', are self-incompatible and need apricot or plum pollenisers. Pellets light olive to greenish-khaki.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***P. avium**	Sweet cherry *Soetkersie*	N2–3 P2–3	9–10 (Week 1/9–1/10)

Remarks

China, Japan. Produced mainly in the eastern FS, but also southwestern Cape. Very small plantings in LIM and KZN. Compatible cultivars and honeybees are needed for cross-pollination. Bee factor 90%. Orchards are also inclined to alternate bearing. Occasional honey in the FS; reddish-golden, mildly fruity, slightly acidic. Pellets light orange-brown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***P. × domestica**	Plum Prune *Pruim* *Pruimedant*	N1–2 P1–3	8–10 (Week 1/8–2/10)

Remarks

Europe, western Asia. Majority of commercial cultivars are still self-incompatible, but a few new cultivars are self-fertile. Bee factor 90% or less. Nectar with comparatively low sugar concentration. Also small nectar volumes, but the nectar can be secreted at relatively low temperatures. Problems are seldom encountered with honeybee pollination. Good source of pollen with regard to the amount as well as the nutritive value. Pellets yellowish-brown to variably orange-brown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***P. dulcis** (= *P. amygdalus*)	Almond *Amandel*	N1–3 P2–3	7–9 (Week 3/7–2/9)

Remarks

Southwest Asia. Commercial orchards in winter and summer rainfall regions. Most commercial cultivars are self-incompatible, requiring honeybee cross-pollination. Therefore a high bee factor of 90%. Cold weather during flowering of early cultivars subdues bee activity: sunny, wind-protected locations for hives are needed. Competitive flowering beeplants such as aloes and eucalypts have lured bees away from almond flowers. Pellets light to dark olive, or mustard-coloured. Crude protein 30.7% (Australia) or 28.7% (USA). The amygdalin in almond pollen is potentially toxic to honeybees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***P. persica**	Peach Nectarine *Perske* *Kaalperske*	N0–1 P0–2	7–9 (Week 4/7–4/9)

Remarks

China. Although most cultivars are apparently self-fertile, pollen transfer (pollination) is still necessary. A few cultivars produce no pollen. Bee factor 65%. Problems with fruit set are rarely encountered and commercial pollination is not practised. Note low nectar value; seven different cultivars that were tested only had N1 ratings. Early-flowering cultivars may be seriously affected by severe frosts. Pellets yellow, light brown, olive. Pollen crude protein 26.5% (USA).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Psidium guajava** (Myrtaceae)	Guava *Koejawel*	N0–2 P0–3	8–3 (11–12) SR

Remarks

Tropical America. Partially self-incompatible, necessitating cross-pollination. Bee factor 45%. Bee attractivity very variable, usually low. Blossoming can be controlled with pruning. Wild trees flower for about a month at a time, with flower buds, open flowers and mature green fruit on the same tree. Invasive in KZN, MP, LIM. A light golden honey was obtained once from an EC orchard. Bees also collect juice of ripe fruit. Pellets whitish or cream-coloured.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Punica granatum** (Punicaceae)	Pomegranate *Granaat*	N0–1 P0–1	9–11

Remarks

Asia Minor. In home gardens as hedge, ornamental or for fruit. Recent revival in interest; several commercial ventures in FS, KZN, EC, WC. Bee factor possibly 20% or higher. An external agent, e.g. honeybee, is necessary for pollen transfer of the self-fertile or self-sterile cultivars. Small biscuit-coloured to light yellow pellets.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Pyrus communis** (= *P. domestica*) (ROSACEAE)	Pear *Peer*	N1 P2–4	9–10 (Week 1/9–4/10)

Remarks

Asia Minor. Cross-pollination with compatible pollenisers is essential in many cultivars. The pollenisers must flower the same time as the main crop, and must themselves be commercial pears. Nectar is unattractive: low volumes and low sugar. Therefore pollination units should have a minimum of honey. A few cultivars set fruit parthenocarpically. Pear trees bear relatively few flowers compared to other pome and stone fruits. Old garden trees (unknown cultivars) in the summer rainfall region set good crops without pollenisers, but with bee pollination. Pellets pale lemon or light greyish-green or light green.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Raphanus sativus** var. **sativus**	Common radish *Gewone radys*	N1–2 P1–3	5–9
***R. sativus** var. **longipinnatus** (BRASSICACEAE)	Japanese radish *Japanese radys*		

Remarks

Middle and Far East. The common radish is a small, round, red, tuberous root eaten fresh as a salad vegetable. The Japanese radish has large, round to elongated, up to 300 mm long tuberous roots that are fed to livestock as winter fodder on the Highveld. Radishes are annual to perennial and for seed production are left to flower. One published report of a 22% increase in seed production using honeybees as pollinators. Pollen of Japanese radishes is light yellow, with a mild but distinctly acidic taste. The nectar is water-white, with a slightly sour smell.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Ribes nigrum** (GROSSULARIACEAE) (ESCALLONIACEAE)	Black currant *Swart aalbessie*	N1–2 P0–1	9–10

Remarks

Europe to Himalayas. Small commercial plantings on the Highveld. Lack of pollination, as well as hot or dry weather, may cause fruit drop. Reported substantial increase in fruit yield with bee pollination. Much nectar is secreted, but with a low sugar concentration: 9–26% in Europe. Pollen pellets are greenish-grey. The beeplant value is based on European information.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Rubus** spp. & cvs. (ROSACEAE)	Blackberry Loganberry Youngberry *Braambessie*	N1–3 P1–3	9–2

Remarks

Europe, North America. ***Rubus ursinus** is most likely to be a parent of all these berry types. Most orchards are found in the Swellendam district. Fruit set and berry quality increased by bees in both self-sterile and self-fertile cultivars. Pollen whitish to light grey to light green. Crude protein 25.8% (Europe), or 20.0% (Australia).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***R. idaeus**	Raspberry *Framboos*	N1–3 P0–3	9–4 (10–11) (2–3)

Remarks

Europe. Grown in the southwestern and southern Cape, with smaller plantings under nets on the Highveld and in KZN. New autumn-bearing cultivars flower later. Largely self-fertile, with varying degrees of auto-pollination. Commercial orchards need honeybee pollination to increase set and to reduce the number of imperfect fruit. Pellets light grey. Reports of some surplus honey in the Cape. Honey in Europe and North America: light colour, quick granulation.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Ruta graveolens** (Rutaceae)	Rue *Wynruit*	N0–2 P0–1	9–1

Remarks

Southern Europe. Few garden plants in S. Africa. Escapes in WC, EC, MP. Medicinal but poisonous herb. The small flowers have yellow petals with hairy margins. Relatively few flowers are open at any given time, i.e. long-flowering. Pellets light brown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Saccharum officinarum** (Poaceae)	Sugar cane *Suikerriet*	N0 Sap 0–2 P0–1	Sap 4–1 (11–1)

Remarks

Melanesia. Cane is cut from April to January, but bees collect the sap from November to January when no other nectar is available. Sap also exudes naturally in uncut burnt and unburnt cane on the lowest five or six nodes. The sugar concentration of the sap varies between 11% and 24%. Bees prefer sweeter nectar, if available. Honey: very dark, dense, molasses-like flavour. Flowering plants may be found any time of the year, though never plentiful. Sometimes pollen is eagerly collected.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Salvia officinalis** (Lamiaceae)	Common sage *Maksalie*	N0–4 P0–1	1–12 (9–2)

Remarks

Southern Europe. Small commercial plantings in S. Africa, but mainly grown in gardens. Culinary and medicinal herb. Pollen is deposited on bees' backs. It is rarely collected in pellets. Estimated bee factor 65%. Flowers in gardens are sometimes ignored. Honey in Europe: strongly aromatic, light colour.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Sanguisorba minor** (Rosaceae)	Sheep burnet Salad burnet *Skaapburnet*	N0 P2	11–2?

Remarks

Europe, Mediterranean. Hardy perennial pasture crop and salad herb. Flower head: round, green to reddish, on long thin stalk. Mainly wind-pollinated. Pellets brown. Escapes in G, MP, FS, EC.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Satureja hortensis**	Summer savory *Somer bonekruid*	N1–3 P0–1	12–4
***S. montana** (Lamiaceae)	Winter savory *Winter bonekruid*		

Remarks

Mediterranean. Annual and perennial herbs respectively. Widely grown on a small scale in gardens. Pollination biology unknown. Nectar is yellow, and pollen light yellowish-brown. Honey in Europe is strongly aromatic, with a yellowish-brown colour.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Sechium edule** (Cucurbitaceae)	Susu Chayote *Sjoe-sjoe*	N0–2 P0–1	1–5

Remarks

Mexico? – now Pantropical. Perennial tuberous-rooted crop plant. Widely grown in gardens, but now also promoted as a minor commercial crop. The large, pear-shaped, rough-skinned, lemon-coloured fruit are eaten cooked in S. Africa. In other countries the roots and leaves are also eaten. Small cream-coloured; separate male and female flowers are found on the same plant. Both sexes provide potential pollinators with nectar. Pellets mostly small; cream-coloured to light yellow. Long-flowering. Honeybees contribute to pollination, but to what extent is not known. Each fruit has a single, large edible seed.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Simmondsia sinensis** (Buxaceae) (Simmondsiaceae)	Jojoba *Woestynbos*	N0 P0–2?	8–9

Remarks

Mexico, southern USA. Very hardy evergreen shrub, grown for its seeds that contain a unique oil used in pharmaceuticals. Dioecious. Wind-pollinated. Planting ratio: 1 male to 5 females. Honeybees collect an abundance of pollen from numerous stamens of male flowers. Their wingbeats produce enough wind to send puffs of pollen into the air, so they may contribute to wind-pollination (Free 1993). Pollen crude protein 31–34% (USA). One commercial orchard and several smaller plantings in the Little Karoo, EC and Upington district.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Sinapis alba** (Brassicaceae)	White mustard *Wit mosterd*	N2–3 P2–3	8–10

Remarks

Mediterranean. An escape in the EC. Minor crop in the southwestern Cape, where the market has dropped. Now recommended for crop rotation with grains, to be used as a cover crop, green manure and forage. Bees double seed production, with a bee factor possibly as high as 75%. Pellets lemon-coloured or yellowish. White mustard can be distinguished from other mustards by the flat beak and hairy surface of the seed capsule or 'pod'.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Solanum melongena** (SOLANACEAE)	Aubergine Brinjal Eggplant *Eiervrug*	N0 P0–1	11–4

Remarks

India. Flowers are very rarely visited by honeybees, but frequently by carpenter bees in S. Africa. In greenhouses honeybee pollination increased the size of fruit. Bee factor possibly 35%. Sugar-feeding of colonies will be necessary in any attempts to promote pollination.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Sorghum bicolor (POACEAE)	Grain sorghum *Graansorghum*	N0 HD0–1 P0–3	12–4

Remarks

Africa. Grown for its grain, but also as cattle feed, particularly the many cultivars of forage sorghums. These are mostly **S. bicolor** × **S. sudanense** crossings. Pollen is eagerly collected from grain sorghum if a stimulative nectar source is at hand. Pellets light yellow to cream-coloured. Sometimes honeydew from the sorghum aphid becomes available, which is then gathered by bees. Reports from the 1920s of sorghum honey in the Western Transvaal [NW] most probably refer to this honeydew.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. dochna	Sweet sorghum Sugar millet *Soetriet*	N0 Sap 0–1 P0–2	1–4

Remarks

Africa. Grown in rural areas of LIM, MP, SZ. A usually single-stemmed annual that is planted for its sweet, juicy pith. Mature inflorescence is a loose, reddish-brown panicle, of which the branches are without spikelets (florets) for 30–100 mm from the base. Bees collect sweet plant juice from cut stumps. New types are being tested for their biomass production; they are very promising candidates for making biofuel.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Stevia rebaudiana** (ASTERACEAE)	Stevia Sugar leaf	N3? P?	3–5

Remarks

Subtropical South America. Small perennial shrub of which the leaves are used as a high-intensity sweetener. The small, white, star-shaped flowers are solitary and not in the typical composite flower head. At least two herb farms, one in KZN and the other in NW, produce this crop.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Stylosanthes guianensis** (FABACEAE) (PAPILIONACEAE)	Common stylo Oxley stylo *Gewone stylo*	N0–1 P0–2	3–5

Remarks

South America. Decumbent to partly erect perennial legume used for stock grazing in hot, sandy regions. It has become established in a few locations where it was tested. The author could not establish whether this crop is commercially grown. Small yellow pea flowers. Nectar water-white. Pellets dark beige.

Botanical Name	Common Name	Beeplant Value	FloweringTime
***Symphytum officinale** (Boraginaceae)	Comfrey *Smeerwortel*	N1–3 P0–2	10–2?

Remarks

Europe, Asia. Perennial fodder crop (restricted use) and medicinal garden herb. Bees can only reach the nectar that runs down the mauve-coloured flower tube. Pollen pellets whitish. Said to have become naturalised in moist grassland.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Thymus** spp. (Lamiaceae)	Thyme *Tiemie*	N1–3 P0–1	10–4
T. × citriodorus	Lemon thyme *Sitroen tiemie*		
T. serpyllum	Creeping thyme *Kruip tiemie*		
T. vulgaris	Common thyme *Egte tiemie*		

Remarks

Mediterranean. Widely grown in S. Africa in gardens and on herb farms for culinary and medicinal purposes (the essential oil thymol). Strongly aromatic, small-leaved herbs. White, pink or mauve flowers that are distinctly two-lipped; the upper lip notched, the lower one with three lobes. Honey in New Zealand and Europe: light amber, mint-flavoured. Pellets of creeping thyme are light brownish-olive.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Trifolium balansae* (= ***T. michelianum var. **balansae**) (Fabaceae) (Papilionaceae)	Balansa clover *Balansa klawer*	N3? P3?	9–11

Remarks

Turkey. This annual legume for grazing and hay is used in the southwestern Cape in rotation with wheat. Commercial planting is on the increase. Flowers white to light rose. Pollination needs unknown. Pollen crude protein 27–29%. Very light honey in South Australia.

Botanical Name	Common Name	Beeplant Value	FloweringTime
***T. fragiferum**	Strawberry clover *Aarbei klawer*	N2–3 P1–2	12–4

Remarks

Mediterranean. Perennial creeping pasture legume that is also used as an orchard cover crop in the WC. Swollen florets make flower heads look like strawberries. Seed production increased by cross-pollinating bees. Pellets greenish-brown. Honey in New Zealand.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***T. pratense**	Red clover *Rooiklawer*	N0–2 P1–2	10–3 (12–1)

Remarks

Eurasia, North Africa. Perennial silage, hay and grazing legume. Suited to high rainfall areas of KZN, but is also grown in the SC. Self-sterile, therefore needs cross-pollination. Long floret tube; bees cannot reach all the nectar. Honey in Europe and North America. Pollen pellets light to dark brown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***T. repens**	White clover *Witklawer*	N1–3 P1–3	8–5 (10–11) (3–4)

Remarks

Europe. A creeping perennial for grazing. Occurs widely as an escape in higher rainfall areas, particularly as a weed of lawns, from the southwestern Cape to MP and G. Florets wither soon after pollination. Contributes to multi-floral honey. Pollen olive to greyish-brown, with 24.2% crude protein. With summer rains there are two main growing periods reflected in the flowering times.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***T. resupinatum**	Persian clover *Persiese klawer*	N1–3 P0–2	9–11

Remarks

Mediterranean, Asia Minor. Annual pasture crop that is best suited to the all-year rainfall zone of the SC and EC. Bee visits beneficial for seed set. Pellets in shades of brown.

Botanical Name	Common Name	Beeplant Value	FloweringTime
***T. subterraneum**	Subterranean clover *Ondergrondse klawer*	N2–3 P	8–10

Remarks

Mediterranean. A spreading to semi-erect annual pasture crop. Planted in high rainfall areas of the WC and EC. Both fertile and many sterile florets on a flower head. Self-fertile, but bee visits enhance seed set. Very few single-seeded pods develop on the head, which is pushed into the soil by the strongly-growing flower stem. (See the groundnut for a similar action.)

Botanical Name	Common Name	Beeplant Value	Flowering Time
***T. vesiculosum**	Arrowleaf clover *Assegaai klawer*	N3? P	(9–11) WR (3–5) SR

Remarks

Central Europe, Mediterranean. Cold-tolerant annual pasture crop. Best in moist higher-lying areas. Large upright flower head with white to light pink flowers. Bees considered essential for pollination. Honey in North America.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Trigonella foenum-graecum** (Fabaceae) (Papilionaceae)	Fenugreek *Bokhoring klawer*	N1? P0–1?	11–2

Remarks

Asia Minor. Medicinal (seeds) and culinary annual herb, grown on a small scale in various parts of S. Africa. Pale whitish to yellow pea flowers, two per leaf axil. Thin upright pods, resembling a pair of antelope horns (Afrikaans name). Promoted by the Romans as a green feed or hay for horses.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Vaccinium corymbosum** (= *V. ashei*) (Ericaceae)	Highbush blueberry Rabbiteye blueberry *Bloubessie*	N2–3 P1–2	8–10

Remarks

North America. Restricted cultivation in southwestern Cape, EC, KZN, MP and LIM, partly under hail or shade netting. Cultivar inter-planting for cross-pollination by bees is necessary. Pollen light pinkish-grey to silvery-grey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Vicia benghalensis** (= *V. atropurpurea*)	Purple vetch *Pers wiek*	N1–4 EN0–2 P0–2	7–11 (8–10)
***V. villosa** subsp. **varia** (= *V. dasycarpa*)	Grazing vetch *Wei wiek*		
***V. hirsuta** & ***V. villosa**	Hairy vetch *Harige wiek*		
***V. sativa** (Fabaceae) (Papilionaceae)	Common vetch *Gewone wiek*		

Remarks

Eurasia. Vetches are annuals for grazing, hay, silage and pigeon feed. Mainly grown under winter-rainfall conditions. Limited cultivation on the Highveld and along the Orange River. Vetches are also weeds in irrigated winter crops of summer rainfall areas, particularly the common vetch. Grazing vetch performs best on the Highveld, whereas purple vetch is successfully grown under winter-rainfall conditions, where escapes are known as wild peas or *wilde ertjies*. An identifying characteristic of vetches is the leaf-tendril at the tip of the compound leaf. Bee-pollination is essential or beneficial, except for the self-pollinating **V. sativa**. Extrafloral nectaries, which appear as dark spots on the stipules (leaf-like appendages) at the base of the leaf stalk, are well-visited at times. Bees may then even ignore the flowers. Vetches are a source of light, mild, slow-granulating honey in the WC. Pollen pellets biscuit-coloured. The tufted vetch, ***V. cracca**, is not a crop plant in S. Africa, but has become established in Cape Town and in the EC. It is a good beeplant in Europe.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***V. faba**	Broad bean Field bean *Boerboon* *Fababoon*	N0–2 EN0–1 P0–2	6–10

Remarks

Mediterranean. Versatile crop; forage, hay, cover crop in orchards, garden bean, pulse crop, rotation with grains. Flowers mostly self-pollinated and only certain cultivars benefit from bee visits. Bees nevertheless increase seed yield; the bee factor could be as high as 25%. Generally the flowers are not very attractive to bees. Flowers drop in heat, cold or drought conditions. Pellets in shades of grey. Fresh pollen has ± 28% crude protein. Extrafloral stipule nectaries readily attract bees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Vigna unguiculata (= *V. sinensis*) (Fabaceae) (Papilionaceae)	Cowpea *Akkerboon*	N0 EN0–3 P0	9–4 (12–3)

Remarks

Africa. All-purpose, drought-tolerant crop for grazing, hay, silage, cover crop, rotation, green beans, pulse crop, leaf spinach. In S. Africa mostly a minor crop in rural areas, or else of limited commercial usage; this includes planting it as a cover crop in plantations and orchards. One report from Nigeria and another from the USA of flower visits by bees. Cowpeas are otherwise only known for their active extrafloral nectaries on the inflorescence, which are eagerly visited at times by honeybees. This nectar is water-white and has no smell. There are only old USA records of honey harvests when cowpeas were still widely grown. Several wild subspecies of the cowpea are found in eastern S. Africa and further north. Only the one growing in coastal KZN has yet been seen with honeybees collecting extrafloral nectar, and carpenter bees floral nectar.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Vitis vinifera** (Vitaceae)	Grape *Druif*	N0–1? P1–2	9–11 Juice 1–3

Remarks

The wild grape occurs naturally in Middle Asia. Nectar is said to be secreted only at high temperatures. Pellets light yellow to lemon-coloured, with a slightly resinous taste. Summer-flowering rootstocks sometimes also provide pollen. The taste and colour of honey made from the juice of wasp- and bird-damaged wine grapes is akin to *moskonfyt*. Considerable surplus of this honey is reportedly produced at times.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Voandzeia subterranea (= **Vigna subterranea**) (Fabaceae) (Papilionaceae)	Bambara groundnut Njugo bean *Bambara boon* *Rondeboon*	N0 EN? P0	11–2

Remarks

Africa. An 'old' pulse crop with round beans, grown in rural areas of eastern S. Africa. Limited commercial plantings. Flowers are self-fertile and self-pollinating. Bee visits to flowers have not been noted yet, neither to the active nectary on the tip of the inflorescence stem, which is reported to be attended by ants in the early morning hours. The inflorescence with developing pods is pushed into the soil, as happens with the groundnut.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Zea mays** (POACEAE)	Maize *Mielie*	N0 HD0–2 P1–4	1–12 (12–3)

Remarks

America. Widely grown in home gardens, on smallholdings and on farms. Mainly used for maize meal, but also as a green vegetable and for hybrid seed production, forage and silage. Plants are wind- and gravity-pollinated. Bees eagerly collect pollen in dark yellow to very light yellow pellets. Pollen crude protein 20.3% (USA) or 18.5% (Europe). Aphid honeydew is changed into a light reddish-golden honey, with low viscosity, a mildly acidic taste and low pollen content. Chicken and cattle feeds that contain finely ground maize meal are particularly attractive to bees, often causing problems in batteries and feedlots for staff and animals.





Actinidia deliciosa. Kiwi fruit have separate male and female plants that need honeybee cross-pollination.



Allium cepa. Flowering onion field for seed production.



Brassica napus. Yellow fields of flowering canola are becoming a common sight in the Western Cape.



Citrus sinensis. Orange honey is one of the most sought-after honeys in the world.



Coffea arabica. No honey from coffee plants has yet been harvested in S. Africa because plantations are still relatively small.



Coriandrum sativum. Coriander seed is produced in the southwestern Cape and North West province.



Eriobotrya japonica. Loquat is slowly disappearing as a fruit crop in S. Africa.



Foeniculum vulgare. Fennel is a minor seed and garden crop, which requires cross-pollination by honeybees.



Helianthus annuus. A sight that delights the beekeeper and his bees.



Lavandula sp. All lavenders attract bees with their plentiful nectar.



Litchi chinensis. The light-coloured, mild-tasting litchi honey is much sought-after.



Macadamia integrifolia. Although the macadamia nut belongs to the protea family, its atypical inflorescence is a drooping spike.



Malus pumila. Modern apple cultivation in which pollinating bees are but one link in the production chain.



Mangifera indica. Pollination and fruit set of mangos remain problematic.



Mentha sp. All the different kinds of mint attract honeybees with their nectar.



Medicago sativa. Producers of lucerne seed rely heavily on pollinating honeybees.



Opuntia ficus-indica. Although honeybees do contribute to the pollination of the prickly pear, it is unknown to what extent.



Persea americana. Avocado flowers are small and insignificant, but they need honeybees for pollination and attract them with pollen and nectar.



Phaseolus coccineus. Spraying insecticides on flowering kidney beans poses a real danger to honeybees.



Physalis peruviana. Honeybees increase fruit set in Cape gooseberries.



Prunus sp. All stone fruit greatly benefit from honeybee pollination.



Psidium guajava. Guavas are partially self-incompatible and therefore need cross-pollination.



Pyrus communis. The greenish pollen of pear flowers is highly attractive to honeybees, but not the nectar.



Rubus spp. Blackberries and raspberries only set commercial crops when pollinated by honeybees.



Saccharum officinarum. Unburnt sugarcane that is not yet ready for cutting.



Sorghum bicolor. Grain sorghum is not only cultivated commercially, but also on a small scale in rural areas.



Thymus sp. Different kinds of thyme are widely grown in S. Africa.



Trifolium repens. Although white clover is used as a grazing plant in combination with grasses, it is better known as a 'weed' in lawns.



Vicia spp. Vetches are annuals that flower during spring. The tendril at the tip of the compound leaf is one identifying characteristic.



2. Eucalypts

Probably no other plants are as widely adapted to different growth conditions as the estimated 450 species of eucalypts from Australia. Some withstand snow, desert conditions and waterlogging, whilst others grow in dune sand, on lime banks or in brackish sites. It is not surprising therefore that they are planted worldwide, mainly for timber and as ornamentals, but also increasingly for firewood, shelter, poles and bee forage. As a rule eucalypts have attractive foliage and flowers, together with a decorative bark. There is much scope for establishing different eucalypts on farms and in municipal areas for purposes other than just ornamentals or sources of timber, for example as shelterbelts and street trees.

It is estimated that 50 per cent of the total honey crop in South Africa can be attributed to eucalypts. Two species contribute notably to beekeeping in general, and honey production in particular: the saligna gum in eastern South Africa and the sugar gum of the Western Cape. Saligna is the main honey source in the country, and the nectar and pollen flows are profitably utilised for queen rearing. Vast numbers of migratory swarms are attracted to flowering plantations, where they are trapped by commercial beekeepers. Sugar gum is a source of choice grade honey. Together with other eucalypt species it maintains honeybee colonies during the nectar and pollen dearth of the hot and dry summer months. Such colonies are used for the indispensable pollination of deciduous fruit in the following season.

The classification of *Eucalyptus camaldulensis*, *E. cladocalyx*, *E. grandis*, *E. lehmannii*, *E. paniculata* and *E. sideroxylon* as declared weeds or invaders in 2001, and their subsequent removal by Working for Water teams, caused much discord with beekeepers. In 2004 a survey was conducted amongst southwestern Cape beekeepers to determine the importance of eucalypts for honey production and for maintaining colonies that are subsequently used for pollination. The results of this survey were published by Allsopp & Cherry (2005). In a nutshell, the survey revealed that the removal of the listed gums would critically curtail colony maintenance, honey production, and particularly deciduous fruit production. A new alien and invasive species list was gazetted in August 2014. (See further details under WEEDS). The following eucalypts appear in this list: *Eucalyptus camaldulensis* (and hybrids with *E. tereticornis*), *E. cladocalyx*, *E. lehmannii* (= *E. conferruminata*), *E. diversicolor*, *E. grandis* (and hybrids), *E. tereticornis*. A useful booklet assists in the identification and treatment of these eucalypts (Anonymous 2015).

During the past two decades, new eucalypt species and hybrids have been introduced as plantation trees, of which there already are limited commercial plantings. Their beeplant values have not been determined locally, neither in Australia. They are: *Eucalyptus badjensis* (badga gum), *E. benthamii* (Camden white gum), *E. longirostrata* (long-capped grey gum), *Corymbia henryi* (large-leaf spotted gum). Test plantings in Zululand of the Queensland white gum, *E. argophloia,* have shown that it has some desirable properties as a source of timber and its adaptability to different soil types. It has not been established in plantations yet, but this is likely to change in future. The locally bred hybrids all have saligna gum as main parent, namely *E. grandis* × *camaldulensis*, *E. grandis* × *longirostrata*, *E. grandis* × *nitens*, *E. grandis* × *tereticornis* and *E. grandis* × *urophylla*. More recently the hybrids of *Corymbia torelliana* (cadagi gum) and *C. citriodora*, *C. henryi* and *C. maculata* have been planted to test their suitability as high-yielding sources of pulpwood. As with the foregoing species and hybrids, there is no information on plant–bee interactions.

The full impact of recently introduced plant pathogens, as well as sap-sucking and leaf-eating insect pests on eucalypts, has yet to be determined. A few cases of dying trees have been reported, but generally their development is impaired. Fewer flowers and changing flowering time have been observed in at least one species.

The robbing of bee nests in eucalypt brushwood can be a serious fire danger. Prior to the 1980s approximately 11 per cent of all plantation fires in South Africa were caused by collectors of wild honey. Beekeepers were then actively encouraged by the Department of Forestry to place trap hives in its plantations. This practice successfully decreased the number of fires started by honey hunters. Some private forest companies only allow beekeepers into their plantations if they are covered by public liability insurance. Others contract beekeepers to saturate plantations with trap hives to remove all bees.

For accurate and definitive identification, full-grown flower buds and mature dry fruit are needed. These are most likely to be found on the ground beneath the tree. Drawings of buds and fruit, about life-size, appear in this publication to aid in identification, as well as reference to them in the text under each species.

Eucalypts can be broadly classified by bark type as a first step in their identification.

Eucalypt Bark Types

Gum bark (*gladdebas*): Smooth, light-coloured bark throughout, except for varying amounts of dark rough bark at the base of the trunk. Patches, strips or ribbons of bark are shed from the stem and main branches at certain times of the year.



Box bark (*vlegbas*). Layers of rough, short-fibred or sub-fibrous bark. The layers overlie each other at different angles and become somewhat interlaced. Sometimes the bark has a neat appearance when it displays thin, shallow, parallel furrows.



Iron bark (*ysterbas*). Strips of thick bark are separated by deep vertical furrows. In most species the bark contains a hard, dark-coloured resin (called kino gum).





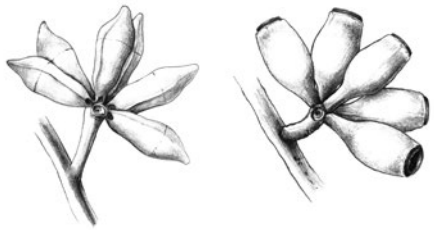
Stringy bark (*veselbas*). The fibres are stringy and soft. Shallow or deep furrows may run vertically.



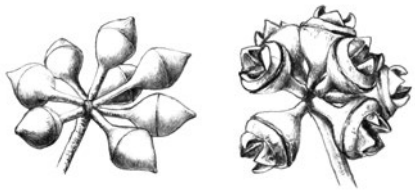


Flaky bark (*skilferbas*). Also called tessellated bark. It is partitioned into small, squarish or oblong patches or pieces. These are non-fibrous (the 'bloodwoods' of Australia), or they are sub-fibrous and may appear on the surface of the bark of stringy barks or box barks. No typical representatives of this bark are grown in South Africa. However, the bark of the yellow box eucalypt may sometimes appear distinctly flaky.

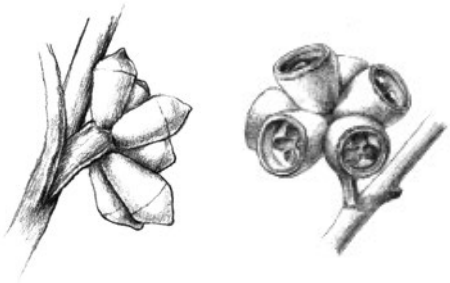
Eucalypt Flower Buds and Fruit



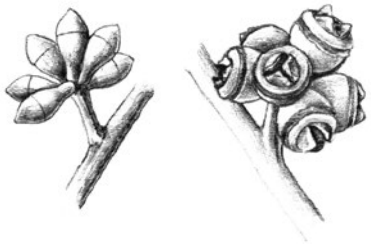
Eucalyptus albens



Eucalyptus blakelyi



Eucalyptus botryoides



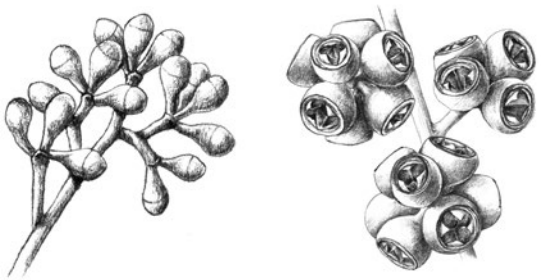
Eucalyptus bridgesiana



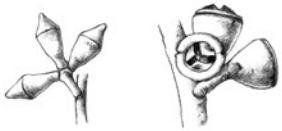
Eucalyptus camaldulensis



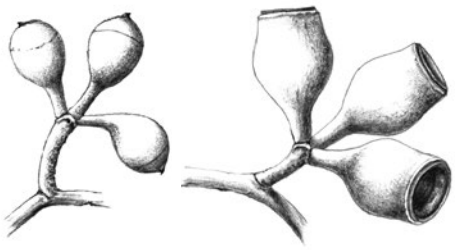
Eucalyptus cladocalyx



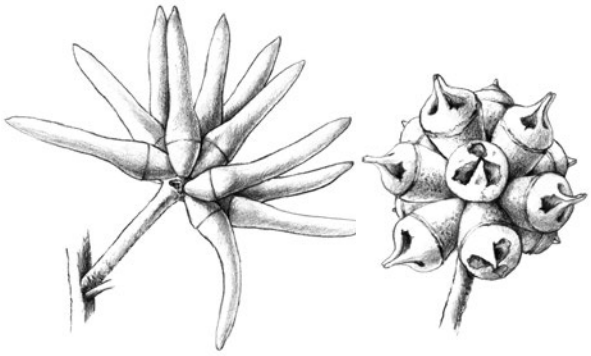
Eucalyptus cloeziana



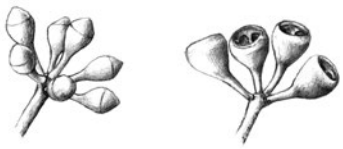
Eucalyptus cinerea



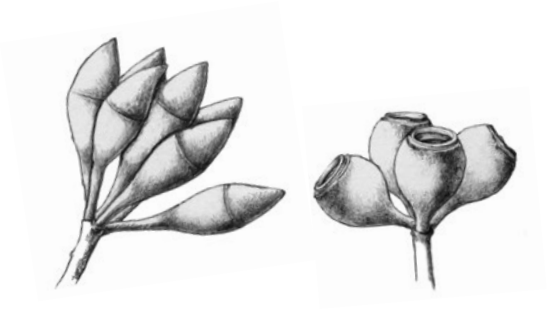
Corymbia citriodora



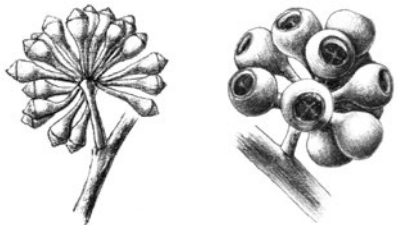
Eucalyptus cornuta



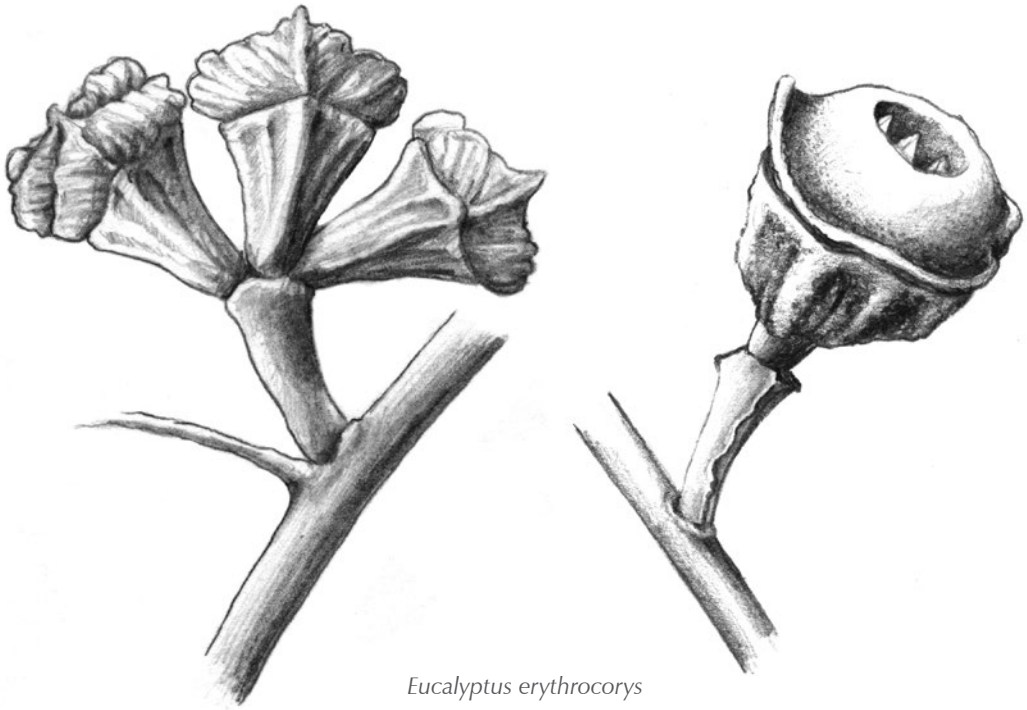
Eucalyptus crebra



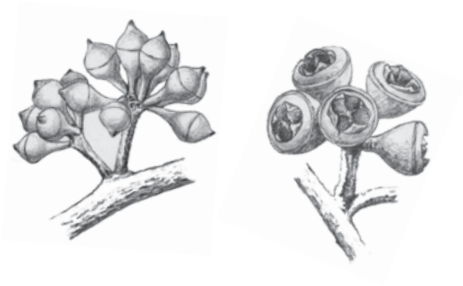
Eucalyptus diversicolor



Eucalyptus elata



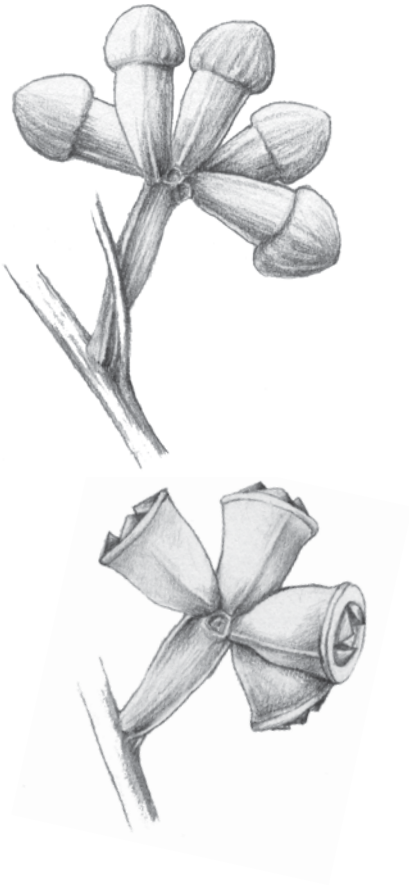
Eucalyptus erythrocorys



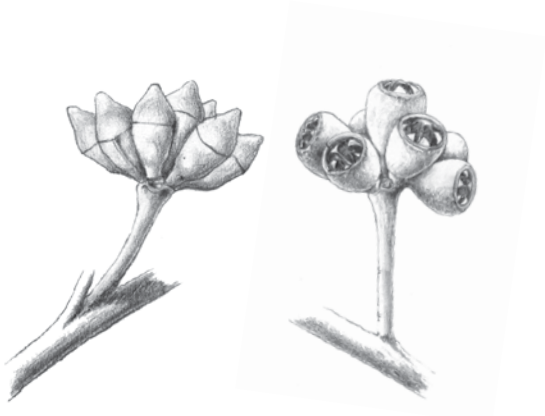
Eucalyptus fastigata



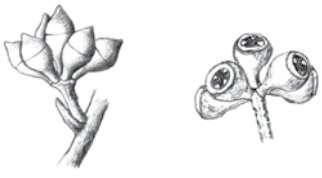
Corymbia ficifolia



Eucalyptus gomphocephala



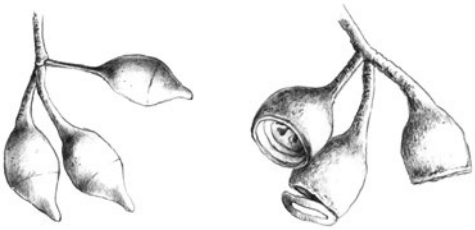
Eucalyptus grandis



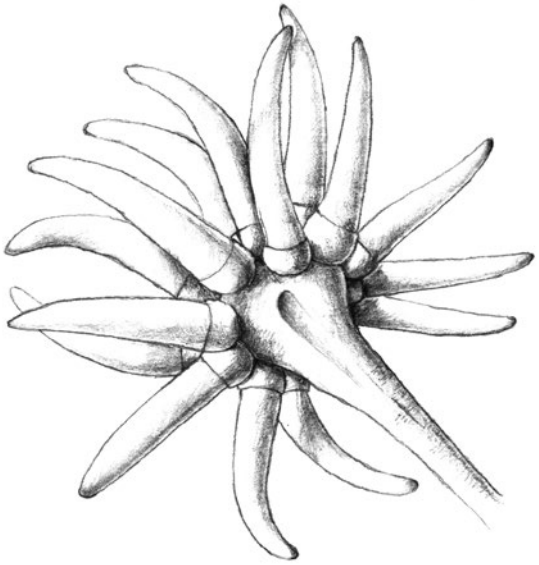
Eucalyptus globoidea

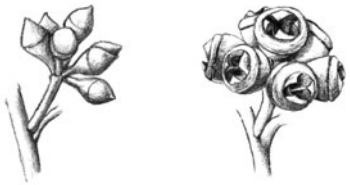


Eucalyptus globulus

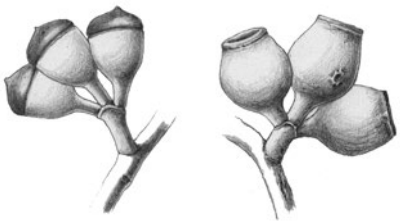


Eucalyptus leucoxylon

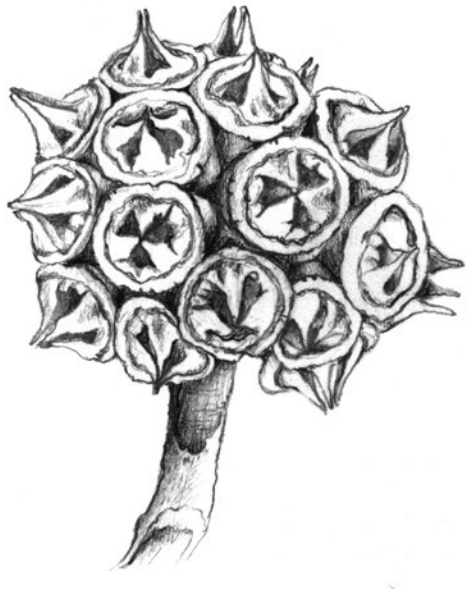




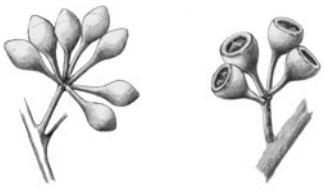
Eucalyptus macarthurii



Corymbia maculata



Eucalyptus lehmannii



Eucalyptus melliodora



Eucalyptus microcorys



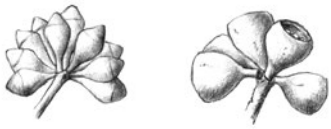
Eucalyptus microtheca



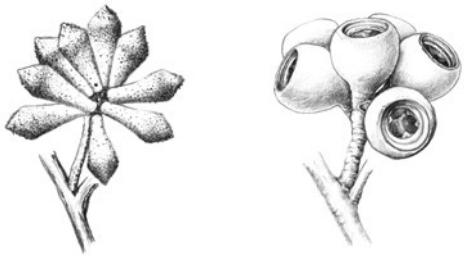
Eucalyptus nitens



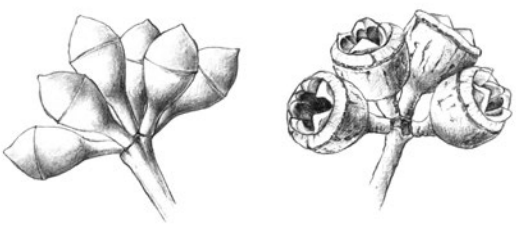
Eucalyptus paniculata



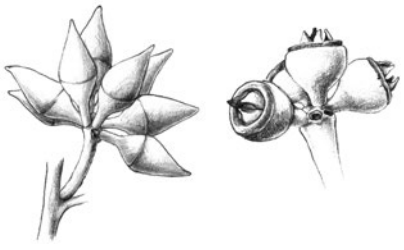
Eucalyptus polyanthemos



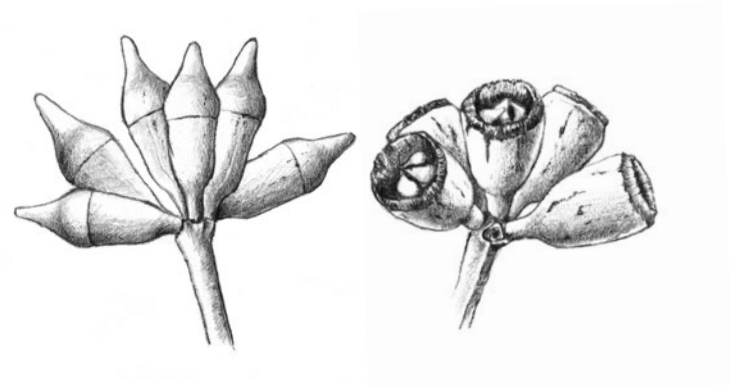
Eucalyptus pauciflora



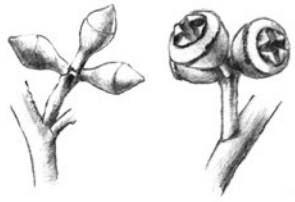
Eucalyptus punctata



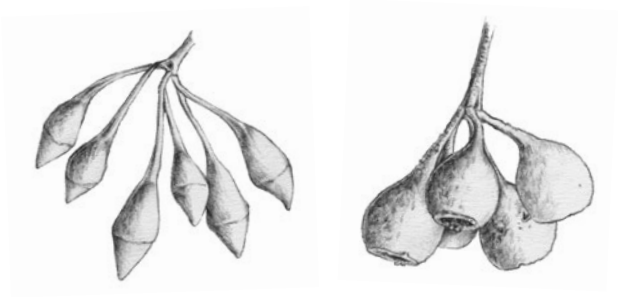
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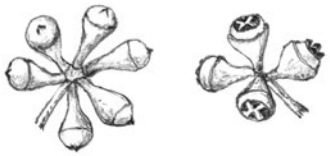
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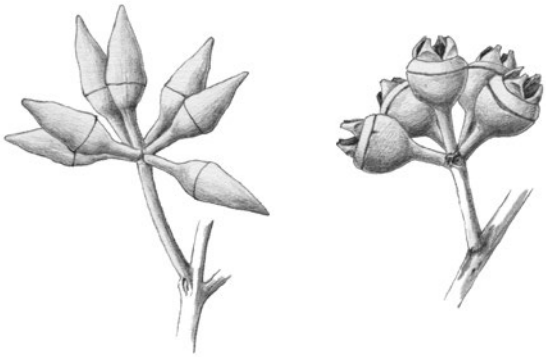
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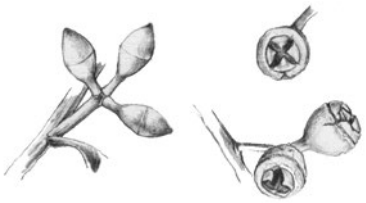
Eucalyptus sideroxylon



Eucalyptus smithii



Eucalyptus tereticornis



Eucalyptus viminalis

A few of the South African-grown **Eucalyptus** species have been re-classified under the genus **Corymbia**. They are entered under the new name in the table below.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Corymbia citriodora** (Myrtaceae)	Lemon-scented gum *Sitroen bloekom*	N1–3 P0–2?	7–12 (8–10)

Remarks

LIM, G, MP, KZN, EC. Smooth white powdery bark. Long narrow leaves that strongly smell of citronella. Buds in threes. No clear boundary between cap and cup of the flower bud. Young trees have a more variable flowering time. Characteristic urn-shaped fruit. Because the species is somewhat frost and drought-hardy, some small woodlots and single trees are occasionally met with in the interior as the remains of test plantings, or in towns and cities. Formerly cultivated commercially in Zululand where some honey was harvested. Pollen crude protein 24.7% (Australia).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***C. ficifolia**	Red flowering gum *Rooi blombloekom*	N1–3 P0–3?	1–12 (12–2)

Remarks

WC, SC, EC, KZN, MP, LIM. Grows best on sandy soils of coastal areas of the Cape, but also does well in frost-free interior locations. Bark greyish-brown, short-fibred, furrowed, divided into small blocks. The large fruit and red flowers make this species unmistakeable. Flowers contain much nectar, which at certain times and from certain trees will drip from the flowers in long thin threads. The dense honey is stringy or ropy – it can be drawn out into long threads that display elastic recoil. The polysaccharide dextran is responsible for this phenomenon. A honey sample from Stellenbosch contained 7.2% of this sugar type. Otherwise the honey is dark reddish, slow-granulating and pleasantly flavoured. This species is a regular provider of lesser honey crops in the Cape. The nutritious pollen is occasionally eagerly collected. In the summer rainfall areas, this species flowers less profusely than in the Cape. The white flowering gum, **C. calophylla**, has much the same properties as a beeplant, but its main flowering period is a little later.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***C. maculata**	Spotted gum *Gevlekte bloekom*	N1–3 P1–3	11–7 (2–4)

Remarks

LIM, G, MP, KZN, EC, SC. Established in timber plantations, fire belts, and less as avenue or specimen tree. The white stem has exfoliating flakes, which leave bluish-green depressions that give the spotted appearance. The cap of the flower bud is shiny and sometimes coloured reddish-brown. Buds are said to be carried for 1–2 years. Fruit is egg- to urn-shaped, with a short neck, a wide rim on the inside of the neck, and valves or teeth deeply enclosed. Heavy flowering every 2–4 years. Honey: very dark; dense, i.e. almost ropy; strongly-flavoured; slow coarse granulation. Nutritious pollen promotes colony build-up. Pollen crude protein 33.3% (Australia).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Eucalyptus albens** (MYRTACEAE)	White box *Albens bloekom*	N0–3 P0–1	1–12 (5–8) SR (12–3) WR

Remarks

NW, G, FS, WC. Nowhere abundant; woodlots and farm avenues. Fine, grey, box-type bark on the main stem. Pale grey leaves are short and broad. Whitish, elongated flower buds. Fruit cylindrical to barrel-shaped, mostly whitish, valves or teeth deep inside. Flower buds usually start developing October–December, with a bud-carrying period of 7–9 months under summer rain conditions. Duration of flowering is 2–3 months, but can be longer if the preceding weather was poor and variable. No known honey crops yet in S. Africa. In Australia the honey is light, dense, quick-granulating and with a good flavour. White box is a poor source of pollen quantitatively, but a medium source qualitatively. The pollen crude protein content has been calculated to be 20–24% (Australia).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. blakelyi**	Blakely's red gum *Blakely bloekom*	N0–2 P0–2	8–12 (10–12)

Remarks

G, MP. Formerly planted as an ornament and for shade – it was never grown commercially. No distinguishing characteristics, i.e. it fits between **E. camaldulensis** and **E. tereticornis**. Flowers well every second or third year, usually following a year of poor fruit set. Buds are carried for about 9 months. Flowering lasts 5–6 weeks. Pollen crude protein 25% (Australia).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. botryoides**	Mahogany eucalypt *Botryoides bloekom*	N0–2 P0–2	10–3 (11–12)

Remarks

G, MP, KZN, EC, SC, WC. A coastal species from New South Wales. Previously widely tested, but never used commercially. Some test trees and park trees still exist. A fibre-bark eucalypt with relatively short, broad leaves. It resembles **E. robusta**, but fruits and buds are smaller. The latter are sessile, i.e. they do not have a stalk. The peduncle (common flower stalk) is flattened. The given flowering time is for the summer rainfall interior. Budding is initiated between February and May, and is mostly dependent on the preceding rainfall, but also on temperature and the size of the previous fruit crop. Heavy flowering is rarely observed.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. bridgesiana**	Apple box *Bridgesiana bloekom*	N1–3 P0–3	11–4 (1–2)

Remarks

S. Africa. Planted in colder and drier parts of S. Africa as shelterbelts and farm woodlots. Commercial plantations were never established. A box type bark that tends to be long-fibred and ridged. Juvenile leaves are heart-shaped. Inflorescence with seven flower buds on short stalks. Each fruit has three well-developed, exserted valves or teeth. Buds are carried for one year or less. Occasional 'satisfactory honey surpluses' in Australia, where the pollen crude protein was found to be 24%

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. camaldulensis**	River red gum *Rooigom*	N0–3 P0–2	1–12 (10–1)

Remarks

S. Africa. More widely planted in sub-humid and semi-arid S. Africa than any other eucalypt species for general utility and amenity purposes. Formerly also grown commercially for mining timber, building poles and fuel. Common name refers to the heartwood colour. Smooth whitish bark with cream-coloured, grey or reddish patches. The base of the trunk has dark, rough bark. Flower buds round, on long stalks, with the beak of the cap not always as prominent as in the drawing. Fruit is shallow cup-shaped, with a wide disc or ring, and prominent exserted valves or teeth. Short intense flow, but it flowers out of season as well. Flowering time is nowadays also influenced by the recently introduced plant-sucking insect pests. Buds are carried for 11–12 months, i.e. they already start developing during or after flowering. Honey colour is light golden, with a mild taste for a eucalypt source, and medium-slow crystallisation, i.e. 3–12 months. Nutritious pollen with 25.8% crude protein (Australia). In parts of the WC the river red gum has become the most important eucalypt honey source. It is a serious invader of watercourses in this province. Over the past three decades, fairly extensive plantings of **E. grandis** × **camaldulensis** hybrid clones for commercial pulpwood production took place in the warm, dry areas of subtropical MP and KZN, in particular the Zululand coastal plain. The beeplant value of this hybrid is unknown, but the flowering time is 11–6 (2–5).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. cinerea**	Florist's gum *Lower bloekom*	N1–3 P1–4	3–12 (4–10)

Remarks

S. Africa. The fibrous bark is brown to greyish-brown – it is not a true gum. Two types of leaves: roundish and elongated, both with a bluish-grey colour. Planted in many gardens and parks for its foliage. Because it retains its lower branches, it is well suited for shelterbelts. Although very cold-hardy, it is only slightly drought-hardy. It has nevertheless been grown successfully in drier western regions of S. Africa. The three buds per peduncle (inflorescence stalk) are covered in a light grey bloom. Fruit is hemispherical, with a wide disc, and 3–4 valves or teeth that are level with the rim or slightly protruding. Long, drawn-out flowering. The nectar has a yellow colour and a distinctive eucalypt-honey taste, implying a dark honey with a strong taste. Buds are carried for 3–4 months. Useful winter food in the interior. (The unexpected high beeplant values were obtained in Pretoria during May and August in warm and mild weather respectively, using the honeybee forager method.).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. cladocalyx**	Sugar gum *Suikergom*	N0–4 P0–1	10–5 (1–2)

Remarks

WC, SC, EC. Smooth, light bark throughout, with yellowish and greyish patches. Flower buds cylindrical and slightly contracted around the middle. Fruit barrel-shaped and ribbed. Formerly a dependable source of light honey, which granulates very slowly and has a strong, typical eucalypt-honey taste. Yields little pollen with 24.5% crude protein (Köttner 1991). No nectar available with dry wind and dry soil during flowering. Bud-carrying period said to be 12–13 months in Australia. Declared invader, based on conditions in the WC. Over the past decade irregular and diminishing honey crops have been reported, for as yet unknown reasons.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. cloeziana**	Cloeziana eucalypt Queensland messmate *Ysterbloekom*	N0–2 P0–2	10–12

Remarks

LIM, MP, KZN. The bark is a combination of box and fibre types, i.e. soft, flaky-fibrous, with some longitudinal fissures. Buds egg-shaped to shortly club-shaped. Hemispherical fruit with three broad teeth or valves, more-or-less at rim level. Flowering may occur earlier or later than the indicated dates. Does not appear to flower every year in Zululand. A reddish honey with a strong flavour and medium density has been harvested in Zululand and MP, but no large surpluses. No honey was obtained from another plantation in MP, neither from a site in LIM. Pollen value possibly higher than indicated. The wood is hard and heavy (Afrikaans name). Commercial planting has been discontinued.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. cornuta**	Yate *Cornuta bloekom*	N1–3 P0–2	9–4 (12–2)

Remarks

WC, SC, EC. Rough-barked tree, less often a shrub. Bark is hard, dark, deeply furrowed, and shed from the upper branches. Long horn-shaped caps or operculi. Fruit crowded together, with elongated valves that are joined. Good pollen and honey source on the West Coast. Unfortunately it has largely been replaced by the Tuart eucalypt. Note by Dr Pettey, entomologist at Elsenburg Agricultural College, 1924-01-22: '**E. cornuta** is the predominant [eucalypt] species, with sugar gum the next most important'. Honey descriptions are contradictory, but the honey is most probably of medium colour, strong flavour and granulating fairly easily.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. crebra**	Narrow-leaf ironbark *Smalblaar ysterbas*	N1–3 P?	7–12 (9–11)

Remarks

Northern provinces, FS, KZN. The grey bark is hard and densely impregnated with kino resin. The fruit is small and not ribbed as in the closely related grey ironbark. Good rains before flowering are needed for a flow. In Australia, where it is an irregular yielder, the honey has a light colour, excellent mild flavour and is slow to granulate. No pollen collection observed yet in S. Africa. Few plantings, but recommended for wider use in sub-humid areas on farms as woodlots (poles and fuel), avenues and shelterbelts.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. diversicolor**	Karri gum *Karrie bloekom*	N1–3? P0–2?	1–6 (3–4)

Remarks

WC, SC, EC. Smooth bark mostly whitish, but also light shades of yellow, orange or grey. Spindle-shaped flower buds. Smith (1969) states that buds take two years to mature. Fruit with prominent disc or ring, and valves (teeth) below rim level. Honey: straw-coloured, mild flavour, dense, slow-granulating, crops variable from year to year. Pollen is sometimes collected, but unknown how much – no beeplant evaluation yet in S. Africa. This species grows well in the higher rainfall regions of the southwestern Cape and the constant rainfall areas of Knysna and George, where it is an important timber tree. It does not flower as heavily as most eucalypts.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. dunnii**	Dunn's white gum	N1 P1	2–6 (3–5)

Remarks

MP, KZN. A new commercial pulpwood species utilised in short rotation. In general appearance the tree resembles **E. grandis** with its long straight stem of white bark with greyish patches. It also has deciduous ribbons of bark. However, its fruit are cup-shaped and the well-developed valves are prominently exserted, somewhat similar to **E. camaldulensis**. (No drawings of buds and fruit in this publication). This species has excellent pulping properties, and its drought, frost and disease resistance is superior to that of **E. grandis**. In S. Africa the trees commence flowering at the age of about nine years. Annual flower and seed crops are only light.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. elata**	River white gum Weeping gum Peppermint gum	N1–2 P0–1	7–12 (8–9)

Remarks

KZN, MP. Small scale afforestation for timber and pulpwood. Lower half of trunk with a dark, sub-fibrous, longitudinally fissured bark. The upper bark is smooth and whitish, with shedding strips. Drooping branchlets and narrow leaves are characteristic of the provenance grown in S. Africa. Leaves have a peppermint smell on being crushed. Many long-stalked flower buds in a spherical assemblage. Fruit with a wide, descending ring or disc; valves (teeth) enclosed. Despite good blooming, the honey production is variable and the surpluses small. Honey: reddish-amber, pronounced eucalypt-honey flavour, fairly rapid granulation.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. erythrocorys**	Redcap gum *Rooidop bloekom*	N1–3 P1–2	2–12 (4–5)

Remarks

Very ornamental small tree suitable for coastal gardens of the southwestern Cape. Adapted to different soils and low rainfall. Cream-coloured smooth bark with flakes. Knobbly bright red operculum or cap. Yellow powder-puff stamens. Important beeplant in Israel for shelter and food.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. fastigata**	Fastigata Brown barrel	N1–2 P0–3	10–2 (12–1)

Remarks

LIM, MP, KZN, EC. Commercial forests are steadily being replaced with other species. The bark is rough, fibrous, brown, and covers the whole trunk and larger branches. Distinguishing features: inflorescences or umbels occur in pairs; about 10–15 flower buds per inflorescence. Buds are carried for 10–12 months. Honey: light reddish-amber colour; unpleasant wet dog aroma when fresh; an artificial, slightly bitter flavour; slow granulation. Only minor to medium surpluses are harvested. Poor flows have been experienced in rainy as well as fine weather, the reason being unknown. Pollen is stored and colonies build up on the 23% crude protein in the bee bread.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. globoidea* (= **E. eugenioides)	White stringybark *Wit veselbas*	N1–2 P0–3?	11–6 (1–3)

Remarks

LIM, MP, KZN, EC, SC. This species was tested in the five mentioned provinces, but subsequently only grown for timber on a small scale, particularly in escarpment areas of MP. The bark is stringy and extends into the top of the tree. Although it is brown, it weathers to a light grey colour, hence the common name. Fruit are characteristic: hemispherical to globular, with a broad disc or ring. The four teeth or valves remain below the rim. In Australia it is of medium importance as a source of honey and pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. globulus**	Blue gum *Blou bloekom*	N0–2 P1–2	4–12 (7–10)

Remarks

S. Africa. Occurs mostly as single trees in towns and cities or as shelterbelts and avenues on farms, and less in woodlots. Widely planted in temperate, humid to sub-humid conditions. The WC has the highest number of remaining trees. Rough greyish to brownish bark at the base, or sometimes higher up. Upper part of tree with a light-coloured smooth bark. Young leaves are bluish-green with a whitish bloom. Buds rough and warty, with a powdery covering. The whitish fruit have distinct ribs. A light April–May honey flow is on record from Stellenbosch as well as the Cape Peninsula. Honey was also obtained in MP (no further details). Promotes colony build-up and even swarming in Ethiopian plantations. Pollen crude protein 25.3% (USA). **Eucalyptus maidenii** is now a subspecies of **E. globulus**, despite marked differences in fruit and bud morphology, as well as flowering time. Maiden's gum was grown commercially in the early 20th century, but was ravaged by the eucalyptus snout beetle during the 1920s, and never used again. Single trees or groups of trees have nevertheless survived in LIM, G, MP and KZN. The results of honeybee forager analyses on a single tree indicate a similar beeplant value as **E. globulus**.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. gomphocephala**	Tuart *Tuart bloekom*	N1–3 P0–4	1–5 (3–4)

Remarks

Grows best on coastal limestone of the WC and SC. Mature avenue trees provide honey. Box-type bark on entire tree. Buds mushroom-shaped. The main flower stalk or peduncle is flattened. Fruit faintly ribbed. Mature avenue trees provide honey, which is light-coloured, granulates quickly and has a caramel flavour, but unpleasant aroma when fresh. Colony build-up on pollen. Combs are occasionally pollen-bound.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. grandis**	Saligna gum Flooded gum *Saligna bloekom*	N0–4 P0–3	1–8 (4–5)

Remarks

LIM, G, MP, KZN, EC. Tall upright stem with a smooth bark, coloured white, light grey or bluish-grey, and decorticating in brownish strips. The base of the stem usually has a rough, dark stocking of bark. Overcast, cool weather inhibits the formation of flower buds, as well as the secretion of nectar in the flowers that are present. Buds are carried for about three months, but longer in cold weather. Honey: dark golden colour; typical eucalypt-honey taste and aroma; rapid granulation; may produce foam on heating. Nutritious pollen supports brood production and queen rearing. Active collecting of saligna sawdust by honeybees was once observed by the auhtor. Most widely afforested eucalypt and the principal source of

honey in S. Africa in the past. Flowering plantations attract great numbers of migratory honeybee swarms, which are annually trapped by beekeepers. It is the main parent of several hybrid species that have been established commercially in recent times. The larvae of the eucalypt nectar fly, *Drosophila flavohirta*, are strong competitors for floral nectar in different eucalypt species. Their activities only stop with the first frost. They are probably largely responsible for the long term average honey production from saligna gum to drop from 28.5 kg/hive to 14.3 kg/hive subsequently at Politsi. The closely related **E. saligna** has the same value as a beeplant. It can be distinguished by its fruit, which have long, thin valves or teeth that protrude well beyond the rim.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. lehmannii** (misapplied name)	Spider gum	N1–3	1–12
= E. conferruminata (correct name)	*Bosbloekom*	P0–2	(9–11)?

Remarks

WC, SC, EC. Shrub or small tree with a rough, flaking bark and short, wide leaves. Planted as hedgerows, windbreaks and ornamentals, i.e. large, light green flower heads. Supports colonies: always some flowers, fewest during winter. No pronounced flowering peak. Honey said to be medium-coloured, quick-granulating and with a distinct flavour. Surpluses are seldom obtained. Colonies build up on the nectar and pollen. Declared weed; invasive in the SC.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. leucoxylon**	Yellow gum	N2–4	4–12
	Geelgom	P?	(5–9)

Remarks

WC, EC. Smooth, light-coloured bark with white, yellow and grey mottling. Sometimes with dark, rough bark at the base of the stem. Hanging red flowers not washed out by winter rain. Fruit with wide rim; the 4–6 valves are deep inside. Bud prospect 6–10 months in Australia. No definitive observations yet of pollen collection. Honey is seldom obtained and reportedly of very fine quality: light-coloured, with a mild vanilla flavour and rapid granulation. Suitable for dry areas. Planting should be encouraged.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. macarthurii**	Camden woollybut	N0–2	7–11
	Macarthurii	P0–2	(9–10)

Remarks

MP, KZN. Best timber species for cold, frost-prone parts of MP, where it is grown in plantations and as shelterbelts on farms. Also some recent establishments in the northern interior of the EC. Bark greyish-brown, coarsely fibrous, sometimes flaky, covering most of the tree, deeply fissured at base of tree. Inflorescence 7-flowered. Flower buds somewhat shiny. Fruit with wide disc or rim, the valves slightly exserted. Variable in flower and nectar production. Honey obtained about once in three years (one beekeeper). Conflicting reports about honey characteristics. Generally colonies are maintained during flowering (three beekeepers). Bud-carrying period 8–9 months.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. melliodora**	Yellow box	N2–4	5–2
	Melliodora bloekom	P0	(9–11)

Remarks

S. Africa. Very hardy tree for shelterbelts and timber in dry areas. Rough box bark on lower part of trunk. The upper layers of this bark are weathered greyish; the lower layers are yellowish-brown. The upper part of the tree has smooth, whitish to yellowish bark. No clear borderline between the cap and the cup of the flower buds, which are carried for 8–10 months. Fruit have their valves below the prominent rim. A pale straw, slow-granulating honey is seldom obtained because this tree is not found in any significant stands. Duration of flowering for any given site is normally 6–8 weeks, but unusual weather conditions can extend this to three months. Out-of-season flowering may occur in late autumn.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. microcorys**	Tallow wood *Talk bloekom*	N1–2 P0–2	6–12 (7–9)

Remarks

LIM, MP, KZN, EC, SC. Only very small-scale afforestation in years past, when minor honey crops were obtained, or else flowering was utilised for build-up purposes. Common name refers to the yellowish and rather greasy heartwood. Soft, fibrous bark persists to the top branches. The bark fades to greyish-brown on the surface, but beneath it has a decidedly reddish-brown colour and is stringy. Flower buds are long and club-shaped. The tips of the valves or teeth are about the same height as the rim of the fruit. Heavy flowering occurs irregularly.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. microtheca**	Flooded box Coolibah *Brak bloekom*	N1–3 P0–2	11–2 (12–1)

Remarks

FS, NW, LIM. Small tree with a greyish-brown box bark, somewhat short-fibred and scaly. A rare eucalypt that should be encouraged for shade and shelter in hot, dry regions. Very drought- and somewhat frost-hardy. Grows well even in brackish conditions. Small egg-shaped flower buds. The fruit is a small shallow cup with 3 or 4 large valves or teeth. Good spring rains are needed for a flow. Bud-carrying time only about six weeks in Australia, where the honey is described as light-coloured, mild, dense, slow-granulating. Beeplant evaluation on Polokwane trees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. nitens**	Shining gum *Blink bloekom*	N1–2 P1–2	11–3 (1–2)

Remarks

MP, KZN, EC. Stem and large branches are whitish to greyish, with plenty of rough, brownish, decorticating bark. This tree is extensively planted on the cold Highveld, as well as in high altitude areas (above 1 400 m) of KZN and the EC. It tends to retain its branches, which catch the ribbons of bark, giving it an unkempt appearance. Some branches with sessile, juvenile leaves are present even on older trees. Inflorescence mostly 7-flowered, but fewer buds may be present. The buds are ribbed. The fruit is sessile, ribbed, pale brown and shiny as if varnished. Flower set is variable from year to year, and never prolific in S. Africa. Flowering only starts when trees are 10–12 years old. The trees flower best at elevated sites in high altitude areas. This species is not utilised by commercial beekeepers. The beeplant value was estimated using information from Victoria, where it is a source of pollen and honey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. paniculata**	Grey ironbark *Grys ysterbas*	N1–4 P0	3–1 (6–10)

Remarks

LIM, MP, KZN, EC. Once extensively planted, but now almost totally replaced by other eucalypt species. Formerly a commercial source of honey, although yields were not regular. Good honey crops were harvested about every third year. These were associated with atypical autumn or winter showers, i.e. moist soil for bud development and flowering. The bark is light grey and comparatively soft, despite being of the ironbark type. The diamond-shaped buds have relatively long stalks and are slightly ribbed. Fruit are also ribbed a little and the valves are below rim level. Bud-carrying period is 5–9 months in Australia, but 4 months in Pretoria. Choice honey: very light, non-granulating, mildly flavoured, mostly dense.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. pauciflora**	Snow gum	N1–2?	10–1
	Sneeu bloekom	P1–2?	(11)

Remarks

MP, KZN, FS, L. A medium-sized gum tree with patches or strips of peeling bark. Shelter, fuel and ornament at high elevations; withstands snow and cold wind, but is just slightly drought-resistant. Only established in test plantings and woodlots, of which a few still exist. Formerly a dependable source of light honey in KZN (R.D. Guy, pers. comm., 1979-05-05). Adult leaves are gland-dotted and have longitudinal venation, i.e. the veins are parallel to the midrib. The flower buds have the shape of a short club and are covered in minute warts. Buds are carried for 6–9 months in Australia, where satisfactory honey crops are sometimes obtained according to reports. The snow gum provides good supplies of pollen. The fruit have discs sloping inward and valves below rim level. The botanical name, meaning 'paucity of flowers' is inappropriate, since this species often flowers profusely.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. polyanthemos**	Red box	N1–2	3–12
	Polyanthemos bloekom	P0	(8–10)

Remarks

S. Africa. Box bark only at the base; otherwise irregular short strips of bark are shed from the tree, giving the impression of a smooth-barked gum species. Leaves are relatively short and wide; juvenile leaves almost round. Foliage is greyish-green. Flower buds are reddish-brown or whitish. Buds are carried for 6–9 months. The fruit have discs sloping inward and valves below the rim. No reports of honey in S. Africa. Relatively long flowering period of three months. Although some trees may be found almost anywhere in S. Africa, this species was mostly planted in G, FS, NW and NC for shelter, shade and ornament. The common name refers to the heartwood colour and the type of bark.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. punctata**	Grey gum	N0–2	6–3
	Grys bloekom	P0–2	(11–1)

Remarks

G, MP, KZN, EC, SC. Plantation tree in the uniform rainfall region during the first half of the 20th century, until attacks by the eucalyptus snout beetle stopped further planting. In other provinces it was test-planted or used in farm woodlots on a limited scale. Medium-sized gum with smooth, dull-grey bark. This is shed in irregular pieces that expose cream-coloured to light orange patches that weather to a grey colour. The operculum, or cap, of the flower bud can be more pointed than shown in the drawing. Fruit are generally somewhat rough and have broad discs. The three or four slightly to strongly exserted valves are light-coloured. Buds and fruit are variable, now and then resembling those of **E. camaldulensis**. Note large span of recorded flowering dates, which is tied to weather conditions and a fluctuating bud-carrying period. A minor and irregular source of honey in Australia.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. resinifera**	Red stringybark	N2–3	8–4
	Rooi veselbas	P1–3	(11–1)

Remarks

LIM, G, MP, KZN, EC, SC. Commercial plantations were established in the warmer temperate and humid regions of S. Africa during the first half of the 20th century, but replaced by better-suited species. Only shelterbelts and avenues remain today, and some small plantations. Soft, fibrous bark covers the stem and all branches. It is reddish-brown, but weathers to greyish on the outside. The operculum or cap of the flower bud is much larger than the calyx tube or cup. Buds are carried for 9–10 months. The rim of the fruit is well-developed, and the valves strongly exserted. The beeplant value was obtained using honeybee foragers. Only one report of honey from Zululand (C.A.M. Andrews, letter dated 1933-12-07).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. robusta**	Swamp stringybark	N1–3	3–8
	Robusta bloekom	P0–3	(4–6)

Remarks

LIM, G, MP, KZN, EC, SC, southwestern Cape. Not established commercially, but widely grown in warm, humid locations for timber, shade, shelter and particularly as an ornamental in parks and large gardens. Naturally it is a coastal species. The bark is thick, spongy-fibrous, reddish-brown and greyish on the surface, covering the entire tree. The large leaves are short and wide. The cap of the flower bud is bluntly beaked. Fruit almost cylindrical, with teeth at rim level and their tips inclined together. Trees may flower poorly or not at all on inland sites when drought conditions prevail during flower bud initiation, which in Pretoria is 3–4 months before flowering. Only one record of honey from Rosebank, Cape Town.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. rubida**	Candle bark gum	N1–2	9–3
	Rubida bloekom	P0–2	(11–12)

Remarks

MP, FS. Suited to cold, moist localities, where it has been planted on farms as woodlots, avenues and shelterbelts. Tall upright stem with a smooth bark, which may be white, cream, pinkish or salmon in colour. The bark is shed in strips. The base of the stem may have a rough, dark stocking. Juvenile leaves are rounded to egg-shaped, which distinguishes this species from the similar **E. viminalis** with its long, narrow juvenile leaves. Inflorescence 3-flowered. Fruit with a wide disc or ring, and valves slightly exserted. Generally a minor source of honey in New South Wales, except in favourable seasons when satisfactory yields are reportedly obtained. Utilised by beekeepers in S. Africa on a very small scale only. No local reports of honey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. sideroxylon**	Black ironbark	N1–4	1–12
	Swart ysterbas	P0	(4–9)

Remarks

S. Africa. One of the best-known drought and frost-hardy eucalypts found all over S. Africa. Used for shade, shelter, timber and as ornamental with its black bark, drooping leaves and flowers in pink, red or yellow. Planting of this multipurpose tree should be encouraged. Bark: black, rough, hard, with much kino resin. The drooping flowers are less affected by winter rains. Flower buds are initiated in warm to hot weather with high rainfall. Buds can be carried for as short as three months, but usually about four months or even longer if the weather is cold and dry. Honey is straw-coloured, slow-granulating and with a mild eucalypt-honey taste. On the Highveld the pollen of green wattle, if available, sustains brood-rearing during the ironbark flow. Oak pollen has also been collected in spring or late autumn pollen from **Senecio** species. Absconding has been reported when no pollen source was available. Colonies taken to the black ironbark on the Highveld are known to have died out because of air pollution from coal power stations and coal fires of informal settlements.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. smithii**	Gully gum	N0–2	10–5
	Smithii bloekom	P0–2	(11–1)

Remarks

MP, KZN, EC. Fairly extensively planted for short rotation pulpwood production in MP and KZN. Also cultivated as a coppice crop for the production of oil. Inflorescence mostly 7-flowered. Flower buds are egg- to club-shaped. Caps are slightly pointed. The globular fruit has three or four well-developed, exserted teeth. In one instance in KZN involving bees, the nectar flow was poor despite good flowering. Beeplant value as for Australia, where honey yields are rarely good, but pollen supplies are satisfactory.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. tereticornis**	Forest red gum *Tereticornis bloekom*	N2–4 P0–4	7–12 (8–10)

Remarks

S. Africa. Although this comparatively drought-hardy eucalypt is widely distributed, it is nowhere abundant. It is slightly less hardy than the river red gum, and the Highveld is too cold for it to survive. It has been planted for general amenity and utility purposes. The bark is a smooth gum type, mottled grey, cream and bluish. A rough dark stocking may or may not be present. Flower buds have elongated opercula or caps that are slightly narrowed in the middle. Buds are carried for 8–10 months. Fruit have wide disc rings and strongly exserted valves (the similar fruit of the river red gum have shallower cups). The forest red gum is without doubt one of the best sources of nectar and pollen, the latter with 24.2–26.5% crude protein (Australia). The honey has a strong eucalypt-honey flavour and golden colour. It granulates with a medium texture and speed. Over the past three decades, limited plantings of **E. grandis** × **tereticornis** hybrid clones for commercial pulpwood production took place in the warm, dry subtropical areas of MP and KZN, in particular the Zululand coastal plain. Overall, the flowering time of these clones seems to fit between those of the parent species, namely 2–11 (6–10). Their beeplant value is unknown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. viminalis**	Manna gum Ribbon gum *Manna bloekom*	N0–2 P0–3	10–4 (12–1)

Remarks

NW, G, MP, FS, KZN, EC. Formerly widely grown in the cooler and more humid regions of S. Africa, until the ravages of the eucalyptus snout beetle put an end to its commercial use. When open-grown, trees retain their lower branches, which, together with the drooping branchlets and leaves, make it suitable for shelter, shade and ornament. Bark is rough and dark at the base, otherwise smooth and light grey to cream-coloured. Many long ribbons of bark are shed from the trunk and branches. This species can be distinguished from the closely related **E. rubida** by its long and narrow juvenile leaves, which are roundish in the other species. Inflorescence is 3-flowered. Flower buds are egg-shaped with a pointed cap. Buds are carried for five months or more. Fruit have a wide disc or ring and slightly exserted valves or teeth. Honey crops are irregular and small. The honey is dark, with a musty aroma and low density. An exceptional winter honey flow has been recorded. Descriptions of the honey are contradictory, both in Australia and S. Africa. The pollen of manna gum is of good quality and boosts brood-rearing. A sweet, cream-coloured liquid exudes from wounds on young branches or leaves, e.g. made by the eucalyptus snout beetle. This exudate dries into firm, white scales – the so-called, edible 'manna'. Bees have been observed to transfer this manna in small pieces into their corbiculae, but where it is deposited in the hive is not known.



3. Other Trees

The largest vegetational and climatic region in South Africa is the central and western semi-desert or Karoo. It is poorly supplied with trees, as is the Highveld to its northeast, and the Fynbos to its southwest. However, in the rest of the country about 560 indigenous tree species have been identified and their distribution documented. (If one's definition of a tree includes large woody shrubs of 2 m or more, then there are over 1 000 tree species in South Africa). The richness in species is unfortunately not reflected in the number of trees of a particular kind, with the exception of the mopane and black thorn. No commercial beekeeping is therefore tied to any indigenous tree species apart from *Acacia mellifera* and *Faurea saligna*, both with a restricted usage. This also partly explains why the Bantu of South Africa did not become beekeepers, unlike the inhabitants of the miombo woodlands to the north; there were no suitable bushveld or forest trees from which to make bark hives, and honey flows were irregular and/or not sufficient for reliable honey production.

Nevertheless, there are indigenous honey producers that could be used to greater advantage on a local and non-commercial basis, such as buffalo thorn, waterberry, large-fruited combretum, common hook-thorn, paperbark thorn, black thorn, candle thorn, marula and *boekenhout*. There also remains a large number of species that have not been suitably investigated as possible honey sources. Hive density and honey production of different veld types and plantations are dealt with in a paper on trees as beeplants in South Africa (Johannsmeier 2007).

If eucalypts and fruit trees are excluded, there are at least 250 exotic tree species that are cultivated in South Africa (Poynton 1984). About half of these species have been recorded as sources of nectar and/or pollen for honeybees. Most exotic species are found in suburban gardens and on farms. Of these, about ten species (discussed in the table below) are known to have produced honey, mainly because of their greater numbers in a given locality. It is estimated that about 10% of South Africa's honey originates in suburban settings, where trees are the major suppliers and eucalypts the main component.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Acacia spp. (= **Senegalia** spp. & **Vachellia** spp.) (Fabaceae) (Mimosaceae) [Only names under *Acacia* are given below.]	Thorn trees *Doringbome*	N0–4 P0–4	7–4 (8–10) (11–1)

Remarks

There are some 40 species of thorn trees in S. Africa. They are characterised by their bipinnate or double-compound leaves, and by their recurved prickles or straight spines, i.e the 'thorns'. The many small florets are close together in two types of inflorescences: globose heads or 'powder puffs', otherwise cylindrical spikes or 'catkins'. Trees with puffball flowers yield dark honeys that are strongly flavoured, whereas the spike-bearing species produce very light-coloured honeys with a mild aroma. Although information on the nutritional value of thorn tree pollen is scant, practical experience has shown that brood production is stimulated and sustained. The intensities and times of flowering are primarily governed by rainfall: how much and when. For species that bloom in spring and that may have rested for periods of up to six months without rain, the precipitation of the previous summer and autumn is crucial. During that time energy stores are accumulated in the roots and stems, to be used the following spring for the production of flowers, nectar and pollen, in some species even before leaves appear. For species that bloom during summer, flowering time is more variable, depending on recent summer rain. Strong showers and high temperatures govern flower initiation and flowering intensity in most of these species. When thorn trees have to rear a large set of pods, they will produce far fewer flowers in the next flowering event or none at all. The African species of **Acacia** have recently been re-classified under the genera **Senegalia** with recurved thorns, and **Vachellia** with straight thorns. The Australian wattles retain their genus name **Acacia**.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Acacia albida (= **Faidherbia albida**)	Ana tree *Anaboom*	N0–1 P0–1	5–9

Remarks

MP, LIM, ZIM, BOT, NAM. Large tree found along dry water courses and pans. Slender pale cream flower spikes in winter. Only low bee attractivity recorded to date. More information is needed.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. ataxacantha	Flame thorn *Vlamdoring*	N0–3 P0–1	10–3 (12–1)

Remarks

KZN, SZ, MP, LIM, NW, ZIM, BOT, NAM. Very spiny shrub or small tree. Reddish pods give the common name. Long, cream-coloured flower spikes. Only one flowering period that may extend over several weeks for a single plant. Pollen rarely collected: beige or light lemon or cream. At times and for unknown reasons, bees avoid the flowers, but mostly there is a low level of activity.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. burkei	Black monkey thorn *Swart apiesdoring*	N2? P2?	8–1 (10)

Remarks

KZN, SZ, northern provinces, BOT, ZIM. Large tree with grey to brownish-black bark. Hooked thorns. Flower spikes white to creamy. The beeplant value is uncertain.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. caffra	Common hook thorn *Gewone haakdoring*	N1–3 P0–2	7–12 (9–10)

Remarks

EC, KZN, SZ, northern provinces, FS, BOT. Paired hook thorns are sparse. Cream-coloured flower spikes. Nectar collectors get a light dusting of pollen. Honey: light straw colour; mild flavour; slow granulation. Pellets lemon-coloured. One flowering period only. Flower set variable from season to season. Flowering benefits from good rains the previous summer or autumn.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. erioloba (= *A. giraffae*)	Camel thorn *Kameeldoring*	N0–2 P0–1	7–11 (8–9)

Remarks

LIM, NW, FS, NC, NAM, BOT, ZIM. Bees forage early morning and late afternoon on puffball flowers. Honey is rarely harvested: brownish colour, slightly tart and resinous taste. Pollen pellets in shades of brown. Good flowering depends on ample rainfall the previous summer–autumn. Hollow trees serve as bee nest sites.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. erubescens	Blue thorn *Geelhaak*	N1–3? P1–2?	8–10

Remarks

MP, LIM, NW, ZIM, BOT, NAM. Yellow papery bark. Leaves greyish-green to bluish-green. Short flower spikes cream-coloured, sometimes pinkish, and sweetly scented.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. fleckii	Blade thorn *Bladdoring*	N1–2 EN P1–2	10–4 (11–1)

Remarks

LIM, ZIM, BOT, NAM. Many-stemmed shrub or small tree. Thorns with elongated base. Flower spikes appear more than once per season. Occasionally extrafloral leaf nectar is collected. Pollen olive.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. galpinii	Monkey thorn *Apiesdoring*	N0–4 P0–2	8–11 (9–10)

Remarks

Northern provinces, ZIM, BOT. Very large trees with hook thorns. Planted on farms and in parks. Flower spikes reddish before florets open. Contributes a mild, light-coloured honey to mixed honey flows in spring. Pollen greenish-khaki. Tendency for on and off seasons, i.e. a year with a heavy load of pods is followed by one with few or no flowers. Trees only develop flowers on branches that do not carry pods from the previous season. Good flowering without resultant pod set, despite the presence of bees, has also been observed. The reason for this phenomenon is unknown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. gerrardii	Red thorn *Rooidoring*	N0–3 P0–1	9–2

Remarks

KZN, SZ, MP, LIM, BOT, ZIM. Shrub or small tree with straight thorns. Bark often reddish. Branchlets hairy. Flowers creamy-white puffballs. Nectar has a strong, unpleasant smell. Anthers seem to have little pollen. Pellets mustard coloured. Flowering mainly dictated by good recent rainfall, therefore the extended period of possible flowering.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. grandicornuta	Horned thorn *Horingdoring*	N3? P2	11–2

Remarks

KZN, SZ, LIM, BOT, ZIM. Similarities with **A. robusta**, but flowering times differ. Thorns sometimes stout and swollen; fused across their bases. Rating based on information from SZ.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. haematoxylon	Grey camel thorn *Vaal kameeldoring*	N0–1? P0–1?	11–4

Remarks

NC, BOT, NAM. Desert shrub or small tree with greyish leaves. Long, thin, straight thorns. Small puffballs are golden yellow. Bees have been observed to collect nectar and pollen, but the flowers seem not to be particularly attractive.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. hebeclada	Candle thorn *Trassie doring*	N1–3 P1–2	7–11 (9)

Remarks

LIM, NW, FS, NC, NAM, BOT, ZIM. Spreading shrub or small tree with upright pods, i.e. candles. Nectar has a faint wood-glue smell. Pellets yellowish-brown to orange. Contributes to spring honey of mixed origin.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. hereroensis	False hook thorn Mountain thorn *Bergdoring*	N3? P2?	11–2

Remarks

NW, BOT, NAM. A rare tree similar to **A**. **caffra**, but flowering at a different time. Very bee-attractive, however, the beeplant value has not been ascertained. Information from NAM: boosts brood production.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. karroo	Sweet thorn *Soetdoring*	N0–2 HD P0–2	10–4

Remarks

Southern Africa, except the central region with Kalahari sand. Dark yellow puffballs have a sweet smell. Several flowering periods per season, each lasting for five days or less. High temperatures in particular, but also strong showers, are necessary for optimal flower bud development, i.e. a rain shower of 20 mm or more, followed by a week of daily maximum temperatures above 30°C. Flowers are attractive to bees for one or two days only. The reason why flowers often are without bees is unknown. Honey is black, with a strong malty aroma and a peculiar sweet-and-salty taste. Pellets orange. One record of exceptionally late flowering, with attending nectar bees, during April. The spiny acacia scale, *Aspidoproctus maximus*, secretes honeydew, which is collected by bees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. kraussiana	Coast climbing thorn *Kus rankdoring*	N0–2 P0–1	10–3

Remarks

KZN. A climber. Hook thorns are scattered on branches, and sometimes on leaves. Small, cream-coloured puffballs in all stages of development, therefore a long drawn-out flowering, with only a few mature flower heads at any given time. The river climbing thorn, **A. schweinfurthii**, has been recorded as a beeplant.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. luederitzii	False umbrella thorn *Baster haak-en-steek*	N1–3 P1–2	10–3 (12–1)

Remarks

KZN, SZ, northern provinces, NC, NAM, BOT, ZIM. Tree or many-stemmed shrub. Rough, dark bark with longitudinal ridges. Straight and hooked thorns that may become inflated. Leaves very finely subdivided. Pollen reddish-brown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. mellifera	Black thorn *Swarthaak*	N2–4 P2–4	7–11 (9)

Remarks

Northern provinces, FS, NC, NAM, BOT, ZIM. Very thorny shrub or small tree, forming impenetrable thickets in overgrazed areas. Explorer Burchell once became hopelessly entrapped by them. The flower heads of the black thorn are not puffballs, but short flower spikes. The flow only lasts 2–3 weeks. Honey is straw-coloured, dense, mild. Light olive, nutritious pollen results in beneficial brood production. Nectar flow dependent on previous season's rainfall. Steady, though variable, honey crops over many years, but unseasonal cold weather during flowering may result in crop failure.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. nebrownii	Water thorn *Waterdoring*	N0–1? P0–1?	7–10

Remarks

LIM, BOT, NAM. Multi-stemmed shrub or small tree, often around pans or near river banks. Thorns straight and slender. Golden-yellow, scented puffballs are seldom bee-attractive, but more observations are needed.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. nigrescens	Knob thorn *Knoppiesdoring*	N0–2? P0–1?	8–12 (9)

Remarks

KZN, SZ, MP, LIM, BOT, ZIM. Low altitude bushveld, sometimes on stony ground. Hook thorns on raised knobs. The scented, light-coloured flower spikes are mostly without bees. Bee visitation depends on whether more attractive nectar is available during spring, when other flower sources are at hand. One report of mixed surplus honey in LIM.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. nilotica	Scented thorn *Lekkerruikpeul*	N0–1 P0–1	9–4

Remarks

KZN, SZ, northern provinces, ZIM, BOT, NAM. Medium size tree with straight, slender thorns. Characteristic pods: black, smooth, constricted between seeds, sweet-smelling when crushed. Generally it flowers poorly, in fits and starts. Very low bee-attractivity.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. polyacantha	White thorn *Witdoring*	N1–3? P0–2?	9–3 (12–1)

Remarks

LIM, ZIM, BOT. Bark of mature trees whitish-grey. Hooked thorns. Light-coloured flower spikes. Yellow pollen. May flower more than once per season.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. rehmanniana	Silky thorn *Sydoring*	N1–2? P0–2?	10–2

Remarks

LIM, ZIM, BOT. Branches covered in golden to light grey hairs. Straight white thorns. Flowers in white balls. Dark, slow-granulating honey in Zimbabwe.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. robusta	Brittle thorn Brack thorn *Brosdoring* *Brakdoring*	N1–3 P0–3	7–10 (8–9)

Remarks

KZN, northern provinces, ZIM, BOT. Leaves and cream-coloured flower heads develop on distinct thickenings or 'cushions' on branches. Pollen light brown to orange. Flowers once per season. Better flower set with good rainfall the previous season. However, there is a tendency for on and off years that is not rainfall related.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. senegal	Three-hook thorn *Slaploot* *Driehaakdoring*	N0–3? P0–2?	(8–9) (11–2)

Remarks

KZN, SZ, MP, LIM, ZIM, BOT, NAM. Shrub to small tree with a flaky, yellowish to brownish bark. Hook thorns usually in threes. Flowering time depends on subspecies and on geographic location. This species does not flower in winter as stated in some leading tree books. Bee information only available from outside southern Africa, where honey is said to be light golden and with a mild aroma, as can be expected from a flower spike-bearing thorn tree.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. sieberiana	Paperbark thorn *Papierbasdoring*	N0–3 P0–2	9–4 (11–1)

Remarks

KZN, SZ, MP, LIM, ZIM, BOT, NAM. One of the flat-topped acacias. Flowers are large, creamy-white puffballs. Pollen light brownish-orange. Strong-smelling nectar. Occasional very dark honey in summer. Attractivity of flowers to bees is variable for unknown reasons. In the same stand of trees it may happen that only one or two flower, probably because of heat and insufficient rain. More than one flowering is possible per season. A good set of pods precludes any additional flowering in the same season.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. swazica	Swazi thorn *Swazi-doring*	N1? P1?	10–5

Remarks

MP, SZ. Slender shrub or small tree of rocky bushveld. Bark is horizontally wrinkled. Dense, light yellow flower balls, of which only a few per branchlet are open at any given time. Beeplant value estimated, based on a single record from SZ.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. tortilis (= *A. heteracantha*)	Umbrella thorn *Haak-en-steek*	N0–1 P0–3 EN0–2	10–3 (12–1)

Remarks

KZN, SZ, northern provinces, FS, NC, ZIM, BOT, NAM. Two types of thorns: hooked and straight. Summer flowers in very small, white to creamy puffballs. Attractivity very variable. High air humidity seems important. Major pollen gathering observed at dawn. Usually one main flowering period, but additional, mostly smaller flowerings are possible despite pods that may be present already. Hot weather above 30°C for two days or more triggers development of flower buds, which is followed 4–5 weeks later by the flowering period. Although soil moisture is necessary for the development of flower buds, rainfall is not a trigger for bud initiation. Extrafloral nectar value was obtained from bees foraging on leaf nectaries of an actively growing young tree.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. xanthophloea	Fever tree *Koorsboom*	N0–3 P0–1 EN0–2	7–11 (9)

Remarks

KZN, SZ, MP, LIM, ZIM. Large tree of low-lying areas that are seasonally inundated. Now a popular ornamental in parks and gardens. Small yellow flower balls are actively exploited by bees at times, but mostly they receive little attention. Major nectar collection was observed from extrafloral leaf nectaries during November in Zululand.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Acacia** spp. (FABACEAE) (MIMOSACEAE)	Wattles *Wattels*	N0 P0–3 EN0–1	5–12 (8–9)

Remarks

There are some 700 ***Acacia** species, or wattles, which are indigenous to Australia. Many of these have been introduced to other countries as sources of wood for various uses, and as ornamentals. Like thorn trees, they either have 'puffball' or 'catkin' flowers. In many species the feathery leaves have been replaced by green, flattened leafstalks, called phyllodes. These look like normal leaves and have taken over photosynthesis. Unlike thorn trees, the wattles produce no flower nectar as far as is known. However, as in thorn trees they have extrafloral nectar glands on the leaves. These are functional at times, but the requirements for nectar secretion are not known. Wattle pollen is of good quality and promotes brood rearing. On average the pollen contains 25% crude protein. A number of species have become serious invaders in S. Africa, and some bio-control agents have been introduced.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Acacia baileyana**	Bailey's wattle *Bailey-se-wattel*	N0 P2–3	6–9

Remarks

Southeastern Australia. Relatively hardy ornamental with small, fern-like leaves. Leaf nectar glands are non-functional. Yellow flower puffs. Very useful late winter pollen source in cold interior regions. Pellets light greyish-khaki. Declared invader.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***A. cultriformis**	Knife-leaf wattle *Lemwattel*	N0 P1–2	7–8

Remarks

New South Wales. Very cold-hardy and somewhat drought-hardy ornamental. Grey triangular leaves and a profusion of yellow puffballs.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***A. cyclops**	Red eye *Rooikrans*	N0 P0–1	10–5 (12–1)

Remarks

Southwestern Australia. Shrub or tree that forms thickets and ousts lowland fynbos. Declared invader. Serious weed of the WC, SC and EC. Yellow puffballs rarely visited by bees. Few flowers at any one time. Common name from black seeds encircled by red stalks.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***A. dealbata**	Silver wattle *Silwer wattel*	N0 P1–3?	7–9

Remarks

Eastern Australia. Tree with silvery-grey, finely compound leaves. Extrafloral nectar glands on leaves are non-functional. Pale to bright yellow puffballs. Serious invader in higher-lying eastern regions of S. Africa.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***A. decurrens**	Green wattle *Groen wattel*	N0 P1–3	7–10 (7–8)

Remarks

Southeastern Australia. Tree with bright green, finely compound leaves. Extrafloral leaf nectaries are non-functional. Large fragrant sprays of yellow puffballs. Pellets dirty light grey (possibly as a result of air pollution?). Can provide good-quality pollen for colonies on black ironbark eucalypts, which have no pollen for bees. Strongly invasive on the Highveld, as well as high-lying areas of KZN and the EC.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***A. elata**	Pepper tree wattle *Peperboom-wattel*	N0 P? EN0–1	10–12

Remarks

New South Wales. Large tree with dark green foliage, which is somewhat similar to that of the pepper tree. Extrafloral nectaries on leaf petioles occasionally attract bees during spring when trees are not in flower. Declared invader. A problem in the southwestern Cape and EC.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***A. longifolia**	Long-leaved wattle *Langblaarwattel*	N? P0–3 EN2?	6–11 (8–9)?

Remarks

Southeastern Australia and Tasmania. Shrub or small tree with leaf phyllodes and yellow flower spikes. Leaf nectaries are active once every few years, when they provide surplus honey in New Zealand. Bee visits to flowers are rarely seen, but one southwestern Cape record of major pollen collection during September, with strong brood rearing. Pollen crude protein 22.6%. Declared weed that seriously threatens mountain fynbos.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***A. mearnsii**	Black wattle *Swartwattel*	N0 P0–4 EN0–1	8–12

Remarks

Southeastern Australia. Important species in commercial forestry. Invasive in large parts of S. Africa, particularly along water courses. Large fragrant sprays of pale yellow puffballs that vary much in their attractiveness to bees. Pellet colours cream, brownish-yellow, khaki and grey, the darker colours probably due to air pollution. Pollen crude protein 24.2%. Leaves are occasionally heavily worked by bees for extrafloral nectar (November and May observations).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***A. melanoxylon**	Australian blackwood *Australiese swarthout*	N0 EN0–1 P?	8–10

Remarks

Forestry species in the SC, but widely planted in cooler humid parts of S. Africa, where it has become invasive. A hardwood tree with phyllodes and pale yellow puffballs, on which pollen collection has not yet been observed. Two reports of major bee activity on extrafloral leaf nectaries, once during flowering.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***A. pendula**	Weeping myall	N0 P1–2	7–8, 2–3

Remarks

Eastern Australia. Small ornamental tree that is moderately drought and frost hardy. Greenish-grey phyllodes on pendulous branches. Relatively few, small, yellow puffballs. Usual flowering is during early spring, but second blooming noted in summer in Pretoria. Pellets lemon-coloured.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***A. podalyriifolia**	Pearl acacia *Pêrel akasia* *Vaal-mimosa*	N0 P2–3	5–8

Remarks

Eastern and southeastern Australia. A short-lived, hardy, small ornamental tree. Greyish-green phyllodes that look like normal leaves with a single midrib. Showy sprays of bright yellow puffballs. Pellets olive-green or light grey. Valuable winter pollen. Declared invader that has become a problem in the WC, KZN and the Highveld.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***A. pycnantha**	Golden wattle *Goue wattel*	N0 P0–2? EN0–1	7–9

Remarks

Southeastern Australia. Small ornamental tree with large sprays of light yellow, fragrant puffballs. The somewhat curved phyllodes look like eucalypt leaves. One nectary at the base of the phyllode secretes nectar shortly before or during flowering, though infrequently. Declared weed: Invades fynbos, roadsides and rivers in the southwestern Cape and SC.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***A. saligna**	Port Jackson	N0 P0–2 EN0–1	7–10

Remarks

Southwestern Australia. Shrub or small tree with long narrow phyllodes, resembling willow leaves. Bright yellow, globular flower heads, i.e. puffballs. Bees have been observed to collect extrafloral leaf nectar. Pollen collecting noticed in SC and WC, but not on the Cape Flats. Pellets olive-green to dark greyish-green. Serious invader from the WC to the EC.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. visco* (= **A. visco)	Visite	N3? P2?	10–12

Remarks

Argentina. Hardy, multi-stemmed ornamental tree. Planting should be encouraged, e.g. in the Karoo. Fragrant flower heads change from light yellow to orange-yellow. Popular with bees, particularly at dawn and dusk.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Acer buergerianum** (Aceraceae)	Trident maple *Sjinese ahorn*	N2–4 P1–2	9–10

Remarks

China. Small ornamental tree with wine-red autumn foliage. Characteristic of the maples: winged fruit or samaras, together in pairs – 'helicopters'. Monoecious, i.e. separate male and female flowers on the same plant. Flowering in Europe only at ± 10 years of age. Pellets in shades of grey. Honey is obtained in Europe from species different to the two discussed here.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***A. negundo**	Ash-leaved maple *Veer-ahorn*	N0–2 P0–3	8–9

Remarks

North America. Large tree with yellow autumn tints. It is the only dioecious maple species that is grown in S. Africa. It also has compound leaves, whereas the vast majority of species have simple leaves. Pellets are large and light lemon to olive-coloured. A pollen mixture of different maple species in Europe contained 28.0% crude protein.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Adansonia digitata (Malvaceae) (Bombacaceae)	Baobab *Kremetart*	N2? P0?	10–3 (11–12)

Remarks

LIM, ZIM, BOT, NAM. Deciduous tree of hot, dry woodland, and well-known for its huge trunk. Flowers have a carrion-like scent. Bees have been seen to work the flowers well at times. Only one reliable record of nectar foraging. Trees are nesting sites for honeybees and mopane bees. These are reached by honey hunters with pegs driven into the soft trunk.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Aesculus hippocastanum** (Sapindaceae) (Hippocastanaceae)	White horse chestnut *Wit perdekastaiing*	N2 P2 PR	9–10

Remarks

Balcan. A relatively rare tree in S. Africa. Large plumes of white flowers. Pollen dark red to purple. Source of propolis.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Afzelia quanzensis (Fabaceae) (Caesalpiniaceae)	Pod mahogany *Peulmahonie*	N2? P2?	8–12 (10–11)

Remarks

KZN, MP, LIM, ZIM, BOT. Tall deciduous tree of hot bushveld and sand forest. The flower has a single, large, two-lobed, pink to red petal. It is sweetly scented. The eight stamens are long and curved. Scant information as to beeplant value.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Agonis flexuosa** (Myrtaceae)	Willow myrtle	N2–3 P?	9–11

Remarks

Western Australia. Street tree with weeping branches that can be covered in flowers. These are small, white and similar to those of tea trees. Regular flowering. Strong-tasting honey in Australia.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Ailanthus altissima** (Simaroubaceae)	Tree-of-heaven *Hemelboom*	N1–3 P0–2	10–2

Remarks

China. Large, deciduous, ornamental tree that suckers freely. Declared invader, mainly of high-lying, cool, moist locations in the interior of S. Africa. Small flowers in large terminal sprays, female and male on different trees, the latter with a bad smell. Unpleasantly-flavoured honey in different overseas countries. Pollen yellowish-green.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Albizia spp. (Fabaceae) (Mimosaceae)	Albizia *Valsdoring*	N0–2 P0–2?	7–12 (10–11)
A. adianthifolia	Flat-crown		
A. amara	Bitter albizia		
A. anthelmintica	Worm-cure albizia		
A. brevifolia	Mountain albizia		
A. forbesii	Broad-pod albizia		
A. harveyi	Common albizia		
A. tanganyicensis	Paperbark albizia		
A. versicolor	Large-leaved albizia		

Remarks

KZN, SZ, MP, LIM, ZIM, BOT, NAM. There are eleven **Albizia** species in southern Africa. Albizias are similar to acacias in that they have bipinnate or double-compound leaves and have glands that are present on the leaf stalk and the midrib. However, albizias have no thorns, and the small florets form loose, half-spherical, fluffy heads with their very elongated stamens. (In acacias the florets are combined into tight globose heads or into flower spikes). South African literature does not mention that an albizia flower head has only one floret (or perhaps a few?) that is well-developed and supplies nectar. This was found to be the case in **A. adianthifolia**, which also produced very little pollen. This would explain the generally low beeplant value of the listed species, all of which were reported to have had bees visiting the flowers. In Namibia brood production from the pollen and nectar of **A. anthelmintica** was noticed once during very prolific flowering (Eggers & Wurst-Henning 1944).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***A. julibrissin**	Pink siris *Pienk albizia*	N0–1 P0	10–1

Remarks

India to China. Small, hardy tree with showy pink flowers, made up of long silky stamens. Dilute white nectar, without detectable smell, and sweet taste only. Uncommon ornamental in cities and some towns.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***A. lebbeck**	White siris Lebbeck	N2 P1	11–2

Remarks

India to Australia. Hardy tree with spreading crown; grown for ornament and shade; not common. Invasive in coastal bush of KZN. Very floriferous in certain locations. Long creamy-white stamens darken to dull yellow with age.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Alnus glutinosa** (Betulaceae)	Black alder *Elsboom* *Alderboom*	N0 P1–3 PR	8–9

Remarks

Europe and Asia Minor. Ornamental tree. Used as an orchard wind-break in the Cape. Wind pollinated. Separate male and female catkins on the same tree. Pollen is lemon-coloured and is said to have a 'medium biological efficiency'. Yellowish propolis. There are test plantings in southern and eastern S. Africa of different **Alnus** species to determine their suitability for commercial forestry.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Aloe barberae (= *A. bainesii*) (Asphodelaceae)	Tree aloe *Mikaalwyn* *Boomaalwyn*	N0–1 P2–3	4–6

Remarks

EC, KZN, SZ, MP. In wooded kloofs and dense bush of low lying areas. Much-branched, tall tree aloe. The branches are regularly forked in pairs (Afrikaans: *mikaalwyn*). Pink flowers from which the bees only obtain the dilute nectar that moves between the filaments to the flower opening. Pellets brownish-yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. dichotoma	Quiver tree *Kokerboom*	N0–2 P1–3	5–8 (6–7)

Remarks

NC, NAM. In S. Africa it is found in Bushmanland and along the Orange River. Thick-stemmed tree aloe with forked branches, growing in arid rocky or gravelly situations. The yellow flowers are short and swollen, with a narrow opening. Heavy flows of dilute, light-coloured nectar seem to be dependent on strong autumn showers. One report of honey at Keimoes in 1938.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Androstachys johnsonii (Picrodendraceae) (Euphorbiaceae) [The use of two family names is explained in the Introduction (pg. 4) and the first name is the correct/ preferred APG II one]	Lebombo ironwood *Lebombo-ysterhout*	N0–2? P0?	8–12 (10–11)

Remarks

KZN, SZ, MP, LIM, ZIM. Medium-sized dioecious tree. Occurs at low altitudes, on rocky hillsides and stony outcrops, in deciduous woodland. Honey is collected by mopane bees, seldom by honeybees. The honey is reportedly poisonous to humans; its purgative action is known. Verbal reports from SZ of anaesthetic effects, and from Vendaland of deaths following the ingestion of this honey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Angophora costata** (= *A. lanceolata*) (Myrtaceae)	Smooth-barked apple Sydney red bark	N0–3 P0–3	11–1

Remarks

Eastern Australia. A large ornamental tree of parks and gardens, from the coast to temperate Highveld. It is closely related to the eucalypts. The smooth greyish stem and branches reveal orange-brown patches where the bark has been shed. Masses of small cream-coloured flowers. The angophoras are distinguished from the eucalypts by, inter alia, the presence of short teeth on the rim of the fruit besides the valves or 'teeth' inside the fruit. Beeplant value as for Australia, where moderate honey yields are encountered once every five years and excellent harvests of cream-coloured pollen are recorded. In S. Africa no pollen collection has yet been noticed. Perhaps it is gathered during very early hours.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Annona senegalensis (Annonaceae)	Wild custard apple *Wilde vla-appel*	N0? P1?	8–12

Remarks

KZN, SZ, MP, LIM, ZIM. Small deciduous bushveld tree, usually on sandy soils and along rivers. Honeybee visits observed in SZ and Congo. One record of carpenter bees. In the cultivated custard apple, ***A. cherimola**, the flowers are not scented. They produce only pollen and no nectar, and no honeybee visits have been documented.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Apodytes dimidiata (Icacinaceae)	White pear *Witpeer*	N? P1–3	9–4 (11–1)

Remarks

S. African coastal and montane forests; also in ZIM and further north. Small, white, scented flowers are visited for one hour only, before and after sunrise. Unsure whether bees obtain nectar. Pollen colour biscuit to light yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Araucaria heterophylla** (= *A. excelsa*) (Araucariaceae)	Norfolk Island pine	N0 P0 PR0–3	–

Remarks

Norfolk Islands. A lofty coniferous tree of which the long branches radiate horizontally from the stem in regular widely-spaced whorls. Mass propolis collection has been observed by Cape and African bees. This was either the resin from a cut stump, or the resin exuding from an intact stem.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Arbutus unedo** (Ericaceae)	Strawberry tree *Aarbeiboom*	N0–4 P0–2	4–6

Remarks

Mediterranean. Small, cold-hardy tree that is planted on the Highveld. Also tolerates coastal conditions with winter rain. Bunches of white to pink flowers. Pellets small, light brown. High beeplant value in Italy, where a bitter honey is harvested, similar to that of some S. African members of the Ericaceae.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Archontophoenix alexandrae** (ARECACEAE)	Alexandra palm Twist-frond palm	N0–2 EN0–1 P0–2	1–12?

Remarks

Queensland. Long feather fronds that are slightly twisted. The inflorescences, emerging below the crownshaft, are cream-coloured. They can be in different flowering and fruiting stages. Blossoms whitish, fruit red. Pellets cream-coloured to light yellow. Extrafloral nectar is also collected on the inflorescence.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***A. cunninghamiana**	Piccabeen palm Bangalow palm	N0–1 P0–3	1–12

Remarks

Eastern Australia. The stem above the inflorescences, the so-called crownshaft, is smooth and dark green. Below the flowers, the stem is ringed. Long feather fronds. Large drooping inflorescences are lavender-coloured. They may carry flowers or fruit at the same time, depending on inflorescence age. Pellets whitish to pinkish. Round red fruit.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Arecastrum romanzoffianum* (= *Cocos plumosa*) (= **Syagrus romanzoffiana) (ARECACEAE)	Queen palm *Koninginpalm*	N0–3 P2–4	1–12 (12–4)

Remarks

Brazil. Widely-grown ornamental palm with plumose fronds. Flowering only starts at the age of about 10 years. It flowers at different times of the year. Pollen loads are light-coloured.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Avicennia marina (ACANTHACEAE) (VERBENACEAE)	White mangrove *Witbas seeboom*	N3 P2	9–4 (10–2)

Remarks

Coasts of KZN and parts of EC (former Transkei). Small trees with breathing roots that stick out of the salty mud. Flowers small, bell-shaped, creamy-yellow, sweetly-scented. Noticeable fragrance of copious nectar. Honey from EC coast.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Azanza garckeana (MALVACEAE)	Snot apple *Snotappel*	N2? P2?	12–5 (1–3)

Remarks

LIM, ZIM, BOT, NAM. Small to medium size tree of deciduous woodland. Fruit contains edible glutinous flesh before becoming woody. Large yellow flower with maroon centre. Nectar foragers become covered with yellow pollen on their entire bodies. Pollen foragers pack the body pollen into their corbiculae while in flight in front of the flower. Pellets light orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Bambusa balcooa** (POACEAE)	Common bamboo Giant bamboo	N0 P0–3	4–5

Remarks

India. This bamboo is widely grown in S. Africa. It flowers only once in many years, when major bee activity can be seen. There are a number of pilot projects in S. Africa to test and promote different bamboo species, including the common bamboo.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Baphia massaiensis (= *B. obovata*) (FABACEAE) (PAPILIONACEAE)	Sand camwood *Sand kamhout*	N2? P1?	9–1

Remarks

LIM, ZIM, BOT, NAM. Small tree, usually in dense stands in sandy woodland, i.e. Kalahari Sandveld. White, scented pea-flowers. A nectar and pollen source of unknown value.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Bauhinia × blakeana** (FABACEAE) (CAESALPINIACEAE)	Hong Kong orchid tree *Geur-orgideëboom*	N2–3 P0–2	1–12 (5–9)

Remarks

Canton, China. Semi-deciduous, large-leaved ornamental. Showy, purple, sterile flowers; no pods. Extended flowering is possible because no resources are needed to develop pods. Pellets light grey to whitish.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***B. forficata**	Thorny orchid tree *Doring-bauhinia*	N1–3 EN P0–1	11–3 (12–2)

Remarks

South America. Large semi-deciduous ornamental tree with white flowers. Very frost-hardy. Pairs of small hooked thorns on thin branches. Single extrafloral nectary at the base of each young flower bud. Active nectar collection was observed on these nectaries during late afternoon. Flower nectar is also gathered.

Botanical Name	Common Name	Beeplant Value	Flowering Time
B. galpinii	Pride-of-de-Kaap *Vlam-van-die-vlakte*	N0–2 P0–1	1–12 (11–2)

Remarks

KZN, SZ, northern provinces, ZIM. Small scrambling tree with red flowers. Two-lobed leaves like other bauhinias. Long-flowering. Flower buds are initiated during high temperatures and showers of 10 mm or more. Nectar secretion starts at around 22°C and increases with rising temperatures. The nectar is water-white, without a detectable smell, and with a sweet taste only. There are three fertile and seven sterile stamens per flower. Bees rarely collect the light-greyish pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
B. thonningii	Camel's foot	N1–3	10–4
(= *Piliostigma thonningii*)	*Kameelspoor*	P0–1	(12–2)

Remarks

MP, LIM, ZIM, BOT, NAM. Small to medium size, rounded tree of sandy bushveld. Large, two-lobed leaves. Flowers: short velvety brown calyx tubes that contain small whitish crinkly petals. Male and female plants separate, which is unusual for bauhinias.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***B. variegata**	Orchid tree	N1–3	4–12
	Pink camel's foot	P0–2	(8–9)
	Kameelpoot		

Remarks

India and China. Common street and garden tree. Drought and somewhat cold hardy. Invasive in the subtropics. Pink or white flowers. Nectar secretion starts at around 17°C. Contributes a light honey to Pretoria's spring flow. Long and regular flowering. Pellets light grey to cream-coloured.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Berchemia zeyheri	Red ivory	N0–3	9–12
(= *Phyllogeiton zeyheri*)	*Rooi-ivoor*	P0–2	(10–11)
(Rhamnaceae)			

Remarks

KZN, SZ, northern provinces, ZIM. Small to medium size deciduous tree. Open woodland with rocky outcrops or termitaria. Small, yellowish-green, inconspicuous flowers. Reason for variable attractiveness to bees is unknown. High nectar or high pollen activity has been documented, followed by a total absence of bees two days later. Nectar: water-white colour; distinct, unpleasant carob flower smell. Small pollen pellets dark khaki. **Berchemia discolor**, the brown ivory, has been recorded as a beeplant in Zambia.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Betula pendula**	Silver birch	N0	8–9
(Betulaceae)	*Silwer berk*	P2?	
		PR	

Remarks

Europe. Small to medium-sized, deciduous tree with a smooth, greyish-white bark and arching branchlets that bear shimmering leaves. Trees need cold winters, and summers that are not too hot and dry. Birches are monoecious and wind-pollinated. In Europe trees only start flowering when 10 years old. The male catkins provide yellowish pollen with a 'very good biological efficiency' (Maurizio & Grafl 1980). A medium-strong activity of propolis gatherers on young leaves of growing shoots was observed during November in Pretoria. Propolis from birches is said to be almost black.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Bolusanthus speciosus	Tree wisteria	N0–2	8–1
(Fabaceae)	*Vanwykshout*	P?	(9–10)
(Papilionaceae)			

Remarks

KZN, SZ, MP, LIM, BOT, ZIM. Small graceful deciduous bushveld tree. Attractiveness to bees of blue to mauve pea flowers is very variable, usually scant.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Borassus aethiopum (Arecaceae)	Borassus palm	N2? P3?	9–10

Remarks

LIM, ZIM. A tall palm with fan-shaped leaves and a distinct swelling of the trunk about halfway up. In sandy soils of low altitude bushveld. Rare in S. Africa. Dioecious, with large female flowers 25 mm wide. Two foraging peaks, the main one during forenoon. Slow-growing; flowering possibly does not occur until the tree is 30 or 40 years old (Coates Palgrave 1985).

Botanical Name	Common Name	Beeplant Value	Flowering Time
Boscia albitrunca (Capparaceae)	Shepherd's tree *Witgat*	N0–2 P0–2	7–12 (8–9)

Remarks

Southern Africa, except WC and EC. Small tree with whitish stem and dense crown. Occurs in different habitats. Long-flowering at times: fruit and flowers together. May flower later than springtime, i.e. after good rains. Variably attractive to bees for unknown reasons. Honey is rare: red colour, low viscosity, mild flavour. Pellets mustard-coloured or greenish-yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
B. foetida	Stinking shepherd's tree *Stink witgat* *Noenieboom*	N0–2? P0–2?	7–2 (8–10)

Remarks

NC, NAM. Large shrub or small, dense tree. Flowers and freshly cut wood have unpleasant smell. Good source of nectar and pollen at times.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Brabejum stellatifolium (Proteaceae)	Wild almond *Wilde amandel*	N2? P1?	11–1

Remarks

Gifberg to Gouritz River, SC. Near streams. The many florets on dense spikes are not very attractive to bees. Reportedly a source of bitter or unpalatable honey, but this has not been confirmed. Closely related to Australia's macadamia nut.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Brachychiton acerifolius** (Malvaceae)	Australian flame tree *Australiese vlamboom*	N2–3 P2	9–1

Remarks

Australia. Tolerates sea air and some drought. Entire inflorescence bright red. Erratic seasonal flowering, which is best after very hot weather. Biscuit-coloured pollen during forenoon or afternoon.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***B. discolor**	Pink flame tree *Pienk vlamboom*	N2–3 P1–2	10–3? (10–12)

Remarks

Australia. Usually leafless during flowering. Large, pink, woolly flowers worked all day. Pellets biscuit-coloured.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***B. populneus**	Kurrajong	N1–3 P1–3	9–2 (10–12)

Remarks

Eastern Australia. Evergreen ornament and shade tree. Bell-shaped flowers cream-coloured, with purple and yellow nectar guides inside. Unisexual flowers on the same tree. Pollen yellow. Source of honey in Australia. In dry regions the planting of this multipurpose species should be encouraged.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Brachylaena discolor (ASTERACEAE)	Coastal silver oak *Kus-vaalbos*	N1–3 P0–3	5–10 (7–9)

Remarks

Coastal bush and associated bushveld of EC and KZN. Small, much-branched tree with characteristic leaves: large, glossy green above, white-felted below. Cream-coloured flower heads in large clusters; dioecious; no ray florets. One hearsay report: 'good honey plant'. Pellets biscuit-coloured to light khaki.

Botanical Name	Common Name	Beeplant Value	Flowering Time
B. neriifolia	Kloof silver oak *Kloof-vaalbos* *Water-witels*	N2 P2?	12–4

Remarks

Southwestern to southeastern Cape. Small tree of streamsides. Dioecious, but bisexual flowers also noted. Nectar from female and male trees. Full flowering every year. Pollen lemon-coloured.

Botanical Name	Common Name	Beeplant Value	Flowering Time
B. rotundata	Mountain silver oak *Berg-vaalbos*	N1–3 P1–3	7–11 (8–9)

Remarks

Northern provinces, ZIM. Small semi-deciduous tree of open bushveld, usually on rocky sites. Flower heads in pale yellow clusters; dioecious; no ray florets or petals. Pellets dirty light yellow or beige.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Breonadia salicina (= *Adina microcephala*) (Rubiaceae)	Matumi *Mingerhout*	N2? P2?	11–6

Remarks

KZN, SZ, MP, LIM, ZIM. Large tree of riverine forest. Inflorescence a dense, spherical, spiked head, 40 mm across. The 'spikes' are the extended long styles. The individual florets are small, fragrant, pale yellow tinged with red.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Bridelia micrantha (Phyllanthaceae) (Euphorbiaceae)	Mitzeeri *Mitserie* *Bruin stinkhout*	N2? P1?	8–12

Remarks

EC, KZN, SZ, MP, LIM. Medium to tall semi-deciduous tree of coastal and riverine forests. Leaves often bright orange in autumn. Small, insignificant light-yellowish flowers in leaf axils. Separate male and female flowers on the same tree.

Botanical Name	Common Name	Beeplant Value	Flowering Time
B. cathartica	Blue sweetberry *Blou soetbessie*	N2? P1?	8–4 (12–2)

Remarks

KZN, SZ, MP, LIM, ZIM, BOT. Large shrub or multi-stemmed small tree. Sand and riverine forests. Leaves greyish-blue below and shiny green above. Flowers: monoecious, very small, greenish to yellowish, in tight axillary clusters. A profusion of black, edible berries.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Bruguiera gymnorrhiza (Rhizophoraceae)	Black mangrove *Swart wortelboom*	N3 P1?	1–12 (7–3)

Remarks

Coasts of EC and KZN. Medium-sized tree of lagoons and estuaries. Aerial breathing roots. Long cigar-shaped fruit. Nectar-laden flowers release their pollen explosively when touched by an insect or other agent. Copious nectar is still produced after petals and stamens have dropped.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Buddleja saligna (Loganiaceae)	False olive *Wit olienhout*	N0–3 P0–2	8–3 (10–12)

Remarks

Found over much of S. Africa, from southwestern Cape to EC, Karoo and northwards to LIM. Small, hardy, evergreen tree of bushveld, grassland and Karoo. Usually on rocky outcrops. Good rains and high temperatures during spring are conducive to plant growth and flowering. Honey crops in Vryburg district.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Burchellia bubalina (Rubiaceae)	Wild pomegranate *Wilde granaat*	N0–2 P0–2	6–3 (9–10)?

Remarks

SC to MP. Small tree of forest and woodland. Good garden subject. Rarely misses a flowering. Ring of hairs in flower tube prevents nectar from running out. Large yellow pellets.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Burkea africana (Fabaceae) (Caesalpiniaceae)	Wild syringa *Wilde sering*	N0–3 P0–3	9–2 (10–11)

Remarks

Northern provinces, ZIM, BOT, NAM. Medium-sized deciduous bushveld tree in deep sandy soils. Typically with a flattened spreading crown, depicted so strikingly by the artist Pierneef in his bushveld scenes. Good crops of light honey in some years. Pollen light yellow to cream. May flower poorly or even skip flowering. At least two factors determine the extent of flowering. First, trees that carry a load of pods from the previous season do not flower, even if the pods have been dry for many months already. Interestingly, some trees with pods develop flowers nonetheless, but only on those branches that have no pods. Second, trees need good summer and autumn rain for starch production and storage. Additionally, at least one good shower is needed in spring before flowering, to optimise conditions for tree growth, i.e. flower development.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Butia capitata** (Arecaceae)	Pindo palm Jelly palm *Jelliepalm*	N3? P3?	10–12

Remarks

Brazil. Palm with greyish feather fronds that are strongly arched. Long spikes on leaf stem. Separate female and male flowers are present on the same inflorescence. Young fruit and flowers on different inflorescences may be present on the same palm.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Calodendrum capense (Rutaceae)	Cape chestnut *Kaapse kastaiing*	N1–2 P1–3	7–3 (10–12)

Remarks

SC to KZN and northwards to ZIM. Forests and wooded ravines. Small to tall evergreen garden tree. Maroon-dotted pink petals. Pellets: dark grey colour; taste bitter.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Calpurnia aurea (Fabaceae) (Papilionaceae)	African laburnum *Wilde geelkeur*	N0–2 P0–1?	9–3

Remarks

EC, KZN, SZ, MP, ZIM. Shrub or small tree, mostly of forest margins. Bunches of yellow pea-type flowers. No bees in some seasons, then again humming with bees, for which the reason is unknown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Canthium inerme (Rubiaceae)	Common turkey berry *Gewone bokdrol*	N0–2? P0–2?	8–2 (10–11)

Remarks

Southwestern Cape to KZN to LIM, ZIM. Small tree of coastal and montane forests. Flowers small and greenish. Full flowering every year, or sometimes in alternate years.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. mundianum (= **Afrocanthium mundianum**)	Rock alder *Klipels*	N0–3 P0–1	9–2 (10–11)

Remarks

SC to KZN, northern provinces, ZIM. Shrub or small tree on rocky ridges of bushveld and grassland. Small, greenish-white, faintly-scented flowers, in clusters. At least one strong spring shower is necessary for flowers to develop.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Caryota urens** (Arecaceae)	Common fishtail palm	N2 P	1–12?

Remarks

India, Sri-Lanka. Single-stemmed palm of the subtropics. 'Fishtail' refers to the wedge-shaped, veined leaflets. The inflorescence consists of several long, hanging straps, densely covered in flowers. Inflorescences of different ages are found on the same palm, implying flowering at different times of the year. Foraging honeybees were observed in October.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Cassia** & ***Senna** spp. (Fabaceae) (Caesalpiniaceae)	Cassia	N0? P0?	1–12 (12–3)

Remarks

Circumtropical. Many different species of exotic shrubs and trees are grown as ornamentals in S. Africa. They are admired for their masses of yellow flowers and their dark compound leaves. Contrary to some reports, they are not visited by honeybees, although carpenter bees often collect pollen from them. The flowers do not produce nectar. There are extrafloral nectaries on the leaf stalks, but only three documented cases overseas show that these glands are functional in small shrubs and that these were visited by honeybees. However, there is one observation of honeybees collecting a dirty lemon-coloured pollen from the shrub ***C. artemisioides** during August in Pretoria. Most **Cassia** species have now been transferred to the genus **Senna**.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Cassine papillosa (= *Elaeodendron croceum*) (Celastraceae)	Common saffron *Gewone saffraan*	N2? P2?	8–5 (9–11)

Remarks

SC to KZN, SZ, MP, LIM, ZIM. Small to medium size tree of evergreen forests or wooded ravines. Clusters of small, light green flowers, faintly sweet, in leaf axils. Irregular flowering. Evaluation based on two records.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. peragua	Cape saffron *Baster saffraan*	N2 P2	1–6

Remarks

Southwestern Cape to EC to LIM. Shrub or tree of forests and coastal scrub. Reportedly contributes to honeys of mixed origin in the Cape Peninsula.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. schinoides (= *Hartogiella schinoides*)	Spoon wood *Smalblaar* *Lepelhout*	N2? P1?	8–2 (12–1)

Remarks

Cederberg to EC. Small tree in mountainous areas. Suspected source of light-coloured, bitter honey in the Ceres district. No further information.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. eucleiformis (= *Robsonodendron eucleiforme*)	White silky-bark *Wit sybas*	N2 P1	9–4

Remarks

SC to KZN to LIM. Small tree on margins of coastal and montane forests. Identifying characteristic: elastic threads are present when the leaf blade is broken. Small, inconspicuous, pale green flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Cassipourea gummiflua (Rhizophoraceae)	Large-leaved onionwood *Grootblaar-uiehout*	N2? P	12–4

Remarks

EC, KZN, ZIM. Large forest tree usually near the coast. Small greenish-white flowers with many stamens. Terminal leaf buds with sticky yellow gum. Its collection for propolis has not been documented yet.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Castanospermum australe** (Fabaceae) (Papilionaceae)	Australian chestnut *Australiese kastaiing*	N0–3 P0–2	10–12

Remarks

Eastern Australia. Uncommon, slow-growing, evergreen street tree. Pollen occasionally much favoured, and not at other times. No honeybee notes from its native country.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Casuarina cunninghamiana** (Casuarinaceae)	River she-oak Beefwood *Kasuarina* *Kasuarisboom*	N0 P0–3	2–6

Remarks

Eastern Australia. Drooping needles are thin branches that have minute, scale-like leaves. Generally not very attractive to bees, but major visitation recorded a few times. Low 12.1% protein content in pollen. Invasive, particularly along the EC and KZN coasts. Flowering time is of trees in the interior. The horsetail tree, **C. equisetifolia**, is also worked by bees on occasion.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Catalpa bignonioides** (Bignoniaceae)	Indian bean tree Catalpa	N2? EN P0–2?	10–12

Remarks

Southeastern USA. Medium-sized ornamental tree with heart-shaped leaves. It is found in some large gardens and parks. It withstands frost and some drought. The fruit is long, thin and bean-like, but it is not a legume. Showy flowers are roughly bell-shaped, with crinkly white petals. There are prominent nectar guides in the form of dark purple lines and two orange blotches. White pollen pellets. Shortly before flowering, during flowering and for some time after flowering, nectar is secreted on the underside of the leaves from nectaries along the midrib. This extrafloral nectar is avidly collected at times.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Catha edulis (Celastraceae)	Bushman's tea Khat *Boesmantee*	N0–1? P0–1?	1–12 (6–10)?

Remarks

EC to LIM, ZIM. Small to medium-large tree. Rocky bushveld and associated forests. Honeybees have been observed to collect nectar and pollen occasionally – probably not a good beeplant. Source of a stimulating and narcotic alkaloid-based drug 'khat'. Illegal khat harvesting on EC farms.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Cedrela toona* (= **Toona ciliata) (Meliaceae)	Toon tree Burmese cedar	N0–4 P0–1	9–3? (9–11)

Remarks

Asia. Medium to tall tree. Grown on a small scale in warm, humid parts of S. Africa for timber, shade and ornament. Invasive at some localities in LIM and MP. The small, sweetly-scented flowers are sometimes ignored by bees for reasons unknown. The high nectar value was established in S. Africa. Reddish pollen in India, where it is a source of honey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Cedrus deodara** (PINACEAE)	Deodar cedar *Deodar seder*	N0 P? HD0–2	HD4–8

Remarks

Himalayas. Large coniferous cone-shaped tree of parks and gardens. Short, bluish-green needles. Aphid honeydew during winter months, particularly during mild winters on the Highveld. At times this is eagerly collected by bees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Celtis africana (ULMACEAE) (CELTIDACEAE)	White stinkwood *Kamdeboo* *Wit stinkhout*	N0 P0–2	8–10

Remarks

WC to KZN, FS, SZ, northern provinces, ZIM. Popular garden and street tree. In the wild associated with moist places. Beneficial pollen source in the more arid interior regions of its distribution. Male flowers release pollen in the morning as a small cloud after explosive dehiscence. Pellets greyish-beige. **Celtis** pollen constituted 12.8% of the pellets trapped during September outside Bloemfontein. Pollen foragers have also been observed on the Chinese nettle tree, ***C. sinensis**, on a few occasions.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Ceratonia siliqua** (FABACEAE) (CAESALPINIACEAE)	Carob *Johannesbroodboom*	N0–2 P0–4	12–5

Remarks

East Mediterranean. Hardy, predominantly dioecious fodder and shade tree: streets, gardens, parking areas. Bees obtain nectar and pollen from male flowers, but no bees have yet been observed on female flowers in the summer rainfall region. Honey is obtained in Italy where the tree occurs naturally and is grown commercially. Very useful pollen source. Pellets light brown to dirty yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Cercis siliquastrum** (FABACEAE) (CAESALPINIACEAE)	Judas tree *Judasboom*	N1–2 P0–2?	8–10

Remarks

Asia Minor. Deciduous ornamental. Drought, frost and heat resistant. Not well known. Pollen light grey. On the Highveld the flowers are poorly attended by bees – possibly due to acid soils.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Chamaecyparis lawsoniana** (CUPRESSACEAE)	False cypress *Baster sipres*	N0 P0? HD0–1	HD5–8

Remarks

Western USA. In S. Africa grown as a small tree that resembles a dense cypress. The cultivar that is mostly encountered has horizontally flattened branchlets (compare **Thuja**). The small round female cone is covered by 6–8 scales, each with a central tip. Large brown, as well as small brown aphids, identified as *Cinara* species, were observed to be visited by honeybees for their honeydew.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Chionanthus foveolatus (Oleaceae)	Pock ironwood *Pok-ysterhout*	N? P2?	9–5 (10–12)

Remarks

Southwestern Cape to KZN, SZ, MP, LIM, ZIM. Evergreen tree of very variable size. In forests, wooded ravines and thickets, from coast to mountains. Underside of leaves with small pockets in axils of veins. The small white flowers with elongated petals are sweetly scented.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Chorisia speciosa* (=Ceiba speciosa**) (Malvaceae)	Pink kapok tree *Pienk kapokboom*	N0–2 P0–3?	1–7 (2–4)

Remarks

Paraguay, Brazil. Ornamental tree with thick spiny trunk and large pink to burgundy flowers. There are five hard, pink-coloured structures in the flower, which close the flower base. Presumably honeybees only collect the nectar when it is copiously secreted and reaches these structures. High temperatures are more important for the formation of flowers than rainfall.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Cinnamomum camphora** (Lauraceae)	Camphor tree *Kamferboom*	N0 P0	8–11

Remarks

East Asia. Widely grown in parks, streets and gardens. Thick, stout trunk and dense, glossy green, rounded canopy. Leaves with strong camphor aroma when crushed. The tree is mentioned here because beeplant literature repeats the false information that it is a good source of food for honeybees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Cladrastis kentukea** (= *C. lutea*) (Fabaceae) (Papilionaceae)	American yellowwood	N1–2 P0–1?	10–11

Remarks

USA. Small, cold-hardy ornamental tree grown in some Highveld gardens. Drooping plumes of white, fragrant, pea-shaped flowers. Minor honey source in the USA.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Clausena anisata (Rutaceae)	Horsewood *Perdepis*	N1–2 P1–2	5–11

Remarks

SC to KZN, SZ, MP, LIM, ZIM. Slender shrub or small tree. From coast to mountains in thickets, bushveld and forest margins. Leaves as well as the water-white nectar have a strong, unpleasant smell. Sprays of small, cream-coloured flowers. Pellets light brownish-yellow. Later-flowering in the north.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Clerodendrum glabrum (Lamiaceae)	Tinder wood Verbena tree *Tontelhout*	N0–2 P0–1	9–4

Remarks

EC, KZN, SZ, northern provinces, ZIM, BOT, NAM. Small to medium size bushveld tree. Deciduous or evergreen. Compact round flower heads, which can be foul or sweet scented. Flower time can vary from year to year, possibly depending on rain. The blue-flowered tinder wood, **C. myricoides**, has the same distribution and beeplant value as the verbena tree.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Colophospermum mopane (Fabaceae) (Caesalpiniaceae)	Mopane *Mopanie*	N0–2 P0–2	10–3 (1–2)

Remarks

LIM, ZIM, BOT, NAM. Medium size tree, often on alluvial or poorly drained soils. May be found in pure stands of 'mopane woodland'. Insignificant, small, greenish flowers are variably attractive to bees. Seasonal flowering is erratic: it may be absent for several years. Rainfall is the main factor governing extent of flowering and nectar secretion. Surplus honey is rare, and more likely to be collected by mopane bees, *Trigona* species. One report of 'good quality honey' from Zimbabwe. A honey sample from mopane bees was golden, turbid and distinctly acidic.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Combretum apiculatum (Combretaceae)	Red bushwillow *Rooibos*	N0–3 P0–3	8–1 (9–10)

Remarks

KZN, SZ, northern provinces, ZIM, BOT, NAM. Small to medium size deciduous tree. Reddish-brown autumn leaves and 4-winged fruit. Flowering time variable, but only one flowering period. Good flowering depends on adequate autumn as well as spring rains. Honey reportedly dark with a strong flavour – this needs confirmation. Flow variable from year to year. This widely distributed plant needs proper evaluation. 'Harvested a 200 gallon water tank full of honey once, at Bochum, but flows are irregular' (Jack van der Merwe, pers. comm., 1973-03-31).

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. collinum	Variable bushwillow *Variërende boswilg*	N1–3 P2–3	6–10 (9)

Remarks

MP, LIM, ZIM, BOT, NAM. Variable, semi-deciduous shrub or medium-sized tree of open woodland. Flowers worked all day. Pollen greenish-yellow. Valuable for early build-up.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. erythrophyllum	River bushwillow *Vaderlandswilg*	N0–3 P0–3	9–2 (10–11)

Remarks

EC, KZN, SZ, northern provinces, along the Vaal and lower Orange rivers, BOT, ZIM. Large deciduous tree, mainly on riverbanks. Bee activity throughout the day under ideal conditions, but usually variable. Nectar has a water-white colour and non-specific taste. Pollen in shades of yellow or mustard-coloured. May skip flowering during drought conditions, particularly following a dry autumn and warm winter.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. hereroense	Russet bushwillow *Kierie-boswilg*	N3? P2?	8–1 (9–11)

Remarks

KZN, SZ, MP, LIM, ZIM, BOT, NAM. Small to medium size tree. Deciduous or semi-deciduous. Bee-attractive, but value uncertain. Fruit reddish-brown (russet). Browsed by game and cattle.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. imberbe	Leadwood *Hardekool*	N0–3 P0–2?	11–3 (12–1)

Remarks

SZ, MP, LIM, ZIM, BOT, NAM. Small to large semi-deciduous bushveld tree with exceptionally hard and heavy wood. Bark with grey rectangular flakes. Rare source of surplus honey. Strong showers during the 1–2 months prior to flowering seem to be significant. Tree cavities serve as sites for bee nests.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. kraussii	Forest bushwillow *Bosvaderlandswilg*	N0–3? P0–2?	8–12

Remarks

EC, KZN, SZ, MP, LIM. Medium to large tree in or near forests. White spring leaves change to green and then again to red in autumn. Little beeplant information, but high bee activity recorded.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. microphyllum (= *C. paniculatum*)	Flame creeper *Vlamklimop*	N1–3 P1–2	7–11 (9–10)

Remarks

KZN, SZ, MP, LIM, ZIM. Scrambling shrub or small tree of bushveld and forest, often along rivers. Large crimson panicles, with the many red stamens giving a showy effect. The urn-shaped flowers are too tightly closed for the bees, which rely on the nectar that flows between the filaments to outside the flower. Nectar collected throughout the day. Dark red pollen, most of which is gathered in the morning. Honey source in Ethiopia.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. molle	Velvet bushwillow *Fluweelboswilg*	N0–3 P0–3	8–11 (9–10)

Remarks

KZN, SZ, northern provinces, ZIM, BOT. Small to medium size, spreading, usually deciduous tree. Leaves mostly velvety. Normally attracts bees during the forenoon only. Contributes light, mild honey to mixed honey crops in spring. Best flows following good rains the previous summer and autumn. Mustard-coloured pellets.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. padoides	Thicket bushwillow *Boskasiewilg*	N1–2 P0–1	11–4

Remarks

KZN, MP, LIM. Scandent shrub or small tree of low-altitude bushveld. Pale yellow florets in loose spikes, often produced in profusion and with an unpleasant smell. The nectar also has this disagreeable smell. Nectar sugar varied between 9% and 32% at different times of the day and in different years. Pellets mustard-coloured. Usually more than one flowering per season.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. zeyheri	Large-fruited bushwillow *Raasblaar*	N0–3 P0–3	8–12 (9–10)

Remarks

KZN, SZ, northern provinces, ZIM, BOT, NAM. Open woodland and rocky hillsides. Small to medium size deciduous tree with large 4-winged fruit. Lemon-coloured florets in spikes; slightly sweet-scented. Honey straw-coloured with a bland sugary taste. Pollen yellow. Flowering is poor or absent following a dry autumn.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Cordia africana (= *C. abyssinica*) (Boraginaceae)	Large-leaved cordia *Grootblaar pieringbessie*	N2–4 P0–2?	3–6

Remarks

LIM, ZIM. Small to medium-sized tree of woodland and riverine bush. Large rough leaves. Flowers small, white, bell-shaped, sweetly scented, petals crinkled, in dense clusters, very attractive to bees. Honey source in Ethiopia. Two other related tree species with a wider distribution in the east of S. Africa are also well-attended by bees for nectar and pollen. They are the septee saucer-berry, **C. caffra**, and satin-bark saucer-berry, **C. ovalis**.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Cordyla africana (Fabaceae) (Caesalpiniaceae)	Wild mango *Wilde mango*	N0–2? P0–1	8–10

Remarks

KZN, SZ, MP, ZIM. Large tree of riverine forest. Flowers very similar to those of the weeping boer bean, also with much dilute nectar, but with a golden yellow colour. The plant bears yellow fleshy fruit instead of a pod as in other members of this family.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Croton gratissimus (Euphorbiaceae)	Lavender fever-berry *Bergboegoe* *Laventel koorsbessie*	N0–2 P0–4	1–12 (9–4)

Remarks

KZN, SZ, northern provinces, NC, ZIM, BOT, NAM. Small tree in different types of woodland, often on rocky ridges. Leaves shiny green above and silvery white below. Active extrafloral leaf nectaries have been seen to be exploited by ants. Small flowers on catkins: the few females are closest to the branchlets, the males towards the tip of the catkin. Flower buds can be carried for many months. The nectar is light yellow with a slightly perfumed smell. Pollen light yellow or lemon-coloured, with a slightly bitter and resinous taste. In the bushveld north of Pretoria the pollen constituted 23.3% of the total pellets trapped during December. The high pollen value of P4 was obtained from forager analysis in April.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. megalobotrys	Large fever-berry *Groot koorsbessie*	N0–3 P0–2?	9–1

Remarks

MP, LIM, ZIM, BOT. Medium size tree of bushveld and thickets, mostly along rivers. Separate male and female flowers on the same flower spike. Pollen value uncertain.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. sylvaticus	Forest fever-berry *Boskoorsbessie*	N0–2? P0–3?	9–1

Remarks

EC, KZN, SZ, MP, LIM, ZIM. Medium to large tree of low-altitude forests or dense woodland. Each leaf has two prominent nectar glands. It is unknown whether they become active. Light lemon flowers, female and male separate, on the same spike. Day-long pollen gathering has been noted.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Cunonia capensis (Cunoniaceae)	Butterspoon tree *Rooi els*	N2–3 P1?	2–6

Remarks

Groot Winterhoek to KZN. Streambanks and forests. Leaf buds are enclosed in a large, reddish, spoon-shaped structure. Whitish, scented flowers in dense spikes. Reported autumn honey flow in the SC. Regular seasonal flowering. One reliable record of late flowering in August, with high bee activity.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Cupressus** spp. (Cupressaceae)	Cypress *Sipres*	N0 P0–1 HD0–2	7–10
C. arizonica	Arizona cypress	PR0–1	
C. lusitanica	Mexican cypress		
C. macrocarpa	Monterey cypress		
C. sempervirens	Churchyard cypress		

Remarks

Mediterranean, southwestern USA. Male cones on the tips of branches are very small and inconspicuous. Pollen is rarely collected, and only if there is a simultaneous nectar source, such as has been recorded from aloes, eucalypts and red hot pokers. Pollen grains are round and smooth, and easier to collect than those of pines, which are larger and have two air sacs. Major honeydew collection by bees was observed on Mexican cypress during June on the Highveld. Three notices of propolis collection.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Curtisia dentata (Cornaceae)	Assegai *Assegaaihout*	N P	9–3 (1–2)

Remarks

Coastal and montane forests, from Cape Peninsula to EC, KZN and northwards to ZIM. Minute unscented flowers. Three records of honeybee visits. Beeplant value probably not high. Regular flowering in SC.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Cussonia natalensis (Araliaceae)	Rock cabbage tree *Rots-kiepersol*	N0–2 P0–2	12–7 (2–5)

Remarks

KZN, SZ, MP, LIM, ZIM. Small to medium size tree of rocky bushveld, with golden-yellow autumn leaves. Flowers small, yellowish-green, with unpleasant scent, on thin ± upright spikes. Nectar and pollen foragers have also been noticed on the Highveld cabbage tree, **C. paniculata**, as well as on **C. transvaalensis**, the Transvaal cabbage tree.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. spicata	Common cabbage tree *Gewone kiepersol*	N0–2 P0–3	11–8 (3–6)

Remarks

Swartberg mountains to EC, KZN, SZ, northern provinces, ZIM. In different habitats: rocky grassland, forest margins and bushveld. Small to medium size tree with a much-branched rounded crown. Inflorescence with many, thick, upright, candle-like flowering spikes. Nectar: water-white and with a mild taste. Pellets cream to lemon-coloured to light biscuit.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Dais cotinifolia (Thymelaeaceae)	Pompom tree *Kannabas*	N0–3 P0–1	10–2 (11–12)

Remarks

EC, KZN, L, FS, SZ, MP, LIM, ZIM. Shrub or small tree of forest margins and kloofs. Tubular pink flowers in round heads. Seldom enough nectar in the thin, long flower tube for bees to reach: only when it rises higher than 15 mm. Pollen orange. Plants may have two flowering periods.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Dalbergia spp. (Fabaceae) (Papilionaceae)	Flat bean *Platboontjie*	N1–3 P0–1?	8–12 (10–11)
D. armata	Thorny rope		
D. melanoxylon	Zebra wood		
D. nitidula	Glossy flat bean		

Remarks

EC, KZN, SZ, MP, LIM. Trees or vigorous climbers with compound leaves. Flat pods that do not split and that rarely contain more than 1–2 seeds. Flowers: small, pea-type, cream-coloured, sometimes fragrant. Bees can access the nectar, probably because the flowers are small and because the different petal types are not stiff and allow the bees to open the flower. Honeybees noted to be active on flowers of zebra wood all day long. Honey is harvested from ***D. sissoo** in India. Some escapes of this tree are found in the northern provinces.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Delonix regia** (= *Poinciana regia*) (Fabaceae) (Caesalpiniaceae)	Flamboyant	N0–2 EN0–1 P0–3	11–2 (12)

Remarks

Madagascar. Magnificent large tree with umbrella crown of feathery leaves. Common name coined by Mark Twain while visiting Natal [KZN]. Orchid-like red flowers, with the lower middle petal white to cream-coloured and streaked with red nectar guides. This flag petal folds up and changes to an orange-red colour in flowers that probably have been successfully pollinated. Such flowers are not attended by bees. High activity of nectar and pollen gatherers has been noticed for an entire day, but usually the flowers are without bees, probably because of dry soil. Extrafloral nectar is secreted as droplets in any position on the leaf stalk. This was seen to be collected by honeybees, whilst the flowers on the same tree were not visited. Pollen is eagerly gathered in red pellets. Under a microscope it was noticed that pollen grains have much yellow oil on their surfaces. No flowering takes place when rains fail.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Dialium schlechteri (Fabaceae) (Caesalpiniaceae)	Zulu podberry *Zoeloe peulbessie*	N3? P2?	10–12

Remarks

Sand forest of Maputaland, northern KZN. Small to medium-sized, deciduous tree. Flowers are small, cream-coloured, and carried on a compact, branched inflorescence of which all parts are covered in dense, golden-brown hairs. The Zulu podberry is closely related to the Kalahari podberry, **D. englerianum**, of northern Botswana and Namibia and further north. This species is a source of light-coloured honey and brownish-yellow pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Diospyros mespiliformis (Ebenaceae)	Jackal-berry *Jakkalsbessie*	N0–3? P0–1?	9–3 (10–11)

Remarks

MP, LIM, ZIM, BOT, NAM. Medium to large tree, often along rivers. Separate male and female plants. Flowers small, urn-shaped, cream-coloured. Beeplant value not yet tested in S. Africa, but at times trees are said to be 'humming with bees'. Surplus honey in Malawi and Ethiopia. Common name: jackals eat the fruit.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Dombeya rotundifolia (Sterculiaceae)	Wild pear *Drolpeer*	N0–2 P0–4	7–11 (8–9)

Remarks

KZN, SZ, northern provinces, ZIM, BOT, NAM. Small deciduous tree in different bushveld habitats. Ample autumn rain provides subsoil moisture for the short flowering during the dry spring. Early brood stimulant. Nectar secretion very variable. Light-coloured honey in East Africa. Pellets light biscuit.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Dovyalis rhamnoides (Salicaceae) (Flacourtiaceae)	Common sour-berry *Gewone suurbessie*	N2? P2?	7–2

Remarks

SC to KZN, SZ, MP, LIM. Shrub or small tree of coastal and montane forests. Straight, slender spines. Flowers small, light lemon-coloured, as clusters in leaf axils, sexes on different trees. Both flower types secrete nectar. Regular flowering in SC forests. Scant information on bee–flower interaction.

Botanical Name	Common Name	Beeplant Value	Flowering Time
D. zeyheri	Wild apricot *Wilde appelkoos*	N0–2 P0–3	8–4 (10–12)

Remarks

EC, KZN, SZ, northern provinces, ZIM. Small to medium size tree of forest margins and bushveld, on termitaria and rocky ridges. Male flowers in clusters, female singly; light lemon colour; central mass of yellow stamens in male flowers. Variably attractive to bees, but 'major activity' recorded. Fruit reminiscent of common apricot, but smaller and oval-shaped.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Dracaena mannii (Dracaenaceae)	Small-leaved dragon tree *Kleinblaar drakeboom*	N2? P1?	8–10

Remarks

Maputaland in northern KZN. Shrub or small tree of swamp and dune forest, with a slender, much-branched stem. Flowers are cream-coloured, open at night, sweetly-scented, with long stamens and flower tube, i.e. moth-pollinated. Single record of bee visits.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Dypsis lutescens** (= *Chrysalidocarpus lutescens*) (Arecaceae)	Yellow bamboo palm *Geel bamboespalm*	N1–2 P0–1	11–1

Remarks

Madagascar. Small, many-stemmed palm with arched feather fronds. Stems with bamboo-like rings. Small yellowish flowers, with separate sexes on the same panicle. First flowering at about 10 years of age in Pretoria, thereafter regularly every year. In the subtropics it may flower at other times as well. Nectar colour: a hint of light yellow; taste: distinctly nutty (peanuts). Pollen light biscuit. A flower panicle emerges from the axil of the lowest leaf. Flowering of a single panicle lasts six days in hot weather.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Ekebergia capensis (Meliaceae)	Cape ash *Essenhout*	N0–2 P0–2	8–3 (9–11)

Remarks

SC to KZN, SZ, MP, LIM, ZIM, BOT. Medium to large tree of coastal and montane forests. Small light green flowers, faintly sweet-scented, sexes on different trees. Full flowering every year in the SC. Active bee-visitation in SC and KZN forests, but no bees observed yet on trees planted in Pretoria, despite good fruit set. The smaller rock ash, **E. pterophylla**, of eastern S. Africa is a known nectar source for honeybees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Encephalartos villosus (Zamiaceae)	Ground cycad *Grond-broodboom*	N0 P0–2	3–6

Remarks

EC, KZN, SZ. Cycad with underground stem, sometimes slightly exposed. Shaded or forested areas of coast and inland. Leaves to 2.5 m long. Male cones are lemon-coloured and relatively long and narrow. Honeybees eagerly collect the white pollen at times.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Englerophytum magalismontanum (Sapotaceae)	Transvaal milk plum *Stamvrug*	N0–1 P0–2	6–1 (8–10)

Remarks

KZN, SZ, northern provinces, BOT, ZIM. Small to medium size tree of rocky outcrops. Flowers in compact clusters on main stem and branches, small, brownish-pink, unpleasantly-scented, rarely visited by bees. Pellets dirty-white.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Ensete ventricosum (Musaceae)	Wild banana *Wilde piesang*	N1? P2?	10–11

Remarks

LIM, ZIM. Banana-like plant with a thick stem and very large spirally-arranged leaves. In moist forests and along streams. Large drooping flower spike. The pale flowers are protected by large maroon-coloured bracts. The plant flowers once at an age of about eight years, and then dies after fruiting. Pollen pellet colour pale violet. Leathery 'bananas' have hard seeds and are not edible.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Erythrina caffra (Fabaceae) (Papilionaceae)	Coast coral tree *Kus koraalboom*	N0–2 P0–2	6–9

Remarks

EC, KZN. Medium to large deciduous tree of coastal forests and rivers. Orange-scarlet flowers with an enlarged standard or top petal. Many very long stamens are carried in a short, thick, rounded keel petal, i.e. bees can easily access the pollen. Much dilute nectar.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. crista-galli**	Cock's comb coral tree *Tuin koraalboom*	N0–2 P0–3	10–11

Remarks

Brazil. Most widely-cultivated of all coral trees. Small deciduous tree with deeply-fissured bark. Pollen olive-coloured. The mature crimson flowers turn upside-down, so that the keel petal with stamens is on top. The stamens jointly protrude a little beyond the lip of the keel, making pollen collection easier for the bees. For nectar collection, however, the bees adopt an upside-down stance. They have difficulty in reaching the large drop of nectar in the base of the flower. All day foraging observed. Unusual autumn flowering is on record.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. humeana	Dwarf coral tree *Klein koraalboom*	N0–2 EN0–1 P0–1	11–4

Remarks

EC, KZN, SZ, MP, LIM. Shrub or small tree in different habitats, from coast to mountainsides. Upright slender inflorescence. Long narrow red flowers that totally enclose the stamens. The pinkish calyx cup, from which the petals develop, has five pointed lobes. One of these is a greenish nectar gland that is functional before the flower is fully developed. It is visited by honeybees. There are also active extrafloral leaf nectaries on young shoots, from which bees collect nectar as well. Rarely do bees reach some of the dilute flower nectar with 16% sugar. Pollen becomes available from wilted flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. lysistemon	Common coral tree *Gewone koraalboom*	N0–2 EN0–1 P0–1	7–10

Remarks

EC, KZN, SZ, northern provinces, BOT, ZIM. Small to medium-sized deciduous tree. Wide range of habitats and altitudes. One of the sepals of the calyx cup has a distinct extrafloral nectary on its tip. This is attended by bees for nectar before the flower opens. Stamens and anthers remain inside the keel and standard petal cover, but are reached by some persistent bees. Low nectar sugar near 13%. Pollen dark grey. There is also one record of nectar-collecting bees on the flowers of the broad-leaved coral tree, **E. latissima**.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. zeyheri	Plough breaker *Ploegbreker*	N2? P0?	10–12

Remarks

KZN, FS, G, MP. Grassland shrub with a large underground stem. Big thorny leaves. Upright inflorescences on long stalks. The standard or top petal encloses the entire flower. Strong activity of nectar bees has been noted, but whether this was floral or extrafloral nectar, is not known.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Erythrophleum lasianthum (FABACEAE) (CAESALPINIACEAE)	Swazi ordeal tree *Swazi oordeelboom*	N2? P2?	8–11

Remarks

KZN, SZ. Medium-sized tree of low-lying sand forest. Large, drooping, double-compound leaves. Inflorescence of dense, honey-scented spikes with small creamy-green florets. Early to mid-morning foraging recorded. Poisonous bark, leaves and seeds.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Euphorbia cooperi (EUPHORBIACEAE)	Lesser candelabra tree *Kandelaar-naboom*	N2 P1	5–10

Remarks

KZN, SZ, MP, NW, LIM, ZIM. Rocky slopes in bushveld. Our most attractive candelabra tree, to which the angled, deeply constricted, neat branches contribute. Pollen light brown. Single old report of poisonous honey (no location given).

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. ingens	Common candelabra tree *Gewone naboom*	N0–2 P0–1	4–8 (4–5)

Remarks

KZN, SZ, northern provinces, BOT, ZIM. Candelabra tree with a massive crown. In bushveld, often associated with termitaria or rocky outcrops. The author took hives to an extensive stand of candelabra trees near Mokopane (Potgietersrus) for five consecutive years, without obtaining honey. The late Paul Hässler, however, harvested some honey from this species at Bandolierkop. This honey was light-coloured and quick-granulating.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. tetragona	Honey candelabra *Heuning-naboom*	N2 P1	6–9
E. triangularis	River candelabra *Rivier-naboom*		

Remarks

EC, KZN, SZ, MP. Tall trees with a few stem-like branches, each with its own candelabra crown. Found in Valley Bushveld of the EC and rocky river valleys elsewhere. The dark honey that burns the throat and causes nausea is fortunately seldom harvested.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Faurea macnaughtonii (PROTEACEAE)	Terblans beech *Terblans*	N2–3? P0–2?	12–5 (2–3)

Remarks

SC to KZN, MP. Tall tree in forests and on forest margins, prized for its hard, dark brown and sweet-smelling wood. Flowers in robust drooping spikes, cream to pink, sweetly scented. Regular flowering in the SC. Well-visited by honeybees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
F. rochetiana (= *F. speciosa*)	Broad-leaved beech *Breëblaar boekenhout*	N0–3 P0–1?	3–9 (4–6)?

Remarks

KZN, MP, LIM, ZIM. Small to medium size deciduous tree of high altitude grassland and woodland. Robust flower spikes are cream-coloured to pinkish. Copious visible nectar if not removed by insects. Very attractive to bees. Honey source in Zambia.

Botanical Name	Common Name	Beeplant Value	Flowering Time
F. saligna	Transvaal beech *Transvaal boekenhout*	N0–3 HD0–1 P0–2	8–3 (11–12)

Remarks

KZN, SZ, northern provinces, ZIM. Small to medium size, semi-deciduous tree, resembling a rough-barked eucalypt. Strong spring showers necessary for optimal flower production and nectar secretion. Honey: dark reddish-brown, musty aroma, malty taste, slow granulation. Pollen greyish-yellow. Bees forage early morning and late afternoon. The average annual honey crop varies between 4 kg and 22 kg per hive. Honeydew is rarely collected from woolly aphids that hide in curled leaves.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Ficus spp. (MORACEAE)	Wild fig *Wildevy*	N0 P0 PR0–2	9–4

Remarks

Widespread in southern Africa. Bees collect propolis during hot weather, presumably because it is then easier to manipulate. The propolis is gathered from injury sites, even very minute ones, on green fruit, leaves, branches and stems. Two records of propolis colour: light brown. Also one report of bee activity on the Namaqua fig, probably collecting propolis.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Firmiana simplex** (MALVACEAE) (STERCULIACEAE)	Chinese parasol tree *Sjinese sambreelboom*	N0–2 P0?	11–1

Remarks

China, Japan. An ornamental tree valued for its large 3- to 5-lobed leaves, its sprays of yellowish-green flowers, and its papery, boat-shaped fruit. Nectar is water-white, without a smell, and with a sweet taste only. No release of pollen from the flowers could be detected.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Fraxinus** spp. (OLEACEAE)	Ash *Es*	N0 P1–4 PR	8–10

Remarks

Europe, North America. Ornamental dioecious trees with compound leaves. The winged fruit or samara develops singly (compare maples). Pellets cream-coloured to yellow to beige to orange in different species. Useful pollen sources in Karoo and Highveld towns. Crude protein in one pollen sample was 17.7%. Propolis is also gathered.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Galpinia transvaalica (LYTHRACEAE)	Wild pride-of-India *Transvaal liguster*	N1–2 EN0–1 P0–2	10–5 (1–3)

Remarks

KZN, SZ, MP, LIM, ZIM. Small tree, usually with several stems, of rocky bushveld and thickets. Leaves typical: opposite, margins strongly wavy, gland near the tip on the underside. This nectar gland is active on young leaves and utilised by honeybees. Flowers: in dense panicles, white crinkly petals, average visitation by bees. Nectar: low sugar content, light yellow colour, musty smell, slightly bitter taste. Pellets in shades of yellow. Flowering in the Lowveld is irregular and rainfall dependent.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Gleditsia triacanthos** (FABACEAE) (CAESALPINIACEAE)	Honey locust *Christus-doring* *Soetpeul*	N1–4 P0–3	9–11

Remarks

North America. Dry area street and fodder tree. Invasive in high-lying interior. Predominantly dioecious. Light, mild honey from the FS. Pollen light greyish-brown, collected during the forenoon. Excellent beeplant.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Gmelina arborea** (Lamiaceae)	White teak *Melina*	N1–3? P0–2?	7–10

Remarks

India. Some trees are extant from former test plantings in escarpment areas of LIM and MP. Uses: timber and shade. Large, heart-shaped leaves. Bell-shaped yellow flowers. Good source of honey in India.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Grevillea robusta** (Proteaceae)	Common silky oak *Gewone silwereik*	N0–2 P0–1	9–1 (10–11)

Remarks

Eastern Australia, Tasmania. Masses of golden-yellow flowers that contrast strikingly with the lilac-blue of jacarandas in late spring. The usually plentiful dark nectar is very rarely attractive to bees despite a range of low to high sugar concentrations (15–78%) on the same tree. High bee activity is infrequently recorded, both in the winter and summer rainfall regions. In a small percentage of flowers with concentrated nectar, it was found that the nectar was ropy, with a slight recoil property. One report of dark honey from Addo. Pollen yellowish.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Halleria lucida (Scrophulariaceae)	Tree fuchsia *Notsung*	N0–2 P0–2	1–12 (6–8)

Remarks

Forest areas of S. Africa, from southwestern Cape to northern provinces to ZIM. Long-flowering, i.e. a supportive beeplant. Long, thin, red, curved flower tube: a bird flower. Nectar collected from flower front, but also robbed from base. Nectar moves by capillary action in the pipes formed between four filaments and the style. Four anthers dehisce at different times. Pellets grey to light pinkish-grey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Harpephyllum caffrum (Anacardiaceae)	Wild plum *Wilde pruim*	N0–1 P0–1	11–4 (12–2)

Remarks

Forests of eastern S. Africa, i.e. EC, KZN, SZ, MP, LIM. Dioecious ornamental trees used for streets and gardens. One record of bee visits from the southwestern Cape. Female and male trees in Pretoria have not been seen with bees, and rarely with other insects, but they nevertheless fruit well.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Heeria argentea (Anacardiaceae)	Rock wood *Kliphout*	N P?	1–7 (4–5)?

Remarks

Southwestern Cape. Small tree of dry rocky slopes. One record of flowering trees, together with *waboom* (**Protea nitida**), attracting wild swarms. No further information.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Heteropyxis natalensis (HETEROPYXIDACEAE)	Lavender tree *Laventelboom*	N1–3 P0–1	12–4 (1–2)

Remarks

KZN, SZ, MP, G, LIM, ZIM. Rocky bushveld and forest margins. Small to medium size tree with pale-grey flaking bark. Leaves with 2–4 prominent lateral veins; lavender scent when crushed. Usually a profusion of small, light lemon-coloured, fragrant flowers. Pollen is rarely collected, but nectar foragers are always in attendance.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Hippobromus pauciflorus (SAPINDACEAE)	False horsewood *Baster perdepis*	N1–3 P2?	7–1

Remarks

SC, EC, KZN, SZ, MP, LIM. Riverine thickets, forest margins and bushveld. Shrub or small tree with compound leaves of which the leaflets are asymmetrical. Leaves contain a strong-smelling resinous substance. Flowers: small, cream-coloured, scented, prominent stamens and anthers, in dense velvety-brown clusters. One or sometimes two short honey flows in the EC. Honey very light-coloured.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Hovenia dulcis** (RHAMNACEAE)	Japanese raisin tree *Japanse rosyntjie boom*	N0–2? P?	11–1

Remarks

Eastern Asia. Small to medium-sized deciduous tree, which has been planted in gardens and along streets in temperate Highveld conditions. The heart- to egg-shaped leaves discolour in autumn. Small, greenish-white flowers in loose clusters are busily worked by bees at times. As the small capsular fruit develop, the fruit stalks start growing into fleshy, distorted growths, which are light brown, sweet-tasting and edible – the 'raisins'.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Hyphaene coriacea (= *H. natalensis*) (ARECACEAE)	Lala palm *Lalapalm*	N3 P3	10–3

Remarks

KZN, SZ, MP, LIM, ZIM. Palm tree 3–7 m high, with greyish-green fan-shaped leaves. Lowveld and coastal grassland. Dioecious, i.e. separate female and male plants. A nectar sample with 60% sugar had a water-white colour and no smell, implying a light-coloured, mild honey. The light-coloured pollen had a mild, non-specific taste. The beeplant value was obtained from a single analysis of bees foraging on male trees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Ilex mitis (AQUIFOLIACEAE)	African holly Cape holly *Without*	N1–3 P2?	9–3

Remarks

Moist forests of S. Africa and further north. Leaves not toothed like European hollies. Small white flowers in clusters; dioecious. Regular flowering in the SC. Edith Robinson (1939-01-06, letter): 'Occasional bitter honey at Knysna'. Important honey source in Tanzania.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Ipomoea arborescens** (Convolvulaceae)	Tree morning glory	N2 EN0–1 P3	3–10 (4–6)

Remarks

Jamaica. Small ornamental tree with thickened stem and roots. Large, white, crinkly flowers that provide nectar and a white pollen. Extrafloral nectar from sepals of unopened flower buds.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Jacaranda mimosifolia** (Bignoniaceae)	Jacaranda *Jakaranda*	N0–3 P0	9–3 (10–11)

Remarks

Northwestern Argentina. Dry soil and cool weather in particular, inhibit nectar secretion. Individual trees may be found that flower as late as March. Bees work hanging and fallen flowers. Honey is light-coloured and mild. When pure, it crystallises within a month or two. Invasive in KZN and the northern provinces.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Kigelia africana (Bignoniaceae)	Sausage tree *Worsboom*	N0–2? P0–2?	6–11 (9–10)

Remarks

KZN, SZ, MP, LIM, ZIM, BOT, NAM. Medium to large, semi-deciduous bushveld tree, often near a river. Characteristic large sausage-shaped fruit. Big, maroon, cup-shaped flowers. Long flowering time of two months or more. Beeplant value uncertain: flowers are variably attractive for nectar and pollen. Intense visitation half-an-hour before and after sunrise, but also some reports of bee activity at other times of the day.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Kiggelaria africana (Achariaceae) (Flacourtiaceae)	Wild peach *Wilde perske*	N1–2 P0–4	8–1 (10–11)

Remarks

WC to KZN, L, FS, SZ, northern provinces, ZIM. Dioecious tree of Cape forests and bushveld further north. Nectar is gathered throughout the day, but on male trees major pollen activity was noticed in the morning, followed by high nectar collection only during the afternoon. The nectar has a water-white colour even at a high sugar concentration. Flowers of young trees are more attractive. Pellets light brownish-yellow to yellowish-orange. There is an April–June flowering on record.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Kirkia acuminata (Kirkiaceae) (Simaroubaceae)	White syringa *Witsering*	N0–3 HD P?	10–12

Remarks

MP, LIM, ZIM, BOT, NAM. Medium size to large deciduous tree in different types of woodland, often on rocky outcrops. Small, cream-coloured flowers in branched inflorescences. The plants are monoecious, i.e. separate male and female flowers on the same tree, but in this species only those of one sex open at a time, therefore the 'P?' value. Leafhopper honeydew is collected. One observation of bees re-liquefying dried-out honeydew on leaf surfaces. Nectar collecting has also been seen on the mountain syringa, **K. wilmsii**. More beeplant information is needed.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Koelreuteria paniculata** (SAPINDACEAE)	Golden rain tree	N2 P0?	11–1

Remarks

China. Ornamental tree grown for its foliage, flowers, and decorative fruit. Not suitable for seaside conditions. Sprays of yellow flowers are borne above the foliage. The beeplant value is based on a single evaluation of honeybee foragers. Its rating is most probably higher. ***Koelreuteria bipinnata**, the pride-of-China, has a similar beeplant value. It flowers February–April.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Lagunaria patersonii** (MALVACEAE)	Norfolk Island hibiscus Cow itch *Lagunaria*	N1–3 P0–2	10–12

Remarks

Northeastern Australia. Hardy coastal shade and street tree, with small-scale cultivation in the interior. Pink hibiscus-type flowers. Pollen biscuit coloured. Fruit hairs can cause itching.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Lannea discolor (ANACARDIACEAE)	Live long *Dikbas*	N0–3? P0–3	7–2 (8–9)

Remarks

KZN, SZ, northern provinces, ZIM, BOT, NAM. Small to medium size deciduous tree of open woodland, often on rocky outcrops. Separate male and female trees. Nectar value uncertain. Pollen yellow. **Lannea** species in East Africa yield nectar heavily early morning and late afternoon, producing a mild, light amber honey. The flowers of the false marula, **L. schweinfurthii**, are actively visited by bees in the early morning.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Ligustrum lucidum** (OLEACEAE)	Chinese privet Glossy privet *Sjinese liguster* *Blink liguster*	N1–3 P0–2	10–2, 4–5

Remarks

Eastern Asia. Hardy evergreen shade tree or hedge plant. Invasive in cool, high-rainfall areas. May impart unpleasant taste and smell to other honeys. Light yellow pollen often ignored: foragers become pollen-dusted. Occasional second autumn flowering.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Liquidambar styraciflua** (ALTINGIACEAE) (HAMAMELIDACEAE)	American sweet gum *Amberboom*	N0 P0–3 PR	9–10

Remarks

North and Central America. Ornamental tree that is widely grown in S. Africa. Striking autumn colours. Cream-coloured pollen. Occasionally propolis is collected from wounds on the stem.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Liriodendron tulipifera** (MAGNOLIACEAE)	Tulip tree *Tulpboom*	N0–3 P0–1 PR	9–10

Remarks

Important North American honey source. Relatively rare tree of parks and gardens in S. Africa. First flowers at about 10 years of age. Nectar droplets are formed on the petals. Pollen is rarely collected. Propolis gathering has been observed.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Philenoptera violacea [Formerly known as *Lonchocarpus capassa*, which is a synonym.] (FABACEAE) (PAPILIONACEAE)	Apple-leaf *Appelblaar*	N1–3 P0–1	8–11 (10–11)

Remarks

KZN, SZ, MP, LIM, ZIM, BOT, NAM. Medium size, deciduous bushveld tree, sometimes occurring as non-flowering shrubbery. Dense panicles of small, mauve pea flowers. Most foraging during forenoon in dry weather, otherwise all day. Optimum nectar flow with good rains the previous summer to autumn and with moist soil during flowering. Suspected source of light-coloured, mild honey. Pellets yellowish-brown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Lophostemon confertus** (= *Tristania conferta*) (MYRTACEAE)	Brush box Queensland box	N1–3 P0–1	10–1

Remarks

Eastern Australia. Large ornamental tree found in some city gardens in S. Africa. Although the flowers are myrtaceous, they are exceptional: five hairy, well-developed cream-coloured petals and many stamens united into five bundles that look like miniature bottle-brushes. Source of honey in some seasons in Australia. Most common street tree in Sydney.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Loxostylis alata (ANACARDIACEAE)	Tar wood *Teerhout*	N2 P1?	8–4 (10–12)

Remarks

EC, KZN. Small tree on sandstone forest margins. Dioecious, i.e. sexes on different plants. Distinctive characteristic: the axis or rachis of the compound leaf is winged. Fruit develops in an enlarged sepal that becomes petal-like and red. Many small, white flowers. Beeplant value based on a single observation in KZN. Unconfirmed report of a brown honey near Uitenhage.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Macaranga capensis (EUPHORBIACEAE)	Wild poplar *Wilde populier*	N2? P2?	10–1

Remarks

EC, KZN, ZIM. Medium to large tree of low-altitude forest. Diagnostic character: large, peltate leaves, i.e. leaf stalk attached inside the leaf margin. Small, light-lemon flowers in branched sprays (male) or spikes (female). Evaluation based on two records. In the mountain poplar, **M. mellifera** of eastern Zimbabwe, honeybees were seen to collect extrafloral nectar.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Maerua angolensis (Capparaceae)	Bushveld bead bean *Knoppiesboontjie*	N0–1 P0–1	7–12 (9–10)

Remarks

KZN, SZ, MP, LIM, NW, BOT, ZIM. Small to medium size tree of bushveld and thickets. Flowers scented, without petals, but with many cream-coloured stamens. Bees are rarely seen on the flowers. Fruit are deeply segmented pseudo-pods, like beads on a string. The river maerua of the NC, **M. gilgii**, has been seen to be attended by honeybees. Pollen-collecting bees were also observed once on **M**. **juncea**, the rough-skinned maerua, in the Lowveld.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Malus** spp. & cvs. (Rosaceae)	Crab apple Flowering apple *Houtappel*	N1–3 P0–2	8–11
M. baccata	Siberian crab apple		
M. floribunda	Japanese crab apple		
M. hupehensis	Himalayan crab apple		
M. ioensis	Iowa crab apple		
M. sargentii	Sargent's crab apple		
M. sylvestris	Common crab apple		

Remarks

Northern temperate zones. Deciduous hardy trees or large shrubs. Valued as ornamentals for their beautiful spring blossom display, the plentiful miniature apples, and for the leaves with purplish hues in some species. Besides ornamentals, some crab apples are used as rootstocks and pollenisers for commercially grown apples. They are suited to cold, higher elevations where they bear more flowers and fruit. Although the fruit of most crab apples can be used to make preserves, a few species have hard fruit.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Markhamia zanzibarica (= *Spathodea acuminata*) (Bignoniaceae)	Maroon bell bean *Klokkies boontjieboom*	N2? P?	9–5

Remarks

LIM, ZIM, BOT. Small, slender bushveld tree on deep sand or rocky outcrops. Common names refer to the bell-shaped flower and the fruit, which resembles green bean pods. Evaluation based on two sources outside S. Africa.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Melaleuca quinquenervia** (Myrtaceae)	Broad-leaf tea tree Cajeput	N1–3 P0–3	1–12 (3–5)

Remarks

Eastern Australia, Malaysia. Spongy, whitish, papery bark. Suited to brackish, seaside conditions, but also grows well inland. Cream-coloured pollen promotes brood rearing. Pollen crude protein in Australia: 35.0–36.8%. Strong-tasting, dark honey in Australia and Florida, USA. Some authorities regard ***M. leucadendron** as a distinct species, instead of as a variant with a different flowering time.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***M. styphelioides**	Prickly-leaf tea tree	N1–2 P0–1	10–1

Remarks

Eastern Australia. Adapted to moist, brackish coastal conditions, but also prospers in the interior as a hardy street tree with thick papery bark. Not commonly grown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Melia azedarach** (MELIACEAE)	Syringa Persian lilac *Maksering*	N0–1 EN P0–1	8–2 (9–10)

Remarks

India, Sri Lanka. Small fragrant flowers only attract bees during a general nectar dearth. One record of extra-floral nectar secreted beneath the leaf scars of leafless young trees. This 'clear, pleasant-tasting' nectar was collected by bees. Small yellowish-brown pollen pellets. Declared invader.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Metrosideros angustifolia (MYRTACEAE)	Lance-leaf myrtle *Smalblaar*	N2? P2?	10–1

Remarks

Southwestern Cape. Small tree along mountainous water courses. Whitish flowers with many long stamens. Pollen yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***M. excelsa** (= *M. tomentosa*)	New Zealand Christmas tree Pohutukawa *Nieu-Seelandse kersboom*	N1–3 P0–2	10–1

Remarks

New Zealand. Attractive hedge and street tree for coastal conditions as well as the interior. Crimson flowers with long-exserted stamens. Greenish-yellow pollen. Honey in New Zealand is white and quick-granulating. Invades moist coastal sites of southwestern Cape.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***M. kermadecensis**	Kermadec pohutukawa	N1–3 P0–1	1–12 (11–1)

Remarks

New Zealand. Small tree for coastal conditions. Flowers with long crimson stamens and large amounts of relatively dilute nectar. The variegated cultivar is more commonly grown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Millettia grandis	Umzimbeet	N0	11–3
(Fabaceae)	*Omsambeet*	EN0–1	
(Papilionaceae)		P0	

Remarks

Decorative, medium size, deciduous tree of coastal areas of EC and KZN. Erect, narrow inflorescence with hairy, reddish-brown flower buds, from which the lilac pea flowers develop. These are too stiff for honeybees to open, but carpenter bees and large leafcutter bees readily access the nectar. However, honeybees collect extrafloral nectar from bracts at the base of young pods when these are 2–6 mm long. There are several **Millettia** species in central Africa that are visited by honeybees, probably because they have smaller, more pliant flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Mimusops zeyheri	Transvaal red milkwood	N0–3	10–5
(Sapotaceae)	*Moepel*	P0–1	(11–1)

Remarks

SZ, northern provinces, ZIM, BOT. Small to medium size evergreen tree of bushveld, often in rocky places. Milky latex when injured. Star-shaped white petals contrast with brown sepals. Slow-granulating, reddish-amber honey is only obtained occasionally. Pollen pellets light orange. One note about **M. obovata**, the eastern red milkwood: 'A honey tree'.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Nuxia spp.	Wild elder	N1–3	4–9
(Buddlejaceae)	*Wilde vlier*	P0–2?	(6–7)
(Loganiaceae)			
N. congesta	Common elder		
	Gewone vlier		
N. floribunda	Forest elder		
	Bosvlier		

Remarks

SC to KZN, SZ, northern provinces, ZIM. Small to medium-sized evergreen trees of forest, bushveld and rocky grassland. Leaves concentrated at the end of branchlets. Above them the inflorescences appear: large much-branched sprays of small, white, fragrant flowers. These are highly attractive to bees, already during early morning. Foragers become dusted with pollen, which is collected by some bees into light-coloured pellets. The pollen promotes active brood rearing. Honey crops from both species have been reported, but no further details, except for one note of 'white honey'. Good flowering sometimes occurs outside the normal April–September period.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Ochna arborea	Cape plane	N2	8–2
(Ochnaceae)	*Kaapse rooihout*	P2?	

Remarks

SC to KZN, SZ, MP, LIM, ZIM. Shrub to medium size tree, mainly in forests. The flowers with their yellow, crinkly petals soon drop, indicating the presence of the tree on forest paths. Nectar-gathering bees have also been seen on fallen flowers. Full flowering every second year in SC forests.

Botanical Name	Common Name	Beeplant Value	Flowering Time
O. pretoriensis	Magalies plane *Magalies rooihout*	N0–1? P1–3	8–11 (9–10)

Remarks

Northern provinces. Usually a shrub; rarely a small tree. Mostly on north-facing slopes of rocky outcrops. Yellow fragrant flowers appear before the leaves. Pellets light yellow. Short-flowering.

Botanical Name	Common Name	Beeplant Value	Flowering Time
O. pulchra	Peeling-bark plane *Lekkerbreek*	N0–3 P0–3	8–1 (9–10)

Remarks

Northern provinces, ZIM, BOT, NAM. Shrubby growth form or, more usually, a small deciduous tree of sandy woodland. The bark peels to reveal a smooth, cream- to biscuit-coloured underbark. Nectar and pollen availability very variable between seasons, as well as times of day: no pattern detected yet. The light-coloured honey is said to have the distinctive aroma of the flower scent. It forms part of the mixed spring honey crop. Pollen: light orange colour; mild apricot taste. Best flowering occurs when good rains fall during the preceding summer to autumn. Additionally, moist soil during spring flowering boosts nectar secretion. An exceptional March–April flowering was recorded following above average rainfall from December to February.

Botanical Name	Common Name	Beeplant Value	Flowering Time
O. serrulata (= *O. atropurpurea*)	Small-leaved plane *Kleinblaar rooihout*	N2? P0–2?	1–12? (9–11)

Remarks

SC to KZN, SZ, MP, LIM. Shrub to small tree with much the same distribution and habitats as the Cape plane, i.e. forests, scrub and bushveld. The scented yellow flowers appear singly. Light orange pollen. No regular full flowering. Out-of-season flowering may occur, such as a July record with high nectar activity.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Ocotea bullata (Lauraceae)	Black stinkwood *Swart stinkhout*	N? P?	12–5

Remarks

WC to KZN, MP. Evergreen tree of mistbelt forests. Source of highly-prized timber. Conspicuous pits on the underside of leaves in the axils of the veins. The pits have corresponding 'bubbles' (bullae) on the upper side of leaves. Small, yellowish-green flowers in loose clusters in the leaf axils. No reports are known of honeybee visits to the flowers.
* **Ocotea kuhlmannii** is a beeplant in Brazil. When imbuya timber, ***O. porosa***, was used in the manufacture of frames and parts of inner lids, honeybee colonies absconded from hives where freshly worked wood was introduced (S. Rust, pers. comm., 1993-03-11). The sawdust of **Ocotea** timbers contains alkaloids that may cause skin irritation, headache, cardiac stimulation and vomiting in humans.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Olea capensis (Oleaceae)	Ironwood *Ysterhout*	N0–2? P0–2	8–5

Remarks

Southwestern Cape to KZN, SZ, northern provinces, ZIM. A large tree in evergreen forest, changing to a shrub in the bushveld. Flowers: small, cream-coloured, sweetly scented, in small loose inflorescences to larger, compact heads. Regular flowering in SC forests, where beekeepers believe that it yields honey. Pollen collection by bees has been verified.

Botanical Name	Common Name	Beeplant Value	Flowering Time
O. europaea subsp. **africana**	Wild olive *Wilde olyf* *Olienhout*	N? P0–2	10–3 (11–1)

Remarks

Widespread in S. Africa, except northern Namaqualand and Kalahari; also in BOT, ZIM, NAM. Small to medium size evergreen tree with dense greyish-green crown. Subspecies of the cultivated olive. Small cream-coloured flowers are sometimes sweetly scented. Seldom attracts bees, and then on certain days only. Suspected nectar production needs investigation.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Olinia spp. (Oliniaceae)	Hard pear *Hardepeer*	N0–2 P0–3?	8–3 (10–11)

O. emarginata

O. rochetiana

O. ventosa

Remarks

Southwestern Cape to KZN, SZ, MP, LIM. Shrubs to large trees, such as the timber species, **O. ventosa**, of the southern forests. Flowers: small, short flower tubes, five petals that are cream-coloured to pink, sweetly scented, together in loose heads. Active nectar and pollen foraging has been reported. Colony maintenance by **O. rochetiana** outside S. Africa.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Oncoba spinosa (Salicaceae)	Snuff-box tree *Snuif-kalbassie*	N2? P2?	9–2

Remarks

KZN, SZ, MP, LIM, ZIM, BOT. Shrub or small tree of bushveld and riverine vegetation. Large showy flowers with white petals and a central mass of long yellow stamens; sweetly scented. Evaluation based on one record from SZ.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Ozoroa spp. (= *Heeria* spp.) (Anacardiaceae)	Resin tree *Harpuisboom*	N0–3? P0–1 PR0–2	9–3 (12–1)

O. engleri

O. insignis

O. paniculosa

Remarks

KZN, SZ, northern provinces, ZIM, BOT, NAM. Small to medium size trees of the bushveld, often on rocky hillsides. Dioecious, i.e. sexes on different plants. Flowers in terminal sprays, cream-coloured, sweetly scented, mostly without bees, but occasional high activity for nectar has been reported. Common name from milky resinous latex. This has been seen to be eagerly collected as propolis from **O. paniculosa**.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Pandanus utilis** (PANDANACEAE)	Screw pine	N2 P	11–12

Remarks

Madagascar. Palm-like tree, but with sword-shaped, spiny-edged green leaves, arranged spirally at the end of branches. Inflorescence an aggregation of small white flowers at the end of a hanging stalk. Flowering information is based on a single observation on the north coast of KZN. Common name: 'screw' refers to the leaf arrangement and 'pine' to a fruit that is similar to the pineapple.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Pappea capensis (SAPINDACEAE)	Jacket plum Mini litchi *Doppruim*	N0–2 P0–3	8–4 (1–2)

Remarks

Bushmanland, Karoo, EC, KZN, SZ, northern provinces, ZIM, BOT. Small to medium size tree of grassland, bushveld and Karoo. Separate sexes. Small greenish-yellow flowers on drooping spikes. At times there are no bees on the flowers, particularly when the soil is dry. Pollen collecting noticed during early to mid-morning. Pellets light yellow. High nectar gathering activity recorded at 18:00 on a tree with moist soil. The jacket plum has contributed some honey to the bushveld summer crop of sweet thorn and buffalo thorn. Fruit: small round capsule that splits open, revealing the orange-red, edible flesh.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Parinari curatellifolia (= *P. mobola*) (CHRYSOBALANACEAE)	Mobola plum *Grysappel*	N0–3? P1?	6–12 (9–10)?

Remarks

Lowveld escarpment of MP and LIM, ZIM. Large evergreen tree of open, sandy bushveld. Well known for its mealy fruit. Insignificant, small, hairy flowers. Their variable attractivity is probably related to fluctuating soil moisture. Early dawn foraging reported, but also mornings and all day. Pellets yellowish-orange. All stages from buds to wilted flowers can be present at the same time. No reports of honey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Paulownia** spp. (PAULOWNIACEAE) (SCROPHULARIACEAE)	Paulownia	N2? P?	8–10

Remarks

China. Multipurpose trees. Flower buds form in autumn. Blue or white flowers. Test plantings as agro-forestry trees in the WC, KZN and G.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Peltophorum africanum (FABACEAE) (CAESALPINIACEAE)	African wattle Weeping wattle *Huilboom*	N0–2 P1–3	9–3 (11–1)

Remarks

KZN, SZ, northern provinces, ZIM, BOT, NAM. Small to medium size tree of sandy bushveld. Looks like an acacia, but has no thorns. Very light-coloured nectar without specific taste or smell. Nectar value generally low. Pellets yellowish-brown to dark orange. Pollen grains have much yellow oil on their surfaces. Spittle bugs on branches secrete a non-sweet foamy liquid, which is not collected by bees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Phoenix canariensis** (ARECACEAE)	Canary Island palm *Gewone palmboom*	N0? P0–3	11–7 (12–2)

Remarks

Canary Islands. Hardy shade and ornamental palm, widely planted. Cream-coloured pollen from male trees. Female inflorescences have not yet been observed to be visited by bees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. reclinata	Wild date palm *Wilde dadelpalm*	N0–2? P0–2	8–11

Remarks

EC, KZN, MP, LIM, ZIM, BOT, NAM. Along rivers and on coastal dunes. Small to medium size palm tree with one or more stems from the base. Old stems often lean over, i.e. *'reclinata'*. Long, feather-type leaves. Separate female and male trees. Male flowers in large, showy sprays. Female flowers on short, branched, yellowish-green inflorescences. Orange-brown edible fruit. Beeplant value based on information from SZ and Ethiopia.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Phytolacca dioica** (PHYTOLACCACEAE)	Belhambra	N0–3 P0–2	8–4 (10–12)

Remarks

South America. Semi-evergreen tree with huge gnarled roots around a thick stem. Separate male and female plants. Foraging mostly mornings and late afternoon. Reason for variable bee visitation is unknown. Honey harvested in Johannesburg was dark golden, very aromatic and slow-granulating. Pollen cream- to biscuit-coloured. This tree is invasive in the SC.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Pinus** spp. (PINACEAE)	Pine tree *Denneboom*	N0 P0–2 HD0–2	6–9 P 6–8
P. oocarpa	Ocoti pine	HD	HD
P. palustris	Long-leaf pine	P	
P. patula	Patula pine	HD	
P. pinaster	Cluster pine	P	
P. radiata	Monterey pine	P	
P. roxburghii	Chir pine	P	
P. taeda	Loblolly pine	HD	

Remarks

North America, Mediterranean, Himalaya. The source of honeydew from pines in S. Africa is the black pine aphid, *Cinara cronartii*. Honeydew flows occur only in summer rainfall regions with dry winter months, and stop with the first spring rains. Honeydew is not collected if there are more attractive winter-flowering eucalypts nearby. Pollen grains are released

in masses from male cones. The grains are large and have two air sacs. The crude protein content is low: 7–13%. Pollen is only collected if a nectar source is available simultaneously, like the black ironbark eucalypt, which has no pollen for bees. Pellets are light yellow and brittle. The patula pine is the most widely grown species, with extensive forests along the escarpment. Its soft needles make ideal smoker fuel, and most hives are made from its wood. The hard needles of the chir pine are used by Highveld beekeepers in their smokers. One would expect bees to collect pine resin for propolis, but this has apparently not been recorded yet. All the listed species, except the ocoti pine, are invasive somewhere in S. Africa.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Pittosporum eugenioides** (Pittosporaceae)	Lemon wood Tarata cheesewood	N2–3 P2	9–12

Remarks

New Zealand. Ornamental shrub or tree with yellow flowers that have a honey scent. Leaves have a citrus smell. In New Zealand it produces an extra light amber honey. Pellets yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. viridiflorum	Cheesewood *Kasuur*	N3 P2	9–2 (10–11)

Remarks

SC to KZN, SZ, northern provinces, ZIM. Small to medium size tree of forests, bushveld, scrub and rocky outcrops. Flowers in dense round clusters, small, light yellow, tubular, with spreading petals, sweetly scented. The flower tubes are short and wide enough for bees to reach the nectar. Generally major bee activity is reported when trees are in flower. Variable flowering from year to year in SC forests.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***P. undulatum**	Australian cheesewood *Soet pittosporum*	N2 P1	8–10

Remarks

Eastern Australia. Shrub or small tree used in hedges as windbreak or as an ornamental. Tolerates coastal conditions. White fragrant flowers in few-flowered clusters. Invasive in the southwestern Cape.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Platanus × acerifolia** (Platanaceae)	London plane *Gewone plataan*	N0 P0–1	9

Remarks

North America. Large street and park tree. Minute florets make up separate female and male globose flower heads, which in the male is the size of a pea. The globose fruit head is much bigger. While the pollen collectors are scrabbling over the flower ball, there is a steady fall of anthers. When foragers gather the body pollen into their baskets, they hover near the ball. The pellets are cream-coloured and rarely collected.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Platylophus trifoliatus (CUNONIACEAE)	White alder *Witels*	N2–3 P1?	12–2

Remarks

Southwestern to southeastern Cape. Gnarled forest tree. As the species name implies, each leaf consists of three leaflets, which are toothed. Small, scented, cream-coloured flowers. Honey from the SC has a greenish hue and an astringent aftertaste. Regular flowering, but the flow is not strong.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Poncirus trifoliata* (= **Citrus trifoliata) (RUTACEAE)	Trifoliate orange	N1–2 P1–2	9–10

Remarks

China, Korea. Small ornamental tree for temperate gardens: green leafless stems and branches in winter; white, scented flowers in spring; yellow, fragrant, but inedible fruit in autumn. Pellets biscuit-coloured. This plant is also used as a rootstock for other **Citrus** species.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Populus deltoides** (SALICACEAE)	Match poplar *Vuurhoutjie populier*	N0 P1–4 PR0–2	8–9

Remarks

North America. Large tree used in amenity plantings. The main pollen source during August in many towns of the interior. Pellet colour mainly light beige, otherwise light yellow. Pollen crude protein 20.2%. The collection of orange-coloured rust spores has been observed during April.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Prosopis chilensis** (FABACEAE) (MIMOSACEAE)	Mesquite Algarroba *Duitswesdoring* *Muskietboom*	N2–4 P1–3	8–3 (9–10)

Remarks

Colombia to southwestern USA. Dry areas shade and fodder tree in towns and on farms. Non-invasive species. Also named **P. juliflora** in earlier S. African literature. The mild honey has a straw colour. Pellet colour is cream, beige or lemon. In a Free State suburban setting, 33% of the pollen trapped during October was from mesquite. (See also under WEEDS).

Botanical Name	Common Name	Beeplant Value	Flowering Time
Prunus africana (ROSACEAE)	Red stinkwood *Rooi stinkhout*	N2? P2?	1–12? (3–5)

Remarks

EC to Soutpansberg, and further north to Ethiopia. Evergreen tree of montane forest, but also near coast in KZN. Leaves: shiny, pink stalk, almond smell when crushed. Many small white flowers on branched inflorescence.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***P. cerasifera**	Flowering plum *Blompruim*	N0–3 P0–3	7–9

Remarks

Southwestern Asia. Shrubs or small trees, of which the cultivars 'Nigra' and 'Atropurpurea' were widely grown in S. Africa for their hardiness and purplish leaves. Small light pink flowers very attractive to bees. Pellet colour: yellow to mustard to olive-brown. Small brownish edible plums.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***P. laurocerasus**	Laurel cherry	N1–2 EN P0–2	9–11

Remarks

Southwestern Asia. Hardy evergreen shrub or small tree of Highveld gardens. Erect inflorescence with many small, white, lightly to strongly scented flowers. Pellets lemon-coloured to shades of olive. Extrafloral leaf nectar collected sometimes, particularly on young leaves.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***P. persica**	Flowering peach *Blomperske*	N0–1 EN P0–1	8–9

Remarks

China. Mostly double cultivars that have little or no value for bees. Short flowering of 2–3 weeks. Bees visit the extrafloral nectaries on the margins of the lower half of leaves.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***P. serotina**	Mexican cherry Black cherry *Swartkersie*	N0–3 P0–3	8–9

Remarks

North America. Ornamental tree grown in high-lying cold regions of S. Africa. Inflorescence a 'catkin' with strong-smelling flowers and nectar. Pellets light grey, ivory or lemon. Black cherries are sweet and edible, or bitter.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***P. serrulata**	Japanese flowering cherry *Blomkersie*	N0–2 P0–1	8–9

Remarks

Famous Japanese tourist attraction in many cultivars, of which most have double flowers that are rarely visited by bees. The single or semi-double flowers provide nectar and pollen to honeybees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***P. × yedoensis**	Yoshino cherry	N1–3 EN P0–2?	8–9

Remarks

Japan. Flowers in hanging bunches, single cultivars, pink to white, dark pink stamens. Well-visited by honeybees. Extrafloral nectaries on leaf petioles.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Pseudolachnostylis maprouneifolia (EUPHORBIACEAE)	Kudu berry *Koedoebessie*	N1–3 P0–2	7–11 (9–10)

Remarks

Northern provinces, ZIM, BOT, NAM. Small to large deciduous tree with striking red and yellow autumn colours. Different habitats in bushveld, grassland and rocky ridges; also miombo woodland to the north. Dioecious: male flowers in small clusters, females single. One record of pollen collection throughout the day. Pellets yellow. Also reports of pre-sunrise activity and heavy visitation early to late morning, on male and female trees. Unifloral honey in Malawi. The round, pale yellow fruit is eaten by antelope.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Ptaeroxylon obliquum (RUTACEAE)	Sneeze wood *Nieshout*	N0–2? P0–2?	8–2 (10–11)

Remarks

EC, KZN, SZ, MP, LIM, ZIM, NAM. Shrub to large tree; very variable in size and habit. Diverse habitats, including coastal, montane and sand forests, as well as bushveld. Compound leaves, with the leaflets markedly asymmetrical. Sexes separate on different plants. The small yellow flowers, with an orange centre, are sometimes produced in profusion. Flowering is rain dependent, but it is not clear how. In the EC it is an irregular source of honey: golden colour, mild aroma, distinct bitter taste. Sawdust from the wood is irritating, causing intense sneezing.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Pterocarpus angolensis (FABACEAE) (PAPILIONACEAE)	Wild teak *Kiaat*	N1–3 P0–3?	8–2 (9–11)

Remarks

KZN, SZ, MP, LIM, ZIM, NAM. Medium to large woodland tree. Distinctive pods: large, circular (wavy wing), bristly centre. Single flowering of 2–3 weeks. Yellow, scented, pea-type flowers. Pollen yellowish to orange. Variable set of flowers on trees in the same area. Note wide range of flower time possibilities, which are most likely rainfall related. One report of honey from the Lowveld of MP. *Kiaat* contributes to honey of mixed origin in Malawi.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. lucens (= *P. antunesii*)	Thorny teak *Doringkiaat*	N2? P2?	11–3 (11–12)

Remarks

LIM, ZIM, BOT, NAM. Small to medium size tree with stiff, spine-like side shoots. Occurs in hot dry miombo woodland and may form thickets. Pale yellow pea flowers are attended by bees for nectar and yellow pollen. All day, midday or afternoon foraging has been recorded, as well as 'heavy usage'. In S. Africa this tree is only found in the northeastern Kruger National Park.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. rotundifolius	Roundleaf teak *Dopperkiaat*	N1–3 P0–2	9–3 (11–1)

Remarks

KZN, SZ, MP, LIM, ZIM. Small to medium size, deciduous woodland tree, often multi-stemmed. Large sprays of small yellow pea flowers. The nectar is light yellow, which points to a dark honey. This honey from LIM was described as very dark, with a strong flavour. Pollen pellets are orange. Different short bursts of flowers from the same panicle, each lasting only 2–3 days, with 3–10 day intervals, i.e. intense nectar flow of short duration. A tree may flower over a period of 2–3 months from the same panicles. Mostly 3, but up to 7 flowering periods per season have been noted (records of 11 years). There is one main flowering, involving about 50% of a panicle's flower buds. In one such flowering a daily honey gain of 18 pounds (8.2 kg) was measured with a scale hive. This is probably a S. African record under natural conditions.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Pterocelastrus tricuspidatus (Celastraceae)	Candle wood *Kershout*	N2? P2?	4–2

Remarks

Southwestern Cape to KZN, MP. Shrub to medium size tree of dry forests, dune scrub and rocky outcrops. Flowers in short dense heads: small, cream-coloured, sweet-scented. The variable flowering time is mainly determined by geographical location and habitat. Evaluation is based on a single record.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Quercus** spp. (Fagaceae)	Oak *Eik*	N0 HD0–2 P1–3	8–10
Q. acutissima	Sawtooth oak		
Q. cerris	Turkey oak		
Q. ilex	Holly oak		
Q. palustris	Pin oak		
Q. robur	Common oak		
Q. rugosa	Evergreen oak		
Q. suber	Cork oak		

Remarks

Eurasia, North America. All listed species are visited for pollen in S. Africa. These oaks are deciduous, except **Q. rugosa**, which may skip flowering after a dry autumn and winter. Female flowers are small, greenish and insignificant. Male flowers appear on yellow catkins in spring. In some species the long catkins are in themselves an attractive feature on an otherwise bare tree. Pellet colour variable: yellow, lemon-coloured, light olive, mustard-coloured. Pollen crude protein is 19.0% in **Q. robur** (Europe). Only mature trees flower. Light honeydew flows from aphids have been recorded in S. Africa on **Q. robur** and **Q. cerris** during dry June months on trees that had not yet shed their leaves. In the southwestern Cape, bee nests are frequently found in hollow trees of the common oak.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Rapanea melanophloeos	Cape beech	N2?	4–12
(MYRSINACEAE)	*Kaapse boekenhout*	P2?	(6–8)

Remarks

Medium to tall tree of southern African forests, from the southwestern Cape to KZN to LIM and eastern ZIM. Small cream-coloured flowers, in clusters on older branches. In SC forests it flowers and fruits heavily every second year. Beeplant rating based on two records.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Rauvolfia caffra	Quinine tree	N3?	1–12
(APOCYNACEAE)	*Kinaboom*	P0	(9–10)

Remarks

KZN, SZ, MP, G, LIM, ZIM. Medium to tall tree of riverine bush and forest margins. It contains a milky latex. Flowers in terminal sprays, small, white, scented, with densely-hairy throats that protect the nectar from rain, mist or waterfall drift. Extended flowering is on record. Foraging has been observed throughout the day.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Rhizophora mucronata	Red mangrove	N3?	1–12?
(RHIZOPHORACEAE)	*Rooi wortelboom*	P1?	(11–3)

Remarks

EC, KZN. Small to medium size tree on stilt roots in mud of estuaries. The bark is reddish-brown to dark brown, the wood fine-grained and red. Flowers: on long stalks, with four, cream-coloured, thick, petal-like sepals. The eight stamens soon shrivel and fall off along with the 'petals'. More information is needed.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Rhus spp. (= **Searsia** spp.) (ANACARDIACEAE) [Only names under *Rhus* are given below.]	Karee Currant *Karee* *Taaibos*		

Remarks

Shrubs and trees that are widespread in southern Africa. They have compound leaves consisting of three leaflets. Dioecious, i.e. male and female plants separate. **Rhus** spp. of southern Africa have recently been re-classified as **Searsia** spp. The old name has been retained in this book since this is the genus under which beekeepers will find information in the recommended literature list.

Botanical Name	Common Name	Beeplant Value	Flowering Time
R. chirindensis	Red currant	N0–3	7–2
	Bos taaibos	P0–2	(10–11)

Remarks

SC to KZN, SZ, MP, LIM, ZIM. Shrub to tall tree in different habitats from coast to mountains. Dioecious. Sprays of small, yellowish-green flowers of variable, usually low, attraction to bees. Water-white nectar with a sweet taste only. Pollen light yellowish-brown, with a woody flavour. Ripe 'berries' and young leaves are red.

Botanical Name	Common Name	Beeplant Value	Flowering Time
R. laevigata	Dune currant *Duine taaibos*	N3? P1?	5–2? (10–12)

Remarks

Southwestern Cape to EC. Untidy shrub or small spreading tree of coastal flats and slopes. Value based on two records. More information needed.

Botanical Name	Common Name	Beeplant Value	Flowering Time
R. lancea	Common karee *Gewone karee*	N0–2 P0–4	5–9 (6–7)

Remarks

NAM, NC to Karoo, EC, FS, northern provinces, BOT, ZIM. Medium-sized, evergreen, hardy tree. Widely grown as an ornamental and for shade. Female trees never flower as profusely as the males, and bee-attendance is generally lower. Value as nectar source is variable: better on young plants. Nectar: light yellow colour, no discernible smell, sweet taste only. Pollen pellets in shades of brown. In the dry interior it may be the only available winter pollen source, known to promote brood production.

Botanical Name	Common Name	Beeplant Value	Flowering Time
R. leptodictya	Mountain karee *Bergkaree*	N0–1? P0–3	11–4 (1–2)

Remarks

FS, northern provinces, BOT, ZIM. Rocky sites of bushveld and grassland. Small to medium size tree with somewhat drooping branches. Nectar rarely collected, but pollen in most seasons. Pellets light brown. May have two flowering periods per season. High temperatures and strong showers during spring or summer are determinants for full flowering.

Botanical Name	Common Name	Beeplant Value	Flowering Time
R. lucida	Glossy taaibos *Blink taaibos*	N0–2 P0–2	8–3

Remarks

Southwestern Cape to KZN, FS, SZ, MP, LIM, ZIM. Shrub or small tree of coastal bush and wooded hillsides. Pellets yellowish-brown. More data needed.

Botanical Name	Common Name	Beeplant Value	Flowering Time
R. pyroides	Thorny karee Common taaibos *Gewone taaibos*	N0–1 P0–1	8–5 (10–12)

Remarks

Little Karoo, EC, KZN, FS, SZ, northern provinces, NC, BOT, ZIM. Very variable, multi-stemmed, often spiny shrub to medium-sized tree. Wide range of habitats. Seldom visited by honeybees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***R. succedanea**	Wax tree *Wasboom*	N2? P2–3	8–11

Remarks

Japan to India. Ornamental tree with impressive autumn colours. Pollen light lemon. White wax-producing berries. Unlike the indigenous *Rhus* (= **Searsia**) species that have three leaflets to a leaf, the wax tree has pinnate leaves with 9–15 leaflets. Declared weed: it is invasive in KZN.

Botanical Name	Common Name	Beeplant Value	Flowering Time
R. tenuinervis	Kalahari currant *Kalahari taaibos*	N1? P1?	1–5

Remarks

NC, NW, LIM, ZIM, BOT, NAM. Much-branched shrub or small tree, characteristically rounded and bushy. Sandy soils of woodland and rocky hillsides. Flowers visited by honeybees, but beeplant value unknown – probably low. Pollen light yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
R. tomentosa	Wild currant *Korentebos*	N1? P2?	5–11 (8–9)

Remarks

Clanwilliam to EC, KZN, MP, LIM, ZIM. Shrub or small tree of medium to high altitudes. Margins of scrub forest and on rocky mountainsides. Fruit finely hairy, inedible. More information is needed. *Rhus* pollens sometimes reach a so-called 'secondary' level in naturally mixed honeys from fynbos.

Botanical Name	Common Name	Beeplant Value	Flowering Time
R. viminalis	White karee *Witkaree*	N0–2 P0–2	7–1 (9–10)

Remarks

FS, NC, NAM along Orange River. Tough, appealing specimen tree that only lives 10–15 years under cultivation, but is nevertheless widely grown. Florets variably attractive to bees. Early budding following high autumn rainfall and mild autumn-winter weather.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Robinia pseudoacacia** (Fabaceae) (Papilionaceae)	Black locust *Vals akasia*	N0–3 P0–1	9–12 (9–10)

Remarks

Eastern USA. Drought and frost-hardy tree that is widely planted in S. Africa. Ornamental pendulous sprays of white, fragrant pea flowers. Reasons for variable attractiveness to bees are not known. On the Highveld it is a better nectar plant and contributes a light-coloured honey to mixed honey crops. The greyish pollen has a crude protein content of only 14.1% (Maurizio & Grafl 1980). The tree is invasive in high-lying areas of eastern S. Africa.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Rothmannia capensis (RUBIACEAE)	Cape gardenia *Kaapse katjiepiering*	N0–1 P0–1?	10–4 (12–1)

Remarks

SC to KZN, SZ, northern provinces. Small to medium-sized tree of forests, rocky hillsides and kloofs. Flowers: large, funnel- to trumpet-shaped, strongly sweet-scented, cream-coloured, with maroon streaks in the throat. The narrow basal part of the flower tube does not allow bees to enter. They have to rely on a strong secretion of the dilute nectar, which then rises in the tube. Flowers are usually without bees. There is one report of strong bee flight on the flowers of **R. globosa** in the early morning. Another record involves **R. fisheri** as a source of nectar and pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Roystonea regia** (ARECACEAE)	Cuban royal palm	N1–3? P2?	1–12 (11–1)? (4–5)

Remarks

Cuba, Honduras, Mexico. The long stem is ringed, light-coloured, with an enlarged base. Smooth green crownshaft, i.e. the top part of the stem between the leaves and the inflorescences. Large, plumose-type leaves or fronds. Inflorescences in different stages of development are found together below the crownshaft. Separate female and male flowers on the same inflorescence. Important source of a golden honey in Cuba, where the cream-coloured pollen promotes brood production.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Salix babylonica** (SALICACEAE)	Weeping willow *Treurwilger*	N2–3 P0 HD0–1 HD	8–10 5–7

Remarks

China. Dioecious tree, but there are only female plants in S. Africa. Very frost-hardy, but not drought-hardy. Declared invader of watercourses. Mild, light yellow honey is sometimes produced on the Highveld. Honeybees were observed collecting honeydew of the giant willow aphid, *Tuberolachnus salignus*, during winter in Pretoria.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***S. caprea**	Pussy willow Goat willow *Bokwilger*	N0–2 P3–4	8–9

Remarks

Europe, from where the beeplant values were obtained. Large shrub or small tree in gardens of high-lying regions with cold winters. Pellets in shades of yellow. The crude protein of pollens from different willow species in Europe varied between 15% and 22%, being 'biologically highly active'. Beeplant value from Europe.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***S. × fragilis**	Crack willow *Kraakwilger*	N3? P0	9–10

Remarks

Eurasia. Brittle twigs. Common name: twigs readily snap off at their base. Differs from weeping willow by its ascending branches, but it likewise only has female plants in S. Africa. Invades high altitude watercourses of FS, KZN and EC.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. mucronata	Cape willow	N	8–5
(= *S. capensis*)	*Safsaf wilger*	P1	(8–10)
	Kaapse wilger		(3–4)

Remarks

Widely distributed in S. Africa, but not in the NC north of the Orange River; also found in ZIM, BOT, NAM. Bush or tree along streambanks. Male catkins yellowish, female greenish. Spring flowering, but sometimes also during March–April. Generally not very attractive to bees, but more information is needed. Single report from Mr J.R. Dias of Oudtshoorn, 1924-02-19: 'Trees in the river are strongly worked for pollen and honey [nectar] in September'.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Schefflera actinophylla**	Queensland umbrella tree	N1–2	1–5
(Araliaceae)		P0	

Remarks

Queensland. Ornamental tree of medium size, grown for its attractive leaves and inflorescences. Each leaf consists of a number of leaflets positioned like a cartwheel at the end of a long stalk. The small red flowers are arranged on long radiating spikes on the top of the tree. They have plentiful nectar with a very low sugar content of 12%. Each anther releases its pollen in four, beige-grey, sticky, sausage-shaped structures, which are not collected by bees. The flowers are pollinated by nectar-sucking lorikeets in Australia. The miniature umbrella tree from Taiwan, **S. arboricola**, is widely grown in S. Africa and flowers during spring. It has the same beeplant value as the Queensland umbrella tree.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. umbellifera	False cabbage tree	N2	1–5
	Baster kiepersol	P0–1	

Remarks

EC, KZN, SZ, MP, LIM, ZIM. Small to medium size tree with a thick trunk, in coastal and montane forests. Leaves are digitate, with 3–5 leaflets on a long stalk. Small cream-coloured flowers in large, branched panicles above the tree top. Pollen beige.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Schinus molle**	Pepper tree	N0–2	1–12
(Anacardiaceae)	*Peperboom*	P0–4	(11–5)

Remarks

S. America. Widely-grown exotic ornamental, established in a variety of locations, from rural areas to cities. Separate female and male trees. Variable flowering: peaks in spring and autumn. Bees also work on fallen flowers. One record of mixed honey on the Witwatersrand during December. FS honey sample: light-coloured, yeasty aroma, acidic taste. Pollen light brown to orange. Useful winter pollen source at times. Brood production with this pollen has been recorded in Australia.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***S. terebinthifolia**	Brazilian pepper tree *Brasiliaanse peperboom*	N0–2 P0–3	9–6 (3–4)

Remarks

Brazil. This dioecious tree is planted widely in gardens and on streets. A declared weed, based on its invasion of the KZN coast. Here a light, yellowish-golden honey with a mildly medicinal taste is sometimes harvested when saligna gums are not competitors. Pollen pellets are orange-brown to mid-brown, with a moderate woody taste. One observation in the Cape of numerous bees collecting the white waxy substance of wax scales, which was transported in their pollen baskets. Simultaneously, some ants were collecting honeydew from the same scale insects.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Schotia afra (Fabaceae) (Caesalpiniaceae)	Karoo boerboon	N2–3 P3	8–3 (11–1)

Remarks

Little Karoo to EC; also Bushmanland and NAM. Sweetly fragrant nectar with a relatively high sugar content of 41%. Three reports of a dark honey in the EC. Pollen orange. Though slow-growing, this ornamental should be encouraged.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. brachypetala	Weeping boerboon *Huilboerboon*	N0–2? P0–2 PR0–2	8–12 (9–10)

Remarks

KZN, SZ, MP, LIM, ZIM. Small to large tree of deciduous bushveld, often on riverbanks and termitaria. During flowering the tree is very conspicuous with its dense clusters of bright red flowers. Common name from the plentiful dilute nectar (10–16% sugar) that may drip out of the flowers. It is mostly ignored by bees. Sometimes the flowers have no nectar. If the nectar is not harvested by birds, it may reach a high 57% sugar concentration in older flowers on the same panicle. Single report from Musina of a dark honey, similar to *Transvaal boekenhout*. Trees do not flower every year. They seem to follow an on-and-off pattern. One record of major propolis gathering of gum oozing out of holes probably made by wood-boring insects. **Schotia capitata**, the dwarf boerboon, is also a source of nectar and pollen for honeybees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. latifolia	Forest boerboon *Bosboerboon*	N1–2 P0–2	10–1

Remarks

Little Karoo to EC. Isolated occurrence in MP. Small tree of scrub and forest. Flowers with a creamy-pink colour. It is the only *boerboon* species with petals. A nectar sugar concentration of 41% was measured during a hot afternoon. The beige-coloured pollen is collected during the forenoon.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Sclerocarya birrea (Anacardiaceae)	Marula *Maroela*	N1–3 HD0–1 P0–3	8–11 (9–10)

Remarks

KZN, SZ, northern provinces, ZIM, BOT, NAM. Medium to large deciduous tree of open bushveld. Trees have separate sexes; a few are bisexual. Honey: light colour, mild non-specific taste. Pollen: grassy taste, grey or beige colour. Honeydew from mealy bugs that hide in curled leaves. A multi-purpose tree that is being established in plantations of MP Lowveld.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Scolopia zeyheri (SALICACEAE) (FLACOURTIACEAE)	Thorn pear *Doringpeer*	N1? P2?	4–11

Remarks

SC to KZN, FS, SZ, northern provinces, ZIM. Small to medium-sized tree of forests and bushveld, from the coast to the interior. Small, cream-coloured, sweet-scented flowers. Alternate year flowering noticed. Large spines that are often massed at the base of the stem. The taller red pear, **S. mundii**, has a similar beeplant value to the thorn pear, both of which were evaluated on single records.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Securidaca longipedunculata (POLYGALACEAE)	Violet tree *Krinkhout*	N3? P2?	8–3 (9–10)

Remarks

LIM, BOT, ZIM, NAM. Small to medium size bushveld tree. Bunches of pinkish to purple flowers, which smell of violets. Flowering may be drawn-out and irregular, being influenced by rainfall. Value unknown; at times well-visited for nectar and pollen. Mentioned as a honey source in Ethiopia.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Shirakiopsis elliptica (= *Sapium ellipticum*) (EUPHORBIACEAE)	Jumping-seed tree *Springsaadboom*	N2? P1?	8–11

Remarks

EC, KZN, SZ, MP, ZIM and further north. A medium to tall tree of Lowveld forests, wooded ravines and swamp forest. Inflorescence a spike on the tip of a branchlet. Small greenish-yellow florets; male and female separate on the same spike. Beeplant value from information outside S. Africa. The pollen index is likely to be higher. Fruit capsules on the ground may 'jump' when infested with larvae of a certain moth. The duiker berry, **Sclerocroton integerrimus** (= *Sapium integerrimum*), is also a beeplant, with probably the same value for bees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Sideroxylon inerme (SAPOTACEAE)	White milkwood *Wit melkhout*	N0–2 P0–1	1–12 (1–4)?

Remarks

Tree of coastal forests and thickets, from southwestern Cape to KZN, then interior Lowveld of SZ, MP, LIM, ZIM. Full flowering every year in SC forests. Bees often ignore the unpleasantly scented, small flowers. Two reports of considerable bee activity from the southwestern Cape. Famous post office tree at Mossel Bay.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Sophora japonica* (= **Styphnolobium japonicum) (FABACEAE) (PAPILIONACEAE)	Japanese pagoda tree *Pagodeboom*	N2–3 P0–1	11–2 (12–1)

Remarks

China, Korea. Deciduous shade tree used on sidewalks. Bunches of small white pea-flowers. Optimal nectar secretion with temperatures above 25°C and high relative humidity. Foraging throughout the day – early mornings mostly on fallen flowers. Pollen loads dark yellow to orange. Long-flowering. The less commonly planted **Sophora microphylla** is a honey and pollen source in New Zealand.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Spathodea campanulata** (Bignoniaceae)	African flame tree *Afrika vlamboom*	N0–1 P0–2	12–6

Remarks

Tropical Africa. Ornamental tree planted in warm locations. Large pinnate leaves are deep green and shiny. Flower buds in different stages of development, i.e. long-flowering. Flowers are reddish-orange, large, in dense clusters, cup-shaped, with the opening facing upwards. Dilute nectar with 6–10% sugar did not attract bees, but neither were bees seen in flowers with 25–27% nectar sugar. Flowers have rarely been observed with nectar-gathering bees in S. Africa. Only one report from Zambia of high nectar activity during mornings. Flowers catch rain water in which drowned moths and flies have been found. Pollen biscuit-coloured. Bird pollination observed by several authors.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Spirostachys africana (Euphorbiaceae)	Tamboti *Tambotie*	N? P0–3	7–12 (9–10)

Remarks

KZN, SZ, northern provinces, BOT, ZIM, NAM. Medium size bushveld tree, often along streams. Characteristic bark consisting of dark grey, rectangular flakes. Contains poisonous milky latex. Male flowers on reddish catkins, with only one or two female flowers at the base of each catkin. Depending on the weather, pollen is collected early morning or during afternoons. Pooley (1993): 'Freshly cut branches used to find stingless bee nests. Bees are attracted to the sap [propolis?], and their flight paths can be followed'.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Steganotaenia araliacea (Apiaceae)	Carrot tree *Geelwortelboom*	N1 P2	7–11 (8–9)

Remarks

MP, LIM, ZIM, BOT, NAM. Small tree with yellowish-green, smooth bark, found in hot bushveld, often on rocky outcrops. All parts of the tree smell of carrots. Small yellowish flowers with a pleasantly sweet smell. They are carried in many small, stalked panicles that arise together on a long inflorescence stem. Nectar is water-white, without detectable smell. Pollen pellets light grey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Stenocarpus sinuatus** (Proteaceae)	Fire wheel tree *Vuurwielboom*	N0–2 P0–1	1–7 (2–5)

Remarks

Eastern Australia. Ornamental tree grown for its dense crown of shiny, dark green leaves and the red florets that are arranged like the spokes of a wheel. The flowers only start to appear on trees that are 10 to 12 years old. Most trees flower more than once per season. Pollen pellets are light yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Sterculia murex (Malvaceae) (Sterculiaceae)	Lowveld chestnut *Laeveld kastaiing*	N1? P1?	7–10

Remarks

MP. Medium-sized, deciduous tree of Lowveld Sourveld, usually on rocky sites. Best known for the woody fruit capsules with spiny protuberances. These are sold as ashtrays. Edible seeds. Flowers saucer-shaped with light, lemon-coloured petals and an orange to reddish centre. More observations are needed on insect visits to flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Syncarpia glomulifera** (MYRTACEAE)	Turpentine tree *Terpentynboom*	N2 P2	8–11

Remarks

Eastern Australia. Shade and shelter tree that retains its leaves low down. Formerly used in forestry firebreaks in S. Africa. Leaves emit a turpentine smell when crushed. Occasional surplus of an unpleasant honey in Australia. Note from LIM: 'A light honey obtained once'.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Syzygium cordatum (MYRTACEAE)	Water berry *Umdoni* *Waterbessie*	N1–3 P0–2	8–1 (9–10)

Remarks

EC, KZN, SZ, MP, LIM, ZIM, BOT. Evergreen flowering shrub or, more usually, a medium to large tree along watercourses. At times the flower cups are full of dilute nectar, but not attended by bees. Flowers are lightly scented, with a mass of cream-coloured stamens. Mild-tasting, light-coloured honey from Zululand, and also minor crops along the escarpment. Pollen grey. Some autumn flowering may occur. **Syzygium guineense**, the water pear, has a similar beeplant value and flowering time. The forest water berry, **S. gerrardii**, flowers earlier and has been seen to be visited for nectar and pollen, but its value is unknown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***S. cumini**	Jambolan	N3 P2	10–4 (11–12)

Remarks

Indo-Malaysia. Small to medium size ornamental tree with edible purplish-red fruit. Declared invader in coastal bush of KZN. Small white flowers in sparse clusters. Beeplant value from Hawaii and India, where it is a honey source.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Tabebuia heptaphylla* (= *T. ipe*) (= **Handroanthus heptaphyllus) (BIGNONIACEAE)	Mauve trumpet tree	N1–2 P0–1	8–10

Remarks

Brazil, Bolivia. Medium size ornamental tree, grown for its spectacular flower show in spring. Clusters of tubular to bell-shaped, mauve to pink flowers on the tips of leafless branches. Pollen biscuit-coloured. Can withstand winter temperatures in Pretoria, but not elsewhere on the Highveld. Beeplant value possibly higher in warmer regions. One record of nectar bees on the golden trumpet tree, **T. chrysotricha* (= **H. chrysotrichus**), in Limpopo.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Tabernaemontana elegans (APOCYNACEAE)	Toad tree *Paddaboom*	N2? P?	9–4

Remarks

KZN, SZ, MP, LIM, ZIM. Small tree of coastal forest and bushveld, with thick corky bark. Long-flowering, so that there never are many open flowers at any given time, and with buds, mature flowers and fruit on the same tree. Flowers: five white petals that are relatively long and narrow; flower tube 7 mm long, therefore bees can reach the nectar. Fruit: round, corky, brownish-grey, i.e. toad-like.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Tamarindus indica** (Fabaceae) (Caesalpiniaceae)	Tamarind	N1–3? P1–2	11–3

Remarks

Tropical Africa, India. Naturalised around Durban and in the Zambezi Valley. Medium to large evergreen tree of which the wood, flowers, leaves and pods are used. Compound leaves with 10–18 pairs of small, opposite leaflets. Flowers pale yellow with reddish nectar guides. Pellets yellowish-brown. Honey source in Asia, Ethiopia and Mauritius.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Terminalia brachystemma (Combretaceae)	Green cluster-leaf *Groen vaalboom*	N2 P1?	10–2

Remarks

LIM, ZIM, BOT, NAM. Small bushy tree of sandy bushveld and miombo. Leaves bluish-green below. Bees forage during the morning. Pellets yellow. **Terminalia** species have fruit with two wings, unlike their **Combretum** relatives with four wings. As the common name indicates, their leaves are clustered near the end of branches.

Botanical Name	Common Name	Beeplant Value	Flowering Time
T. prunioides	Purple-pod cluster-leaf *Stinkbos* *Sterkbos*	N0–3? P0–1?	9–2

Remarks

MP, LIM, ZIM, BOT, NAM. Shrub to medium size tree of hot bushveld. Small pale flowers in loose clusters; unpleasantly scented. High nectar value based on a single report of a reputable beekeeper, but generally not very attractive to bees. Characteristic fruit: red to purple colour. Trees need good rainfall before flowering. May flower more than once.

Botanical Name	Common Name	Beeplant Value	Flowering Time
T. sericea	Silver cluster-leaf *Vaalboom* *Sandgeelhout*	N0–2 P0–1	9–2 (10–11)

Remarks

KZN, SZ, northern provinces, NC, NAM, BOT, ZIM. Medium size tree of sandy soils, but also occurs as non-flowering scrub. Leaves covered in silvery hairs. Flowers have an unpleasant smell. Foraging only during early, humid mornings. Recent high rainfall a prerequisite for nectar secretion. Pollen greenish-yellow. The occasional foul-smelling bushveld honeys most probably contain nectar from species of cluster-leaf.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Thuja orientalis* (= **Platycladus orientalis) (Cupressaceae)	Chinese arbor-vitae *Lewensboom*	N0 P0? HD0–2 PR?	HD5–8

Remarks

Northern China. Popular garden subject, resembling a small dense cypress tree, but with vertically-flattened branchlets. Provides honeydew from *Cinara thujafilina*, a small light brown aphid. The honeydew is water-white, without a detectable smell or taste, besides being sweet. This tree most probably is a source of propolis as well.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Tipuana tipu** (FABACEAE) (PAPILIONACEAE)	Tipu *Tipoe*	N1–3 P0–2	9–1 (10–11)

Remarks

Bolivia, Argentina. Medium to large, deciduous, ornamental tree. Slightly cold and drought-hardy. Pea flowers are small and orange-coloured. Honey: light-coloured, mild, not pure, i.e. part of spring honey flow. Small pellets in shades of yellowish-brown. Invasive in a few localities in the northern provinces.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Trachycarpus fortunei** (ARECACEAE)	Chinese windmill palm	N P2	9–11

Remarks

Southern China, i.e. Himalayas. A very cold-tolerant palm that is even grown in Europe. The trunk is covered with coarse, shaggy fibre. The palm has no thorns. It may or may not have a 'skirt' of dead leaves. The fan-shaped leaves are divided into narrow, pointed 'blades'. Dense clusters of small yellow flowers are followed by marble-sized blue fruit, which have a coating of whitish wax. Pollen pellets light lemon colour. Beeplant information based on one observation.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Trema orientalis (ULMACEAE) (CELTIDACEAE)	Pigeon wood *Hophout*	N0–1? P0–2?	1–12 (12–4)?

Remarks

EC, KZN, SZ, MP, LIM, NW, ZIM, NAM. Small to medium size tree in a variety of habitats, usually in moist locations. As in many other members of this plant family, the leaves are asymmetrical at their base. Small white flowers, with only a few open at any given time. Generally not very attractive to bees. Flower buds, open flowers and fruit are present on the same branchlet, therefore long-flowering. Monoecious, i.e. separate male and female flowers on the same tree. Pollen cream-coloured. Small black fruit eaten inter alia by pigeons.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Trichilia emetica (MELIACEAE)	Natal mahogany *Rooi essenhout*	N0–3 EN2? P0–2	8–11 (9–10)

Remarks

KZN, SZ, MP, LIM, ZIM, BOT. Medium to large tree with dense, spreading, dark green crown. Coastal and riverine forests. Also planted in parks and gardens. Small silvery-green flowers, with sexes on separate trees, although some flowers are bisexual. The nectar is collected from male and female flowers. It is lightly coloured and has an unpleasant smell, despite the flowers that are said to be sweetly-scented. Pellets mustard-coloured. One report of high bee activity on extrafloral nectaries, mornings and afternoons. The forest mahogany, **T. dregeana**, is also attended by bees that obtain nectar and pollen from its flowers. It probably has the same beeplant value as the Natal mahogany.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Trimeria grandifolia (Flacourtiaceae)	Wild mulberry *Wilde moerbei*	N? P2?	8–4 (11–2)

Remarks

SC to KZN, SZ, MP, LIM, ZIM. Shrub or small tree in coastal and inland forests. Large roundish leaves often notched at the tip. (With some imagination they have similarities with leaves of mulberry trees). Flowers: very small, greenish, sexes separate, in catkin-like inflorescences. Fruit is a small woody capsule. Evaluation based on a single report.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Ulmus parvifolia** (Ulmaceae)	Chinese elm *Sjinese olm*	N0 P0–2 HD0–1	10 1–3

Remarks

China, Korea. Small to medium-sized deciduous street tree. Drought and frost-hardy. Sometimes with a second summer flowering. Psyllid honeydew during hot summer months. Elms have asymmetrical leaves.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***U. procera**	English elm *Engelse olm*	N0 P1–3	8–10

Remarks

England. Hardy, medium-sized ornamental tree, also grown at the coast. Suckers from roots. Pollen pellets, in shades of grey, are of 'medium biological effectiveness'. Flowers are already formed during the previous summer, and overwinter in the bud stage.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Vepris lanceolata (= *V. undulata*) (Rutaceae)	White ironwood *Wit ysterhout*	N2? P1?	11–3

Remarks

SC to KZN, SZ, MP, LIM. Small to large tree of forests and riverine bush. Leaves: three leaflets on a long stalk, gland-dotted, wavy margins. Small, green, inconspicuous flowers. Nectar collected from female flowers, and pollen (and nectar?) from male flowers that have eight stamens. Hard, white wood. Beeplant rating based on two published records.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Virgilia divaricata & **V. oroboides** (Fabaceae) (Papilionaceae)	*Keurboom*	N0–1 P0–1	8–11 12–4

Remarks

Southwestern Cape to EC. Medium-sized, semi-deciduous tree of streamsides and forest margins. **Virgilia divaricata**, with a central and eastern distribution, has rosy-purple flowers during August–November. **Virgilia oroboides** in the west has pale pink blossoms; flowering later. Excellent carpenter bee plant. Rating as for honeybees, which rarely visit it. They obtain nectar at the base of the flower by inserting their proboscis between the standard petal and the two wing petals.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Xanthocercis zambesiaca (Fabaceae) (Papilionaceae)	Nyala tree *Njalaboom*	N2? P?	9–12

Remarks

SZ, MP, LIM, ZIM. Large tree along Lowveld rivers and floodplains. Flowers: small, cream-coloured, fragrant, in hanging sprays. The fruit is reddish-brown, fleshy and edible, which is unusual for a legume. Only one bee-related observation from the Kruger National Park.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Zanthoxylum davyi (= *Fagara davyi*) (Rutaceae)	Knobwood *Perdepram*	N2 P1	10–5 (11–12)

Remarks

SC to KZN, SZ, MP, LIM, ZIM. Small to large dioecious tree of low to high altitude forests. Stem and branches covered in woody knobs, each of which is tipped by a hard spine. Leaves: compound, with prickles, citrus-scented when crushed. Inconspicuous greenish-yellow flowers in small terminal sprays. Bees gather nectar from female flowers, whilst pollen, and probably nectar as well, is harvested from male flowers. In SC forests there is full flowering about every three years. The small knobwood, **Z. capense**, has been recorded as a source of nectar and pollen in SZ.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Ziziphus mucronata (Rhamnaceae)	Buffalo thorn *Blinkblaar wag-'n-bietjie*	N0–3 P0–1	10–4 (11–1)

Remarks

S. Africa, except the WC and a large part of the Karoo; also in NAM, BOT, ZIM. Shrub to large tree in a variety of habitats. One straight and one hooked thorn together on branches. Insignificant small, yellowish-green flowers. Several flowering periods during a season, but nectar flows only occur in hot, moist weather. Honey: dark reddish-brown, strong malty taste, froths when heated. Important honey source along the lower Orange River, but honey has also been harvested in the bushveld and even the FS. Small pollen loads are olive to brown. The smaller, unarmed false buffalo thorn, **Z. rivularis** of the Lowveld**,** has been observed with bees.





Acacia caffra is an example of thorn trees with a flower spike or 'catkin' inflorescence.



Acacia karroo represents thorn trees that have a globose or 'powder puff' inflorescence.



Acacia mearnsii illustrates a wattle with compound leaves.



Acacia saligna typifies wattles with phyllode leaves.



Albizia julibrissin. Albizias have semi-spherical, fluffy flower heads with elongated stamens.



Aloe dichotoma. The quiver tree is a representative of the so-called 'tree aloes'.



Bauhinia variegata. The orchid tree contributes a light honey to Pretoria's spring flow.



Brachylaena discolor. The indigenous silver oaks get their name from the leaves, which are glossy above and white-felted below. They are not related to the true oaks of the northern hemisphere.



Archontophoenix cunninghamiana. As in many other palms, separate male and female flowers are present on the same inflorescence of the piccabeen or bangalow palm.



Brachychiton populneus. In dry regions the planting of kurrajong from Australia should be encouraged.



Burkea africana. Unfortunately the wild syringa of the northern bushveld is not a regular source of honey.



Combretum zeyheri. Bushwillows can be identified by their four-winged fruit.



Croton gratissimus. At times the lavender fever-berry of rocky bushveld is an excellent source of pollen and some nectar.



Cussonia spicata. The candle-like flowering spikes are typical for the common cabbage tree.



Dalbergia obovata. Flat bean trees and climbers are little-known because they tend to hide in bushveld and thickets.



Dombeya rotundifolia. Outstanding flower display of a wild pear in a dry, late winter setting.



Erythrina lysistemon. Honeybees experience difficulty to access the nectar in the flowers of bird-pollinated coral trees.



Euphorbia ingens. The common candelabra tree rarely produces honey, but when it does, it is poisonous.



Faurea saligna. Flowers of the *Transvaal boekenhout* are attended by bees only during early morning and late afternoon.



Gleditsia triacanthos. An empty male tree and a pod-laden female tree of the honey locust.



Hyphaene coriacea. Honeybees harvest the sweet nectar of the lala palm and humans the sweet plant sap for making a fermented drink.



Jacaranda mimosifolia. In the Jacaranda City, a light, mild honey is harvested from jacaranda trees.



Kiggelaria africana. Fruit on a female wild peach tree. Male trees provide abundant pollen at times.



Lagunaria patersonii. The ornamental Norfolk Island hibiscus tree is an above-average source of pollen and nectar.



Ligustrum lucidum. The flowers of glossy privet attract honeybees with their nectar, but pollen is only collected infrequently.



Melaleuca quinquenervia. The broad-leaf tea tree is a good source of nectar and pollen, but it has only been established to a limited extent in towns and cities in S. Africa.



Mimusops zeyheri. Generally milkwood species do not readily attract bees, but the Transvaal red milkwood may on occasion produce surplus honey.



Ochna pulchra. It has not been established why *lekkerbreek* flowers are at times highly attractive to bees, and then at times not at all attractive.



Pittosporum viridiflorum. Although widely distributed in the eastern half of S. Africa, the beeplant value of the cheesewood tree has been insufficiently investigated.



Prosopis chilensis. The non-invasive mesquite has flowers and leaves which are very similar to those of the invasive species. (See under WEEDS).



Prunus serotina. Whereas most stone fruits have rose-like flowers, for example peaches and plums, others carry their flowers on a 'catkin'-type inflorescence, like this black cherry.



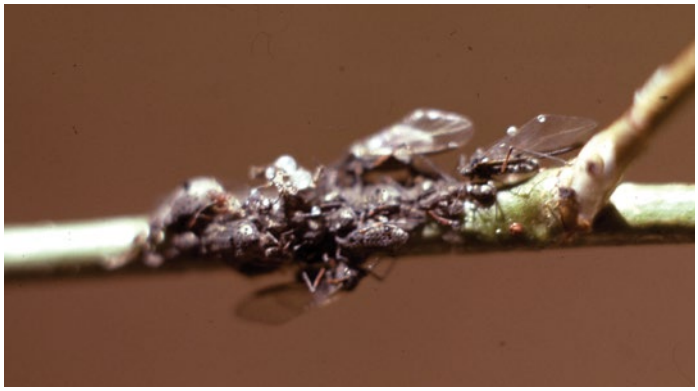
Pterocarpus rotundifolius. Several short flowering periods take place from the same floriferous panicle of the roundleaf kiaat.



Rhus lancea (= **Searsia lancea**). Most karee species have leaves with three leaflets.



Robinia pseudoacacia. In S. Africa the black locust is not as highly ranked as a beeplant compared to countries in the northern hemisphere.



Salix babylonica. The giant willow aphids excrete honeydew on which bees readily feed.



Schinus molle. Male pepper trees are a valuable source of pollen. Both female and male flowers supply some nectar.



Schotia brachypetala. The low-sugar nectar of the weeping boerboon is rarely collected by honeybees.



Sclerocarya birrea. Marula honey has a very light colour and a mild aroma.



Sophora japonica. The flowers of the Japanese pagoda tree are visited by bees for nectar throughout the day.



Syzygium cordatum. The water berry is a minor source of light honey.



Terminalia sericea. Fortunately the foul-smelling flowers of the *vaalboom* seldom secrete enough nectar for bees to store surplus honey. Note the different kinds of beetles.



Ziziphus mucronata. Although the fruit of the buffalo thorn are rather tart and dry, they are nevertheless eaten by people, birds and mammals.

4. Large Shrubs

These are woody perennial plants that are usually multi-stemmed. Robust woody climbers have also been included in this grouping, as well as large woody-stemmed aloes and sisal plants. The transition from the category SMALL SHRUBS to LARGE SHRUBS, and from LARGE SHRUBS to TREES is not fixed, and many plants will fit into two categories. The plants included under LARGE SHRUBS are those that are most often encountered with a size of 1–2 m.

As in the case of trees in the summer rainfall regions, for large shrubs that flower in spring, the rainfall of the previous summer and autumn is critical for the production of carbohydrate food reserves. These are used the following spring, before any rain has fallen and plant growth has taken place, to produce flowers, pollen and nectar, particularly in deciduous plant species. Strong autumn showers also supply subsoil moisture during the following dry months that lead up to the spring flowering. For species that bloom during summer, the flowering time is more changeable, depending on recent summer rain. Strong showers and high temperatures determine flower bud initiation and flowering intensity in this group of plants.

Relatively few species of large shrubs have as yet been identified as sources of surplus honey. The reason may be twofold: Firstly, there have been no opportunities for proper testing, and secondly, they are present in relatively low numbers or densities. In suburban locations large shrubs are, after trees, responsible for substantial honey crops on occasion. In Fynbos the large and small shrubs provide commercial beekeepers with an autumn honey flow and honeybee colonies with sustenance during overwintering.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Abutilon** × **hybridum** (Malvaceae)	Chinese lantern *Sjinese lantern*	N0–2 P0–2	1–12 (11–5)

Remarks

Brazilian parents. Soft-wooded 2–3 m shrub. Lantern-like flowers with many cultivars in different colours, mainly orange. Nectar taken between petals and sepals. Usually two main flowerings. Pellets yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Acokanthera oppositifolia (Apocynaceae)	Common poison-bush *Gewone gifboom*	N2 P0–1	6–12

Remarks

Southern and eastern S. Africa, ZIM. Shrub to small tree in a variety of wooded habitats. All parts of the plant are highly toxic. Small white-and-pink flowers in dense clusters; sweetly scented. Nectar-seeking bees have also been observed on the related roundleaf poison-bush, **A. rotundata**.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Adenolobus garipensis (=*Bauhinia garipensis*) (Fabaceae) (Caesalpiniaceae)	Blue-leaf bauhinia *Blou beesklou* *Latjiesbos*	N? P0–1?	9–1

Remarks

NC, NAM. Shrub in rocky desert areas, e.g. around Augrabies Falls. Small, greyish-blue butterfly leaves. Maroon petals furled together into a tight tube, from which the stamens protrude. Eagerly grazed by game and stock.

Botanical Name	Common Name	Beeplant Value	Flowering Time
*__Agave americana__ (Agavaceae)	American agave Blue sisal *Blou garingboom*	N2–4 P2–3	11–3

Remarks

Mexico. Ornamental and hedge plant found throughout S. Africa. Poling (flowering) at age of about ten years, after which the main plant dies. Pellets greenish-yellow. Good colony build-up. Light honey with unpleasant smell and taste. Restricted, localised invasions. A similar-looking sisal, ***A. parryi***, has shorter green leaves, light orange flower buds and lemon-coloured flowers. It is grown as an ornamental in a few localities in the drier interior. The beeplant value seems to be the same as that of the blue sisal.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***A. angustifolia**	Garden sisal *Tuinsisal*	N1–3 P1–4	12–2

Remarks

Garden origin. Mostly used as protective hedge around properties. Bees never seem to reach all the dilute nectar in a flower. The nectar has an unpleasant smell. Flowering lasts 2–3 weeks per plant. Pollen light yellow to lemon-coloured.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***A. attenuata**	Elephant's trunk *Olifantslurp*	N1–3? P0–3?	4–9 (7–8)

Remarks

Mexico. Rosette of spineless, soft-textured leaves on a woody stem. Arched flower spike about 2 m long, with densely packed light green flowers. They open in succession over a period of up to 3 months. Flowers only at an age of several years. In the years that follow, flowering takes place on lateral branches.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***A. sisalana**	Fibre sisal *Gewone garingboom*	N1–3 P1–3	4–8

Remarks

Mexico. Formerly an important fibre crop, utilised by beekeepers for queen rearing. Now mostly remnants of old plantations that become invasive. Poling at about 7 years of age, after which the plant dies. Produces a dense, light honey, which has an extremely unpleasant taste. Colonies build up and swarm.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Alhagi camelorum* (= **A. maurorum) (Fabaceae) (Papilionaceae)	Camelthorn bush *Kameeldoringbos*	N3? P?	10–1

Remarks

Western to central Asia. Naturalised, much-branched, lanky, thorny, almost leafless shrub. Strong, persistent rootstock. Solitary purplish flowers on spine-tipped branchlets. Recorded in the NC; also the Oudtshoorn district and Beervlei Dam, at which locality it is reported to produce honey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Allophylus spp. (SAPINDACEAE)	False currant *Baster-taaibos*	N1–3 P0–2?	11–5
A. africanus			
A. decipiens			
A. natalensis			

Remarks

Eastern S. Africa: from LIM southwards to coastal bush of KZN and EC; also ZIM, BOT, NAM. Superficially the plants resemble the karees with their compound leaves of three leaflets. Flowers small, white to yellowish, on elongated narrow racemes, often sweetly scented. Fruit round, small, fleshy and red, edible in some species (Litchi family). Dioecious, therefore the questionable pollen values. Pollen collection only observed in **A. africanus**. Usually bee activity stops mid-morning.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Aloe africana (ASPHODELACEAE)	Uitenhage aloe	N? P1–3	6–9 (7–8)

Remarks

EC: Gamtoos River to Port Alfred and adjacent interior. Large, single-stem aloe of Valley Bushveld. Long, pointed flower spike. Reddish flower buds turn yellowish in open flowers. The upcurved flowers are distinctive. Pellets orange. Nectar sugar 11%.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. alooides	Graskop aloe	N0–1 P2?	7–8

Remarks

Mountains of MP, on dolerite ridges. Single-stem aloe with long, recurved leaves. Inflorescence a very long, thin bottle brush, changing from green to yellow to coppery. Flowers are cup-shaped, with the nectar easily available.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. arborescens	Krantz aloe *Kransaalwyn*	N0–2 P1–3	4–7

Remarks

From Caledon eastwards to KZN and northwards to ZIM. Large, many-branched shrub in mountainous areas. Popular garden and roadside plant. Bees can force the petals apart to enter the corolla. Nectar sugar 12–22%. Pollen orange to reddish-brown. The closely related **A. mutabilis** is often considered to be a Highveld form of **A. arborescens**. They have the same beeplant value.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. castanea	Chestnut aloe Cat's tail aloe	N? P1–3	6–8

Remarks

Central MP to Polokwane [Pietersburg], on rocky, bushy slopes. Common names refer to the colour and shape of the inflorescence. The relatively short and widened flowers, with long-exserted stamens, provide potential foragers ready access to the nectar. Although plentiful nectar is available at times, honeybees only collect pollen in biscuit-coloured pellets. Freshly opened flowers secrete a water-white nectar (10% sugar), which changes colour to dark brown and becomes slimy in old flowers. Fresh and old nectar tastes bitter, but because bees cannot taste bitter, this is not the reason why they avoid it.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. ciliaris	Climbing aloe	N0–1? P1–2?	1–12 (12–3)

Remarks

Thicket vegetation of the EC. Semi-woody stems up to 6 m long, inside and on top of other vegetation. Bees cannot enter the flowers. Pellets yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. excelsa	Zimbabwe aloe	N0–2? P1–3	7–9

Remarks

Pafuri area of Kruger National Park, ZIM. Bushy, rocky hills and river banks. Very large, single-stemmed aloe. Each flower 'spike' is short, cylindrical, densely flowered and intensely red.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. ferox (= *A. candelabrum*)	Bitter aloe *Tapaalwyn*	N0–2 P1–4	4–11 (6–8)

Remarks

SC, EC, KZN. Different habitats that are rocky or gravelly with bushy vegetation, particularly Valley Bushveld. Single-stem aloe. Inflorescence candelabra-like, with five to eight red 'candles'. Bees can partly enter the corolla tube of only some flowers – nectar is collected from the front of a flower, or between overlapping petals. A surplus of dark, thin honey is rarely obtained. In the summer rainfall region the nectar flow is poor when the preceding summer and autumn were dry. This aloe is exploited commercially for its leaf sap, known as the medicinal 'Cape aloes'.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. littoralis	Mopane aloe	N0–2 P2–3	1–8 (2–5)?

Remarks

NAM, BOT, ZIM, LIM. Tall, single-stemmed aloe found in different types of woodland, including Mopane. Stems remain clothed with remains of old dried leaves. Bees cannot enter the flowers, or only partly, to reach the dilute nectar (11% sugar) if there is a nectar flow. A bee learns to insert its proboscis between the petals and move towards the base of the flower as far as possible. Pollen is dark reddish-brown. Flowering time is variable, depending on locality, and probably rainfall as well.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. marlothii (= *A. spectabilis*)	Mountain aloe *Bergaalwyn*	N0–3 P1–4	5–9 (6–8)

Remarks

Northern provinces, SZ, KZN. Tall, single-stemmed aloe of open bushveld and rocky hillsides. Bees cannot enter flowers, but sometimes the flow of dilute nectar is heavy so that bees collect it at the tips of flowers. No nectar flow if preceding summer and autumn rainfall was low. Flowering may then even be completely absent. Honey: dark brown colour; strong unpleasant aroma. Red to orange nutritious pollen: expanding brood nests if stimulative nectar is available. Strong nectar competition from many different kinds of birds.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. pluridens	French aloe *Garaa* aloe	N0–2? P3?	5–7

Remarks

Valley Bushveld of the EC. Tall aloe with single or branched stem. Leaves have whitish, toothed margins. Inflorescence very similar to that of **A. arborescens**. *Garaa* is the Khoikhoi name for this species.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. rupestris	Thicket aloe	N0–1? P2?	7–9

Remarks

KZN, SZ. Tall aloe with single stem, in thick bush of major river valleys. Inflorescence a short, broad bottlebrush of long, red filaments. Bees cannot enter the flowers, but nectar secretion may be so profuse that it runs out of the flowers along the greatly elongated stamens. Nectar sugar 9–15%. Pollen orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. speciosa	Twist-leaf aloe	N0–2 P2–4?	7–9

Remarks

SC, EC. Dry inland areas of river valleys and mountains. Tall, single-stem aloe with a tilted rosette-head and twisted leaves. Large flower spikes are thick, long and pointed. Pinkish flower buds turn to greenish-white flowers, with reddish-brown filaments.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. spicata (= *A. sessiliflora*)	Lebombo aloe	N? P3?	6–8

Remarks

KZN, SZ, MP, LIM, ZIM. Rocky slopes of the Lebombo, northern Drakensberg and Soutpansberg ranges. Only one report of nectar foraging. Since the flowers are small, open and with visible brown nectar as in **A. castanea**, perhaps the nectar is also not acceptable to bees. Orange-brown pollen is collected in flight or on the flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. tenuior	Fence aloe	N2? P2?	1–12 (12–3)? (5–8)?

Remarks

EC, KZN. In thickets and on forest margins, from coast to midlands. One of the five species of rambling aloes, this one having a large woody rootstock. Planted as a screening fence. Only the terminal portion of each branch has a rosette of leaves. Small, cylindrical, yellow to red flowers with flared openings. Bees can only insert their heads into the flowers when collecting nectar. Yellowish pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. thraskii	Dune aloe *Strandaalwyn*	N0–2 P1–3?	5–7

Remarks

EC [Transkei], KZN. Single-stem aloe with a huge rosette of curved leaves. In coastal bush on the seaward side of dunes. Greenish-yellow flowers with exserted brownish-orange filaments. Copious, dilute, water-white nectar reaches the flower front by capillary action between the filaments, from where it is available to bees. Rarely is a dark brown honey produced. It has a liquorice taste and appears reddish in a fresh comb held against the light. Pollen orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. vryheidensis (= *A. dolomitica*)	Vryheid aloe Wolkberg aloe	N0? P1–3	7–8

Remarks

KZN, LIM. Mountainous regions of northern KZN, and Wolkberg and Strydpoort mountains of LIM. Exposed rocky locations, often on dolomite. Single short trunk. Very similar to **A. spicata**, but flower buds and old flowers are brown, giving rise to the name 'brown aloe'. As in other cat-tail aloes, the visible nectar in the short, open flowers is not collected by bees. (See **A. castanea**).

Botanical Name	Common Name	Beeplant Value	Flowering Time
Aloysia triphylla* (= **A. citriodora) (= *Lippia citriodora*) (VERBENACEAE)	Lemon-scented verbena	N3? P1?	11–4

Remarks

Mexico to Argentina. Straggly shrub grown for its lemon-scented leaves, from which 'Oil-of-Verbena' is produced. Dainty lavender-coloured flowers may appear any time in summer and autumn.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Alpinia zerumbet** (ZINGIBERACEAE)	Shell ginger *Skulpgemmer*	N2 P0–1	9–3

Remarks

East Asia. Clump-forming evergreen perennial. Naturalised on KZN coast. The inflorescence is drooping, showy, fragrant. Open flowers are orchid-like; closed flowers like a smooth shell. Water-white nectar has a mild vanilla taste. Light grey pollen is rarely collected. Main flowering in spring.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Amelanchier canadensis** (Rosaceae)	Shadbush	N1–2 P1–2	9

Remarks

North America. Hardy ornamental on the Highveld. Large shrub or small tree. Golden-yellow autumn foliage. Plentiful white flowers for only a week. Flowers have characteristic petals: separate, strap-shaped, 5 in number.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Antidesma venosum (Phyllanthaceae)	Tassel berry *Tosselbessie*	N2? P1?	9–3 (11–12)

Remarks

KZN, SZ, MP, LIM, ZIM, BOT, NAM. Large shrub or small tree of forest margins or wooded grassland. Dioecious: male catkins long, yellowish-green; female catkins short, reddish. Small dirty-yellow pollen loads. Fruit: red to purplish-black berries, closely packed on hanging tassels. Only two known records of this species being a beeplant, one from E. Crisp of Maputo [Lourenço Marques]: a 'champion honey-tree' (South African Bee Journal, April 1941).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Antigonon leptopus** (Polygonaceae)	Coral creeper *Koraalranker*	N0–2 P0–2	11–4

Remarks

Mexico. Hardy creeper with masses of intense pink flowers. Attracts bees until 30 minutes after sunset, despite low nectar sugar. Pellets small, brownish-yellow or light orange, chalky taste.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Asparagus spp. (Asparagaceae) **A. africanus** **A. cooperi** **A. densiflorus** **A. falcatus** **A. laricinus** **A. lignosus** **A. macowanii** **A. plumosus** **A. suaveolens**	Wild asparagus *Wilde aspersie* *Katbos*	N1–3 P1–3	8–4

Remarks

Southern Africa. Large and small shrubs with upright or scrambling stems that are thorny in most species. Perennial woody rootstock. Flowers small, mostly white, also greenish, some with orange stamens and sweet smell. Wild asparagus species contribute to honey crops of mixed origin. They are generally under-utilised by beekeepers. Pure honey of **A. laricinus** is straw-coloured, with a very pleasant, mild, somewhat acidic flavour. Pellets either reddish-orange or yellowish, depending on the species. Pollen crude protein of **A. lignosus** is 23.9% (Köttner 1991). Two reports of asparagus honey from the southeastern Karoo, probably from **A. africanus**.

Botanical Name	Common Name	Beeplant Value	Flowering Time
*__Atriplex nummularia__ (Chenopodiaceae)	Old man salt bush *Ouman soutbos*	N? P0–2	1–12 (9–1)

Remarks

Australia. Light grey evergreen shrub. Dry area stock fodder. Invasive. Pollen rarely collected; pale yellow. Only once were flowers seen to contain a glistening substance (possibly nectar) that was attended by small ants. Related **A. halimus** and **A**. **semibaccata** were also introduced. It is unknown whether they are pollen sources.

Botanical Name	Common Name	Beeplant Value	Flowering Time
*__Banksia__ spp. (Proteaceae)	Banksia	N1–3 P0–1	1–12 (4–9)

Remarks

Australia, where honey is dark, strongly flavoured and often thin. Mainly winter flowering. Ornamentals with growing needs of proteas. Pollen colour cream to olive. The pollen crude protein of **B. serrata** in Australia has been given as 33%.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Bauhinia bowkeri (Fabaceae) (Caesalpiniaceae)	Kei white bauhinia *Kei beesklou*	N1–3 P0–2	10–12

Remarks

Riverine scrub of EC coastal belt. Shrub or small tree with small, two-lobed leaves. Flowers white, with crinkly petals and sweetly scented. No nectar secretion when soil is dry and leaves folded. Nectar colour white, no smell, sweet taste only. Nectar is also taken from the flower base after the petals have dropped. Pollen pellets mustard-coloured.

Botanical Name	Common Name	Beeplant Value	Flowering Time
B. petersiana	White bauhinia Coffee bauhinia *Koffie beesklou*	N0–1 P0–1	9–4 (12–1)

Remarks

NAM, BOT, ZIM, LIM, NW. Scrambling shrub or small tree of sandy woodland. Large white flowers with crinkly petals. Night-flowering, but foragers noticed all day. September flowering after August rainfall. Pollen brown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
B. tomentosa	Yellow bauhinia *Geel beesklou*	N2? P1?	10–5

Remarks

KZN, SZ, MP, LIM, ZIM. Shrub or small tree of coastal forest and bushveld. Flowers bell-shaped, hanging, with or without a central dark patch. Sulphur-yellow flower colour changes to mauve or reddish-brown, which most probably indicates successful pollination and fertilisation.

Botanical Name	Common Name	Beeplant Value	Flowering Time
*__Berberis__ spp. (BERBERIDACEAE)	Barberry *Berberis* *Suurbessie*	N1–3 P0–2	7–12 (8–9)
B. darwinii	Darwin barberry		
B. julianae	Winter barberry		
B. × stenophylla	Rosemary barberry		
B. thunbergii	Japanese barberry		
B. vulgaris	European barberry		
B. wilsoniae	Wilson barberry		

Remarks

Europe to Japan; North and South America. Evergreen or deciduous shrubs, most of them with thorns. Useful hedge plants, with attractive autumn colours and showy berries. Cold and drought hardy. Yellow spring flowers. Best nectar secretion at about 18–24°C. All species seem to be very attractive to honeybees. Pollen yellow to lemon-coloured. It is discharged by movements of the stamens on being touched. Definite candidates if planting of bee forage is intended.

Botanical Name	Common Name	Beeplant Value	Flowering Time
*__Beschorneria yuccoides__ (AGAVACEAE)	Beschorneria	N2 P1	8–10

Remarks

Mexico. Long, narrow, flexible leaves in a rosette, from which a 2 m long, drooping flower spike arises. The stem and the large flower bracts are red, but the flowers are a rather insignificant pale green. Nectar is taken between the petals near the base of the flower. Pellets are white to cream-coloured.

Botanical Name	Common Name	Beeplant Value	Flowering Time
*__Buddleja asiatica__ (SCROPHULARIACEAE) (LOGANIACEAE)	Asian sagewood	N2–3 P0–2	7–9

Remarks

Pakistan to Guam. Young branches are covered with white hairs, which add to the shrub's attraction. Drooping 150 mm panicles of small, white, sweetly scented flowers. Very bee-attractive.

Botanical Name	Common Name	Beeplant Value	Flowering Time
B. auriculata	Weeping sage *Treursalie*	N1–2 P2	4–9 (5–7)

Remarks

EC, KZN, SZ, MP, LIM. Scrambling shrub of mountain forests and thickets. Inflorescence a large loose panicle. Florets: strongly scented; cream to light orange to lilac; orange throat as nectar guide. Nectar collection observed at 16°C, with increasing activity at higher temperatures. Pollen white to light grey. Octopus type trichomes (epidermal plant hairs or scales) are incorporated into pollen pellets.

Botanical Name	Common Name	Beeplant Value	Flowering Time
*B. davidii	Butterfly bush Summer lilac *Somer lila*	N2? P0–1	11–3

Remarks

China. Deciduous shrub with arching branches. Dense spikes of pink to purple florets, each with a yellow to orange eye or nectar guide. Very attractive to bees and butterflies. Several cultivars.

Botanical Name	Common Name	Beeplant Value	Flowering Time
*B. globosa	Orange ball	N2 P0–1	10–12

Remarks

Chile, Peru. Semi-deciduous, hardy shrub. Orange-yellow, pendent, honey-scented flower balls.

Botanical Name	Common Name	Beeplant Value	Flowering Time
*B. madagascariensis	Madagascar sagewood	N2 P0–2	5–9

Remarks

Madagascar. Orange flower panicles visited throughout the day. Pollen pellets dirty-white.

Botanical Name	Common Name	Beeplant Value	Flowering Time
B. salviifolia	Wild sagewood *Saliehout*	N0–3 P0–3	6–11 (8–9)

Remarks

Southwestern Cape to EC to East Africa. Many-stemmed greyish shrub in varied habitats. Flowers cream-coloured to lilac. Nectar: light yellow, with a mild taste and smell of the flower aroma. Pellets pinkish-grey or light pink. Contributes to honeys of mixed origin. The mountain sage, **B. loricata**, looks very similar to the wild sagewood, but has small, creamy-white flowers during October to December. It is found in high-altitude Drakensberg of EC [Transkei] and KZN. Its beeplant value is unknown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
*Caesalpinia gilliesii (Fabaceae) (Caesalpiniaceae)	Bird-of-paradise *Paradysblom*	N1–2 P1–3	10–4

Remarks

Argentina, Uruguay. Very hardy ornamental of arid regions. Yellow flowers with long, red, silky stamens. Pollen gathered in flight. Long-flowering.

Botanical Name	Common Name	Beeplant Value	Flowering Time
*C. pulcherrima	Pride-of-Barbados Dwarf flamboyant *Trots-van-Barbados*	N0–1 P0–2	11–4

Remarks

West Indies. Planted throughout the tropics and subtropics of the world. Short-lived perennial with prickly branches. Attractive scarlet–orange–yellow flowers. Nectar rises in the thin, 15 mm long flower tube. Long-flowering.

Botanical Name	Common Name	Beeplant Value	Flowering Time
*__Calliandra__ spp. (FABACEAE) (MIMOSACEAE)	Shuttlecock flower	N1–2 P0–1?	11–6 (3–5)
C. haematocephala	Blood shuttlecock		
C. portoricensis (= **Zapoteca portoricensis**)	White shuttlecock		
C. selloi (= **C. brevipes**)	Bicolour shuttlecock		

Remarks

South America. Ornamental evergreens cultivated for their showy pom-pom flower heads with numerous long stamens. Double compound, hairy leaves that 'sleep' at night; the leaflets folding together. Short thorns in pairs. Bees have some difficulty in manoeuvring the stamens to reach the nectar. Foraging bees noticed 20 minutes after sunset in May. **Calliandra** flower heads have not been examined as to whether they also have a single large nectar floret as in some of the closely related **Albizia** species.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Callistemon citrinus** (MYRTACEAE)	Crimson bottle brush *Gewone bottelborsel*	N1–3 P0–2	9–5

Remarks

Southern Australia. Attractive small shrub to small tree. More than one flowering period. Low 11% sugar in nectar. Pollen beige, khaki, or dirty lemon.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***C. salignus**	Yellow bottle brush *Geel bottelborsel*	N1–2 P0–2	9–5 (9–10)

Remarks

Eastern Australia. Hardy shrub or small tree used as windbreak or street ornamental. Additional flowerings rain-dependent. In Australia the bottle brushes provide surplus honey only occasionally. They are nevertheless useful for maintaining colonies.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***C. speciosus**	Upright bottle brush Albany bottle brush *Albany bottelborsel*	N2 P0–1	9–5

Remarks

Western Australia. Tall shrub with long slender leaves. Ruby-red bottle brushes. Also small shrub cultivars. Mostly flowers in spring as well as autumn.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***C. viminalis**	Weeping bottle brush *Treur bottelborsel*	N1–3 P0–3	8–4

Remarks

Eastern Australia. Semi-hardy shrub or small tree with red flower brushes. More than one flowering peak per year. Although the nectar only has a low 11% sugar, it can reach a value of N3 because of its sheer bounty – a representative bird flower. Pellets dirty-lemon or yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Campsis grandiflora** (Bignoniaceae)	Chinese trumpet creeper *Ranktrompet*	N0–1? P0–1	11–1

Remarks

East Asia. Perennial, deciduous creeper with compound leaves that have conspicuously toothed leaflets. The trumpet-shaped flowers have 5 uneven petal lobes and orange-red colours. Bees try to collect nectar from inside the flower tube, or else from the outside, near the base of the tube, through slits made by either birds or carpenter bees. Pollen gathering observed in the morning and at noon. Pellets light yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Capparis tomentosa (Capparaceae)	Woolly caper bush *Wollerige kapperbos*	N? P?	8–12 (9–10)

Remarks

NAM, BOT, ZIM, LIM, MP, SZ, KZN, EC. Vigorous climber or straggling shrub of bushveld, forest and scrub. Beeplant value unknown, but seen to be visited by honeybees. Reported as a honey plant in Chad. The woody shell of the dried-out, round fruit is sometimes used as a rattle to call up Greater Honeyguides in KZN (Pooley 1993).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Caryopteris odorata** (= *C.* × *clandonensis*) (Verbenaceae)	Blue spirea	N1–3? P?	11–4

Remarks

India, Nepal. Ornamental, deciduous, 1–2 m shrub suited to cold parts of the country. Not well known in S. Africa. The tiny mauve or blue flowers are borne in clusters. They are fragrant, have long stamens and are worked all day. One record of winter–spring flowering.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Catophractes alexandri (Bignoniaceae)	Trumpet thorn *Gabbabos* *Papwielbos*	N0? P1–2	1–12 (11–1)

Remarks

NAM, BOT, NC, LIM. Spiny shrub of arid savanna. Generally pale grey appearance. Showy, sweetly scented, long-tubed white flowers. Early morning foraging for orange pollen. Several flowering periods (following rain), each lasting about 14 days.

Botanical Name	Common Name	Beeplant Value	Flowering Time
*__Ceanothus__ spp. and cvs. (RHAMNACEAE)	Californian lilac Blue brush	N1–3 P1–2	9–4 (9–11)

Remarks

Western USA, where they are a source of light-coloured honey, and in some cases, suppliers of plentiful pollen. Most are large shrubs that have flowers in shades of blue and violet, to which the common names refer. The small flowers are massed in dense clusters at ends of branches. Pellets: dirty yellow to light orange to light brown. Crude protein in pollens of two species was 29.9% and 26.1% (USA).

Botanical Name	Common Name	Beeplant Value	Flowering Time
Cephalanthus natalensis (RUBIACEAE)	Strawberry bush *Wit aarbeibos*	N2 P1	1–12 (8–12)

Remarks

EC, KZN, SZ, MP, LIM, ZIM. Scrambling shrub or small tree of montane forests and grassland. Dense pom-pom-like flower heads, greenish-white. Florets with maroon corollas and long-exserted styles, i.e. pincushion effect.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Chaenomeles japonica** (ROSACEAE)	Flowering quince *Blomkweper*	N0–1 P0–3	6–9
***C. speciosa**			

Remarks

Japan, China. Hardy ornamentals. Very showy crimson, red or pink flowers. Nectar secreted during warm weather. Pollen light yellow to tawny-coloured.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Citharexylum quadrangulare* (= **C. spinosum) (VERBENACEAE)	Fiddle wood *Vioolhout*	N2–3 P0–1	11–5

Remarks

West Indies. Hardy large shrub or small tree. Colourful orange foliage in late winter. Small, whitish, fragrant flowers. May flower more than once per season.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Cordyline australis** (AGAVACEAE)	Palm lily *Palmlelie*	N2–3 P0–1?	8–12 (11–12)

Remarks

New Zealand. Size of a large shrub or small tree, with thick stem and lily-like leaves. Small bell-shaped flowers in branched spikes; white, sweetly scented. A surplus of medium-amber honey is obtained every third year in New Zealand.

Botanical Name	Common Name	Beeplant Value	Flowering Time
*__Clematis__ spp. (RANUNCULACEAE)	Clematis	N? P0–2	9–1
C. alpina			
C. armandii			
C. × jackmanii			
C. montana			
C. tangutica			

Remarks

Eurasia. Perennial, woody, mostly deciduous climbers. Exotic *__Clematis__ species that are grown in S. Africa, where indigenous kinds are found as well (see the next entry). Many hybrid cultivars are available, suitable for cold winter gardens. Large attractive flowers with 6–8 petals, in a wide range of colours. Nectar-feeding not yet observed, but all listed species are pollen sources for bees. Pellets are lemon to sand-coloured. (See also two other exotics below.)

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. brachiata	Traveller's joy *Lemoenbloeisel klimop*	N0–2? P0–3	12–6

Remarks

Perennial climber of scrub and woodland in eastern S. Africa. Leaves divided into 3–5 leaflets. White, sweetly scented flowers with many yellow stamens. Pollen biscuit- to cream-coloured. **Clematis oweniae** is very similar to the above species, but has leaves divided into 5–7 leaflets. Its value is N0–1, P1–4.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***C. paniculata**	New Zealand clematis	N1–2 P1–2	8–10

Remarks

New Zealand. Ornamental, perennial woody climber. Star-shaped white flowers with golden stamens. Contributes to honey crops in New Zealand. Pellets light biscuit.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***C. vitalba**	Fragrant clematis	N1–2 P1–3?	12–2

Remarks

Europe. Probably the best nectar source in the genus. Fragrant, creamy-white flowers. Decorative seedheads are carried well into winter.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Clytostoma callistegioides* (= **Bignonia callistegioides) (= *B. speciosa*) (BIGNONIACEAE)	Mauve bignonia Mauve trumpet vine	N0–2 P?	11–3

Remarks

Brazil, Argentina. Vigorous climber with masses of showy, trumpet-shaped flowers. Several flowering bouts per season. When bees forage for nectar, a light-coloured pollen is deposited on their backs. No active pollen collection has been observed yet. The purple bignonia, **C. binatum** (= *B. purpurea*), resembles the mauve bignonia and probably has a similar beeplant value.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Cobaea scandens** (POLEMONIACEAE)	Cathedral bell Cup-and-saucer	N2? P1?	10–12

Remarks

Mexico. Large semi-climbing shrub with bell-shaped, light to dark purple flowers. Grown in some subtropical and warm-temperate gardens. Reports of flowers being very attractive to bees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Cotoneaster** spp. (ROSACEAE)	Cotoneaster *Pronkbessie*	N1–4 P0–2	8–1 (10–11)
C. conspicuus	Wintergreen cotoneaster		
C. franchetii	Orange cotoneaster		
C. frigidus	Giant cotoneaster		
C. horizontalis	Herringbone cotoneaster		
C. lacteus	Large-leaf red cotoneaster		
C. microphyllus	Rock cotoneaster		
C. pannosus	Small-leaf red cotoneaster		
C. salicifolius	Willow-leaf cotoneaster		

Remarks

China. Deciduous and evergreen shrubs that are widely grown, mainly for the showy crop of berries in autumn and winter. Very cold-hardy and slightly drought-hardy. Small white to pinkish flowers furnish bees with much nectar and some pollen, collected in pellets in shades of olive. **Cotoneaster pannosus** is the species most widely grown, and has therefore contributed to honeys of mixed origin – probably a dark honey because of its yellow nectar. This species, together with **C. franchetii**, have become invasive in high-lying grasslands.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Crassula arborescens (CRASSULACEAE)	Jade plant *Beestebal*	N2? P2?	9–1

Remarks

Karooid areas of WC. Succulent 1–2 m shrub of rocky sandstone slopes. Round, greyish-green, succulent leaves. Small, star-shaped flowers. Stamens have purple anthers, but the pollen is light grey. Information on **Crassula** spp. as beeplants is much needed.

Botanical Name	Common Name	Beeplant Value	Flowering Time
*__Crataegus__ spp. (ROSACEAE)	Hawthorn *Meidoring*	N1–3 P1–3	9–11
C. crus-galli	Cockspur hawthorn		
C. laevigata (= *C. oxyacantha*)	English hawthorn		
C. × lavallei	Lavalléé hawthorn		
C. monogyna	European hawthorn		
C. phaenopyrum	Washington hawthorn		
C. × prunifolia	Plum-leaf hawthorn		
C. punctata	Spotted-fruit hawthorn		

Remarks

Eurasia, North America. Large shrubs to small trees. Very frost-hardy, but less drought-hardy. Planted as windbreaks and ornamentals: white flowers in roundish clusters and reddish fruit that resemble miniature apples in autumn. Most species have long, sharp thorns. Nectar flow usually regarded as fickle in Europe and the UK, where a dark honey is gathered only occasionally. Pollen pellets in different species are cream-coloured, light grey, light olive and olive-grey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. pubescens* (= **C. mexicana)	Mexican hawthorn *Skaapvrug*	N1–2 P1–4	9–10

Remarks

Mexico. Large shrub or small tree. Frost-hardy, but not drought-tolerant. Formerly widely planted on farms and in towns on the Highveld. Pollen light yellow. Many light orange to yellowish fruits in autumn and winter, suitable for fodder. Growing in the wild to a limited extent.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Crossopteryx febrifuga (RUBIACEAE)	Sand crown-berry *Sand-kroonbessie*	N3? P1?	11–2

Remarks

NAM, BOT, ZIM, LIM. A rare plant in the northern Kruger National Park. Large shrub to medium-sized deciduous tree of sandy woodland. Dense clusters of small, cream-coloured flowers with long styles. The fruit is a round capsule with a distinctive ring around the apex, i.e. the 'crown'. Honey source in Malawi.

Botanical Name	Common Name	Beeplant Value	Flowering Time
*__Crotalaria agatiflora__ (Fabaceae) (Papilionaceae)	Bird flower Canary bush *Voëltjiebos*	N1–2 P0–2	1–12 (10–12) (3–5)

Remarks

Eastern and central Africa. Large, lime-coloured pea flowers. Bees must pry the keel open to reach pollen and much nectar. Pollen brownish-yellow or mustard-coloured. Flowers are visited by different nectar-feeding birds.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. capensis	Cape rattle-pod *Kaapse klapperpeul*	N2 P1?	1–12 (10–2)

Remarks

From SC to KZN and northwards to ZIM. Shrub that spreads in disturbed forest areas and near habitations. Escape in southwestern Cape. Bright yellow pea flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. natalitia	Pioneer rattle-pod *Natal klapperpeul*	N2 P?	3–11

Remarks

From KZN northwards to East Africa. Woody shrub of grassland or other disturbed habitats. Yellow pea flowers turn to orange, which is typical for some bee-pollinated flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
*__Cryptostegia grandiflora__ (Apocynaceae)	Rubber vine	N0–2 P0	10–2

Remarks

Madagascar. Vigorous climber with large glossy leaves. Large, showy, bell-shaped, light purple flowers, on which bees have been observed all day. Best grown in warm regions. Not well known in S. Africa.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Cyphostemma hypoleucum (Vitaceae)	Double-barrel vine	N2 P1?	10–5

Remarks

EC, KZN. Deciduous climber in woodland and dune forest. The stems are distinctly 'double-barrelled'. Many small, yellowish flowers with petals that soon drop. The pollen colour of another species is reddish-brown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
*__Cytisus albus__ (Fabaceae) (Papilionaceae)	Spanish broom *Wit Spaanse brem*	N0–3? P0–2?	8–9

Remarks

Western Mediterranean. Hardy, deciduous 2 m shrub, which carries masses of small, white, pea-type flowers. Sometimes it is well-visited, at other times not, for unknown reasons.

Botanical Name	Common Name	Beeplant Value	Flowering Time
*__C. proliferus__ (= *Chamaecytisus palmensis*)	False tree lucerne Tagasaste *Boom lusern*	N1–3? P0–2?	6–10 (8–9)

Remarks

Canary Islands. Hardy large hedge plant or small tree. Stock forage in southwestern Cape, FS and NW. Trifoliate leaves. White flowers in terminal loose panicles. Honey in New Zealand is white and mild. Pollen dull yellow or cadmium-coloured.

Botanical Name	Common Name	Beeplant Value	Flowering Time
*__C. scoparius__	Scottish broom Common broom *Skotse brem*	N0–1? P1–3?	9–3 (10–11)

Remarks

Europe. Acid soils best. Dwarf, large and prostrate forms. Formerly widely grown in S. African gardens. Flowers yellow, but ornamental cultivars are cream through rose to lilac and crimson. Pollen deep orange or brownish-orange. Invades grassland of the Midlands, KZN.

Botanical Name	Common Name	Beeplant Value	Flowering Time
*__Dahlia imperialis__ (Asteraceae)	Tree dahlia *Boom dahlia*	N0–2 P1–3	3–5

Remarks

Central America. Woody 4 m perennial. Pollen pellets orange. A commendable beeplant for a large garden.

Botanical Name	Common Name	Beeplant Value	Flowering Time
**Datura cornigera* (= __Brugmansia arborea__) (Solanaceae)	Angel's trumpet Moon flower *Maanblom*	N0 P2–3	11–4

Remarks

South America. Exotic-looking large shrub or small tree. Flowers are large, fragrant, pendent, trumpet-shaped. A light-coloured pollen is collected late afternoon, i.e. plants bloom at night. Flowering may occur more than once per season. The similar __D. suaveolens__ (= *B. suaveolens*) has the same beeplant value.

Botanical Name	Common Name	Beeplant Value	Flowering Time
__Deinbollia oblongifolia__ (Sapindaceae)	Dune soap-berry *Duine seepbessie*	N2? P1?	3–6

Remarks

EC, KZN. Large shrub or small tree of dune forest and coastal bushveld. Many-flowered inflorescence, white to cream, the nectar attracting different kinds of insects. Edible cream-coloured berries, of which the seeds foam when rubbed in water.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Dichrostachys cinerea	Sickle bush	N0–1?	10–4
(Fabaceae)	Kalahari Christmas tree	P0–3	(11–1)
(Mimosaceae)	*Sekelbos*		

Remarks

KZN, SZ, northern provinces, ZIM, BOT, NAM. Usually a large shrub that forms thickets in overgrazed areas. Serious bush encroachment in some regions of the northern provinces and KZN. Strong showers and high temperatures during spring are prerequisites for abundant flowering. Flowers are the characteristic bicoloured 'lanterns': long pink staminodes (sterile stamens) and yellow fertile florets. Bees forage during forenoons; sometimes late afternoon. Nectar value uncertain. One doubtful report of honey on the Springbok Flats. Attractivity very variable, but it is unknown for what reason. Pollen yellow to orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Diospyros dichrophylla	Poison star apple	N3?	11–4
(Ebenaceae)	Monkey apple	P	(1–3)
	Jakkalstolbos		

Remarks

From Agulhas and Montagu eastwards to KZN. Coastal scrub and forest margins. Flowers cream-coloured, scented, hanging on a long stalk. Honey plant of SC and EC. Honey: light colour; quick hard granulation. The related *blou tolbos*, **D. pallens**, is found in coastal scrub and dunes from Knysna to the EC. One record of bees visiting it for nectar and pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
D. lycioides	Blue bush	N1–4	9–2
	Star apple	P0–2	(10–12)
	Bloubos		

Remarks

Southern Africa, except WC, Karoo and Kalahari. Separate male and female plants. Flowers bell-shaped, drooping, light yellow, sweetly-scented. 'Star apple' refers to the five persistent calyx lobes on the fruit. Honey: light colour, very mild fruity flavour, slow granulation. Good summer and autumn rains the season before increases flowering and a better nectar flow. Strong frost during flower-bud development in September–October can jeopardise the entire honey crop. Hot, dry weather during flowering affects the nectar flow negatively in some years. This beeplant is utilised by one commercial beekeeper in NW, but also by a number of small beekeepers elsewhere.

Botanical Name	Common Name	Beeplant Value	Flowering Time
D. natalensis	Acorn diospyros	N3?	7–12
	Granite jackal berry	P1	(10–11)

Remarks

Coastal forest of EC and KZN; granite outcrops of SZ and MP. Small, white bell-shaped flowers. Orange, acorn-shaped fruit. Beeplant value based on one SZ record.

Botanical Name	Common Name	Beeplant Value	Flowering Time
D. whyteana	Bladder nut *Bos-tolbos*	N0–3? P0–2?	7–12

Remarks

Southwestern Cape to KZN, SZ, L, FS, northern provinces, ZIM. Evergreen shrub of various habitats, e.g. sandstone slopes, scrub, or as forest undershrub. Flowers white, drooping, sweetly scented. Dry, inflated, reddish-brown fruit. Regular flowering in SC.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Diplorhynchus condylocarpon (APOCYNACEAE)	Horn pod *Horingpeul*	N0–2? P0	9–2 (10–11)

Remarks

NAM, BOT, ZIM, northern provinces. Multi-stemmed deciduous shrub or small tree. Sandy or rocky bushveld. Paired fruit, like horns. Small, white, star-shaped, scented 'moth flowers', but bees can reach the nectar in the short 10 mm corolla.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Dodonaea viscosa (= *D. angustifolia*) (SAPINDACEAE)	Sand olive *Sandolien*	N0–1? P0–3	4–10 (6–7)

Remarks

WC to KZN, northern provinces, ZIM. Hardy shrub or small tree, usually multi-stemmed, often used in hedges. In different vegetation types, from thickets to open areas, dry and moist. Separate male and female plants. Small insignificant light green flowers. Nectar value needs investigation. Useful winter pollen source. Pellets greenish-yellow. Fruit with three papery wings. At times the flowers do not attract bees, for no known reason.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Dombeya burgessiae (MALVACEAE)	Pink wild pear *Pienk drolpeer*	N1–2 P0–2	3–8

Remarks

KZN, SZ, MP, LIM, ZIM. Shrub or small tree on rocky outcrops and forest margins in humid areas. Large leaves and pale pink flowers. Pollen pellets cream to ivory to light grey. The closely related Natal wild pear, **D. cymosa**, has a similar distribution and flowering time. It is also a nectar and pollen source for honeybees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
D. tiliacea	Forest wild pear *Bos-drolpeer*	N2? P2?	3–7

Remarks

EC, KZN. Scrambling shrub or small tree of forests and forest margins, from the coast to midlands. Inflorescence with a few, large, white, sweetly scented flowers. Evaluation based on a single observation.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Dovyalis caffra (Salicaceae) (Flacourtiaceae)	Kei apple *Kei-appel*	N0–3? P0–4	8–2 (9) (11–12)

Remarks

Eastern S. Africa. Woodland and thickets. Cultivated for its fruit or as a spiny hedge plant, elsewhere in the world as well. Dioecious. Pellets light yellow. Reports of honey need confirmation.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Duranta erecta** (= *D. repens*) (Verbenaceae)	Forget-me-not-tree Vanilla bush *Vanilla struik*	N1–3 P0–1	1–12 (10–12) (3–5)

Remarks

Tropical America. Ornamental shrub or small tree. Many yellow berries. Mauve or white fragrant flowers. Small, greyish-beige pollen loads. More than one flowering. Invasive in northern provinces.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Duvernoia aconitiflora (Acanthaceae)	Lemon pistol bush *Geel pistoolbos*	N0–2 P0?	2–5

Remarks

MP, SZ. Shrub in riverine thickets. Flowers two-lipped, pale lemon, and with mauve nectar guides on lower lip. Woody fruit capsule splits in half with an audible crack. Only carpenter bees have up to now been seen on the flowers of the related **D. adhatodoides**.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Ehretia amoena (Boraginaceae)	Sandpaper bush *Skurweblaarbos*	N1–3? P0–1?	8–4 (10–2)

Remarks

KZN, SZ, MP, LIM, ZIM, BOT, NAM. Shrub or small tree in bushveld. Leaves covered in rough hairs. Small white to pale mauve flowers. Well-visited by bees, but its value has not yet been determined.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. rigida	Puzzle bush *Deurmekaarbos*	N1–3 P0–2	8–2 (9–10)

Remarks

Southern Africa, except winter rainfall region and Central Kalahari. Untidy, deciduous shrub or small tree of different habitats. Small flowers light purple to pink. Dense, dark-golden honey with a characteristic plum-flower aroma. Pollen: shades of yellow. **Ehretia** pollen comprised 60% of the total trapped during October at Pienaars River. Sometimes there is a second flowering in summer. Good autumn rains increase flower set in spring, whereas spring rains promote the nectar flow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
*__Elaeagnus pungens__ (Elaeagnaceae)	Oleaster Silver berry *Bont oleaster*	N0–3? P0–1?	4–7

Remarks

Japan. Hardy windbreak or hedge plant. Honey in New Zealand. Pollen whitish. No flowering observed yet in G, but major bee activity reported from the WC.

Botanical Name	Common Name	Beeplant Value	Flowering Time
__Elephantorrhiza burkei__ (Fabaceae) (Mimosaceae)	Sumach bean *Basboontjie*	N0–2? P0–1?	9–2 (10–11)

Remarks

Northern provinces, BOT. Rocky locations in bushveld. Multi-stemmed shrub with feathery foliage. Many pale yellow florets on long 'catkins'. Value based on one published hearsay record. Bees have never been observed on sumach bean in the Magaliesberg, where it flowers during the general spring flow of that region.

Botanical Name	Common Name	Beeplant Value	Flowering Time
__Erythroxylum delagoense__ (Erythroxylaceae)	Small-leaved coca *Fynblaar koka*	N2? P1?	9–2 (10–11)

Remarks

KZN, SZ, MP, LIM. Shrub or small tree in bushveld, scrub and dry forest margins. Flowers: small, cream-coloured, on long stalks, 1–4 per leaf axil. Small, red, edible fruit.

Botanical Name	Common Name	Beeplant Value	Flowering Time
__Euclea crispa__ (Ebenaceae)	Blue guarri *Blou ghwarrie*	N1–3 P0–1	10–2

Remarks

Widespread in S. Africa (except Karoo and winter rainfall regions), ZIM. Shrub or small tree of open bushveld and rocky grassland. Bluish-green leaves. Small, cream-coloured, sweetly scented flowers. Male trees provide as much nectar as females. Light-coloured honey mostly of mixed origin. Pollen rarely collected; light grey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
__E. divinorum__	Magic guarri *Tower ghwarrie*	N0–4 P0–2	7–1 (9–10)

Remarks

KZN, SZ, MP, LIM, ZIM, BOT, NAM. Shrub or small tree in bushveld or on flood plains along rivers. Flowering is irregular and very rain-dependent. Honey: light straw colour and a mild citrus blossom-like fragrance, which is noticeable also near flowering shrubs. Pollen light greyish-cream.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. natalensis	Hairy guarri	N2?	1–12
	Natal guarri	P2?	(4–10)

Remarks

KZN, SZ, MP, LIM, BOT, ZIM. Shrub or small tree of different habitats. Leaves hairy below. Male and female plants separate, as in all guarris. Attractive to honeybees, but its value as a beeplant has not been established.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. racemosa	Sea guarri	N0–3	12–6
	See ghwarrie	P1?	
	Kersbos		

Remarks

Northwestern Cape to EC coasts. Low shrub or small tree in dune scrub. Dioecious. Typical guarri flowers: small, cream-coloured, fragrant. Source of surplus light honey with soft granulation.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. tomentosa	Honey guarri	N0–3	7–10
	Heuning ghwarrie	P0–1?	

Remarks

Arid mountainous areas of Richtersveld to southwestern Cape. Shrub or small tree. Flowers: sweetly scented, cream-coloured, in nodding clusters. Irregular honey flows dependent on adequate rain.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. undulata	Common guarri	N0–4	12–6
	Gewone ghwarrie	P0–2?	

Remarks

S. Africa, except winter rainfall region and at higher altitudes around L; also ZIM, BOT, NAM. Evergreen, densely leafy shrub or small tree. Along watercourses, on rocky slopes, in open acacia woodland, and in the semi-arid interior. Leaf margins usually wavy (undulate). Flowering depends on strong summer rain. Light-coloured, mildly scented honey every 2–5 years. One record of cream-coloured pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Eugenia capensis	Dune myrtle	N2?	1–3
(MYRTACEAE)	*Duine mirt*	P1?	

Remarks

EC, KZN. Shrub of coastal scrub, forest and grassland. Showy white flowers of the myrtle and eucalypt type, with prominent stamens. Pollen pellets yellowish-white. Edible black fruit with white flesh.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. uniflora**	Pitanga cherry	N2?	6–10
(= *E. michelii*)	Surinam cherry	P3?	

Remarks

Brazil. Shrub or small tree of subtropical gardens. Established itself as a weed on the coast of KZN. Solitary white flowers on a long stalk give rise to the characteristic fruit that looks like a small, 8-ribbed, crimson tomato; sweet and edible.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Euphorbia avasmontana (EUPHORBIACEAE)	*Gifnoors*	N2 P1	8–9

Remarks

Orange River northwards through Namibia. On rocky slopes. Stems: erect, thorny, 5–8-angled, semi-constricted. Dark brown honey that burns the throat. It is boiled to remove the burning principle.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. grandicornis	Rhino thorn	N0–2 P1?	4–8

Remarks

Lowveld thickets of KZN, SZ. Succulent shrub with spiny 3-angled stems. Large, white, forked spines lend to the beauty of this succulent as a decorative garden plant. Small yellow flowers on the ridges between spines. In the absence of insects, the nectar accumulates visibly on the flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. coerulescens	*Soetnoors*	N2 P1	7–2 (9–11)
E. ledienii	*Suurnoors*		

Remarks

Little Karoo to Uitenhage to Jansenville and Somerset East. Stony karooid slopes. Plant description as for *gifnoors*. Medium to dark brown honey that burns throat and nose, and may cause dizziness. Only *soetnoors* is fed to stock during drought.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. leucocephala**	White lace bush	N2 P1?	4–7

Remarks

Central America. Woody, evergreen, ornamental shrub. Flowers with narrow white 'petals' like the spokes of a wheel. Best flowering in subtropical gardens – abundance of winter flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. pulcherrima**	Poinsettia	N0–2 P0–2	4–8 (5–6)

Remarks

Mexico. A rather gangling shrub that drops its leaves as flowering commences. Red 'petals' are actually flower bracts that surround the small petal-less flowers. Double cultivars not of use to bees. Rarely bee-visited in inland locations, probably because day temperatures are not high enough for nectar secretion. Better bee attraction in the subtropics.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. tirucalli	Hedge euphorbia *Kraalnaboom*	N0–1 P1–3	9–4 (10–11)

Remarks

KZN, SZ, MP, LIM, ZIM, BOT, NAM. Much-branched succulent shrub or small tree without spines or leaves. Used as a hedge plant. Short flowering of about a week. Pollen light yellowish-brown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Feijoa sellowiana* (= **Acca sellowiana) (Myrtaceae)	Pineapple guava *Pynappel-koejawel*	N0–2 P0–3	10–2

Remarks

Brazil. Hardy evergreen ornamental shrub. Not common, but starting to attract attention for its fruit. Attractive flowers with five whitish petals and many red stamens. Pollen light yellow. Fruit with tangy pineapple-like flavour. May flower more than once.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Flacourtia indica (Flacourtiaceae)	Governor's plum *Goewerneurspruim*	N2? P1?	9–2

Remarks

SZ, MP, LIM, ZIM, BOT. Shrub or small tree, evergreen or deciduous, with or without large spines. In woodland and thickets. Small inconspicuous flowers. Two records of noticeable bee activity, one stating that nectar and pollen were collected. Edible dark red to purple berries.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Flueggea virosa (= *Securinega virosa*) (Phyllanthaceae) (Euphorbiaceae)	White berry bush *Witbessiebos*	N0–3? P0–2?	9–1

Remarks

KZN, SZ, MP, LIM, ZIM, BOT, NAM. Many-stemmed shrub or small tree of deciduous woodland, rocky outcrops, and frequently on termite mounds. Separate male and female plants. Very small, sweetly scented, light green flowers. White, round, edible berries. Rainfall determines flowering time. Value uncertain, but major foraging has been observed occasionally.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Freylinia lanceolata (Scrophulariaceae)	Golden freylinia Honey bells *Heuningklokkies*	N1–2 P1?	1–12 (2–7)

Remarks

Namaqualand to western Karoo to EC. Large shrub of moist areas. Flowers small, bell-shaped, cream to golden-yellow, honey-scented.

Botanical Name	Common Name	Beeplant Value	Flowering Time
F. tropica	Mauve freylinia	N0–1 P0–1	1–12 (8–10)

Remarks

Bushveld of NW, LIM, ZIM, BOT. Medium-sized shrub with mostly erect branches. Flowers small, mauve, tubular, with five spreading paddle-shaped lobes. Pollen biscuit-coloured.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Gardenia ternifolia (= *G. asperula*)	Yellow gardenia *Geel katjiepiering*	N? P0–1	7–12
G. volkensii (= *G. spatulifolia*) (Rubiaceae)	Savanna gardenia *Bosveld katjiepiering*		

Remarks

KZN, SZ, northern provinces, ZIM, BOT. Large shrubs or small trees in bushveld. Showy white to cream-coloured flowers, with a long corolla tube, and with an intense sweet smell. The two reports of nectar-collecting bees are questioned. Stamens in the throat of the flower are rarely visited for pollen. This flower type is typically pollinated by night-flying moths.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Gelsemium sempervirens** (Gelsemiaceae)	False jasmine Yellow jessamine *Vals-jasmyn*	N1–3 P0–2	2–9 (7–8)

Remarks

Southeastern USA. Hardy climber with yellow, fragrant, bell-shaped flowers. Plants are poisonous to stock, and the pollen to young bees. Human poisoning by pollen recorded in Johannesburg. Yellowish oily pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Glycyrrhiza glabra** (Fabaceae) (Papilionaceae)	Liquorice *Soethout*	N0–1? P0–1?	1–2

Remarks

Southern Europe to southwestern Asia. Shrub with extensive underground system of thick roots. Formerly grown in the Karoo for the extraction of liquorice. Recent small scale production near Oudtshoorn. Has become established and is a minor weed in lucerne fields. Erect racemes of pale blue flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Grevillea** spp. (PROTEACEAE)	Grevillea	N0–3 P0–1	1–12 (10–2)
G. banksii			
G. caleyi			
G. juniperina			
G. rosmarinifolia			
G. speciosa (= *G. punicea*)			

Remarks

Mostly from southeastern Australia. Attractive hardy ornamentals grown in cities and most towns of S. Africa. They are rarely without bees, which is only likely to happen when the soil is dry. Pollen reddish-brown in one species. In Australia the grevilleas are pre-eminently bird flowers, and honeybees find it difficult to reach the nectar in many species. Nevertheless, some are valuable nectar and pollen sources to maintain or build up colonies. The genus **Grevillea** is the largest in the Protea family, with around 350 species, all evergreens. They range from prostrate shrubs to forest trees. Of the latter, the silky oak, **G. robusta**, is the largest, being well known in S. Africa.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Grewia spp. (MALVACEAE) (TILIACEAE)	Raisin bush *Rosyntjiebos*	N0–3 P0–3	10–5 (11–1)
G. bicolor	White raisin *Wit rosyntjie*		
G. caffra	Climbing raisin *Klimrosyntjie*		
G. flava	Velvet raisin *Fluweelrosyntjie*		
G. flavescens	Sandpaper raisin *Skurwe-rosyntjie*		
G. lasiocarpa	Forest raisin *Bosrosyntjie*		
G. monticola	Grey raisin *Vaalrosyntjie*		
G. occidentalis	Cross berry *Kruisbessie*		
G. retinervis	Kalahari raisin *Kalahari rosyntjie*		

Remarks

Southern Africa, save the winter rainfall regions. The exception is the cross berry, which is also found in the southwestern Cape and SC. Large shrubs or small trees in different habitats, but mostly in dry woodland. Several species have asymmetrical leaf bases. Flowers light yellow or pinkish. In some species the five sepals below the petals are developed into fake petals, making the flowers more conspicuous to insect visitors. Attractiveness of flowers varies much, but it is unknown for what reason. Visible nectar and pollen may not be collected. Flowering is rainfall dependent, and can occur more than once per season in some species. One report of a yellow honey with a mild citrus aroma. Pellets in shades of yellow to orange. In some bushveld localities the main pollen collected during December comes from **Grewia**. The small yellow to reddish-brown fruit are edible: astringent or sweet, fleshy or dry.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Greyia sutherlandii (Greyiaceae)	Natal bottlebrush *Natalse baakhout*	N0–2 P0–2	8–10

Remarks

EC, KZN, SZ, MP. Large woody shrub or small tree in grassland of steep mountain slopes. Typically a bird flower: red colour and copious dilute nectar. Honeybees collect the easily available nectar, and occasionally the pollen from the long-exserted stamens. Under dry conditions the flowers may have no nectar. The Transvaal bottlebrush, **G. radlkoferi**, and the Kei bottlebrush, **G. flanaganii**, are also known to be visited by honeybees for nectar and pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Gymnosporia buxifolia (= *Maytenus heterophylla*) (Celastraceae)	Common spike thorn *Gewone pendoring*	N0–1? P0–1	1–12 (9–11)?

Remarks

Southern Africa. Shrub or small tree of varied habitats. Masses of cream flowers with an unpleasant scent: people inspect their shoes when passing by. Not often visited by bees. Pollen dirty lemon.

Botanical Name	Common Name	Beeplant Value	Flowering Time
G. senegalensis (= *M. senegalensis*)	Confetti tree Red spike thorn *Rooi pendoring* *Lemoendoring*	N0–2? P0–2?	3–12 (5–8)

Remarks

KZN, SZ, northern provinces, NC, NAM, BOT, ZIM. Shrub or small tree of woodland. Cream-coloured flowers are abundant in dense clusters, and sweetly scented. They are, however, ignored by bees at times. Pollen in shades of yellow. Two records of honeybees collecting nectar on **G. tenuispina**.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Hakea salicifolia** (= *H. saligna*) (Proteaceae)	Willow hakea *Wilger hakea*	N1–2 P1?	8–11

Remarks

Eastern Australia. Well-known hedge plant. Young solitary plants flower better than when in a hedge. Not weedy like other species in the WC. New Zealand honey: light-coloured; good quality.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Hamelia patens** (Rubiaceae)	Scarlet bush Fire bush	N0–1 P0–1	1–5

Remarks

Florida to Brazil. Dense, soft-wooded shrub that is occasionally encountered in gardens of warmer regions. Red tubular flowers that narrow towards their base. The wider, rounded base retains a good deal of nectar that the bees cannot reach. Bees partly enter the flower tube to reach a portion of the available nectar. Nectar foraging has been observed for an entire day.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Hedera helix** (Araliaceae)	Common ivy *Gewone klimop*	N1–3 P1–3	11–6 (1–3)

Remarks

Europe. Only aged woody plants flower when 10–20 years old. Honey obtained in Europe. The nectar has an exceptionally high glucose content, which results in a finely-crystallised dry honey. Pollen crude protein 18.3%.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Hedychium coccineum**	Red ginger lily *Rooi gemmerlelie*	N0–2? P0	1–3
***H. coronarium** (Zingiberaceae)	White ginger lily *Wit gemmerlelie*		

Remarks

Himalayas and tropical Asia. Tall, clump-forming plants with lush foliage. Thin-tubed white or red flowers with long-exserted styles, in an erect cylindrical inflorescence. Naturally the flowers are moth- or butterfly-pollinated. Late afternoon nectar foraging by bees observed. The long thin flower tubes were probably filled with nectar.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Helianthus tuberosus** (Asteraceae)	Jerusalem artichoke *Jerusalem artisjok*	N1–2 P0–3	1–4

Remarks

North America. Produces edible tubers, but mostly grown as an ornamental with yellow flower heads. Pellets light orange. Pollen crude protein 15.5% (Köttner 1991).

Botanical Name	Common Name	Beeplant Value	Flowering Time
Helinus integrifolius (Rhamnaceae)	Soap bush *Seepbos*	N0–3 P?	10–4 (12–2)

Remarks

SC, EC, KZN, SZ, northern provinces, ZIM, BOT, NAM. Semi-woody perennial climber. Bushveld and savanna, particularly rocky places. Coiled tendrils are typical. Small light green flowers. Young yellow-centred flowers have much nectar; older flowers are white-centred, without nectar.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Heteromorpha arborescens (= *H. trifoliata*) (Apiaceae)	Parsley tree *Pietersieliebos*	N2 P1?	9–5

Remarks

SC to KZN, FS, SZ, northern provinces, ZIM, NAM. Multi-stemmed shrub to medium-sized tree. Rocky bushveld. Many small, yellowish-green, strong-smelling flowers in round heads.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Hibiscus diversifolius (MALVACEAE)	Prickly hibiscus	N2 EN0–1 P0	8–4

Remarks

SC, EC, KZN; also NAM, BOT, ZIM. Large shrub or small tree of riverine vegetation. Provides floral nectar, as well as extra-floral leaf nectar. Prickly stems and leaf stalks. Showy yellow to reddish-purple flowers, which are cooked and eaten.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***H. rosa-sinensis**	Common hibiscus *Gewone hibiskus*	N0–1 P0–1	10–5

Remarks

Tropical Asia and China. Single cultivars are visited if there is little other bee forage available. Pollen foraging occurs very rarely. One record of nectar robbing from flower base.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***H. syriacus**	Rose-of-Sharon Blue hibiscus	N2? P0–2?	12–5

Remarks

China. Deciduous and very cold- and drought-hardy. Standard flower colour is deep pink or mauve, with a crimson base to the petals. New cultivars range from white to lilac-blue, and some are doubles. One report from Eastern Europe of notable pollen collection.

Botanical Name	Common Name	Beeplant Value	Flowering Time
H. tiliaceus	Lagoon hibiscus *Wilde katoenboom*	N2 EN P0	8–5

Remarks

Transkei [EC], KZN. Large shrub or multi-stemmed small tree fringing lagoons and rivers along the coast. Flowers large, yellow, with dark purple centre, changing to orange-red, and dropping after one day. Floral and extra-floral nectaries attended by bees. Plentiful dilute nectar reported. One record of honey from tropical America.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Hippocratea longipetiolata (CELASTRACEAE)	Bushveld paddle-pod *Bosveld-spaanpeul*	N1–2 P?	10–4

Remarks

MP, LIM, ZIM. Scrambling shrub of open bush or thickets, often on rocky ground. Small, yellowish-green, insignificant flowers. Flat paddle-shaped fruit.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Hoheria populnea** (MALVACEAE)	Poplar lacebark	N1–3 P0?	3–5

Remarks

New Zealand. Ornamental large shrub or small tree for cooler regions. Uncommon in S. Africa. Older plants have a flaky, pale brown and white bark. The attractive, glossy, toothed leaves somewhat resemble those of certain poplars. Flowers with five, white, narrow petals; faintly perfumed; yellow stamens; borne in floriferous clusters. Source of honey in favourable seasons in New Zealand.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Homalocladium platycladum** (POLYGONACEAE)	Tapeworm bush *Lintwurmplant*	N3 P0–1?	5–12?

Remarks

Solomon Islands. Dense leafless shrub with flattened green stems on which small flowers develop at the nodes. Nectar is secreted in warm to hot weather, above ± 24°C.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Hydrangea** spp. and cvs. (HYDRANGEACEAE) (SAXIFRAGACEAE)	Hydrangea *Krismisblom* *Hortensia*	N0–2 P0–1	11–5

Remarks

Japan, China and USA. Only non-showy fertile florets attract bees. The ratio of fertile to sterile florets varies considerably between species. The best beeplant probably is **H. quercifolia**, which is grown in S. Africa. Cream-coloured pellets noted.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Hypericum patulum** (CLUSIACEAE) (HYPERICACEAE)	Hypericum	N? P2?	11–3 (12–1)

Remarks

China. Thin-wooded, 2 m shrub. Deciduous only in very cold areas. Flowers are bright yellow to orange-yellow, and appear for several weeks during summer. A number of large-flowered cultivars are available.

Botanical Name	Common Name	Beeplant Value	Flowering Time
H. revolutum (= *H. lanceolatum*)	Common curry bush *Kerriebos*	N0–2 P0–2	1–12 (8–11)

Remarks

Midlands and lower escarpment of eastern S. Africa. Multi-stemmed shrub of grassland and forest margins. Pollen yellow to orange. Occasionally the flowers are completely ignored by bees, for reasons not known. Blooms regularly during the main flowering time, but the flower set is much-reduced during droughts. Only at certain times do the plants smell like curry. **Hypericum roeperianum**, the large-leaved curry bush, is very similar to the above species, but has much larger leaves and grows at lower altitudes. Its beeplant value and flowering time seems to be comparable to that of the common curry bush.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Ilex aquifolium** (AQUIFOLIACEAE)	English holly European holly	N1–3 P0–2	9–11

Remarks

Europe, western Asia. Popular Christmas decoration in the northern hemisphere. Glossy, spiny-edged, dark green leaves. Bright red winter berries. Separate male and female plants. Many cultivars based on differently coloured leaf patterns.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***I. crenata**	Japanese holly	N1–3 P0–1?	8–10

Remarks

Japan, Korea. Leaves much smaller than in English holly, with few rounded teeth. Several variegated cultivars. Glossy black berries in winter. **Ilex** species have small, insignificant, yellowish-green, sometimes fragrant blossoms. Their beeplant values vary from year to year.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Indigofera frutescens (= *I. cylindrica*) (FABACEAE) (PAPILIONACEAE)	River indigo *Rivierverfbos*	N2 P?	12–4

Remarks

Transkei [EC], KZN. Scrambling shrub or small tree of riverine bush or hillside scrub. Flowers pink and white, sweetly scented, in short dense spikes. Limited introduction as a garden plant.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Iochroma cyaneum** (= *I. tubulosum*) (SOLANACEAE)	Blue cestrum	N0–2 P0–1	12–5

Remarks

Colombia. Widely grown in S. Africa for its showy bunches of drooping purple flowers. Long, narrow, tubular corolla, but at times nectar secretion is so rich that bees can collect it in the front of the flowers. All-day bee activity recorded once. The red cestrum, **I. coccineum**, has a similar flower, but seems to be of lesser bee value than the blue cestrum.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Jasminum fruticans** ***J. humile** ***J. officinale** ***J. polyanthum** ***J. primulinum** (OLEACEAE)	Jasmine *Jasmyn*	N0–1 P0–2	6–12

Remarks

Eurasia. Well-known climbers, grown primarily for their delightful flower fragrance. Flower colours in white, pink or yellow. If there is a strong flow of nectar, bees may reach some of it in the long flower tube. Nectar is also collected from the

outside, i.e. the flower base after the flower tube has withered, or has dropped. The anthers are inside the corolla tube, where bees can only reach the pollen with their mouthparts. Pellet colour in various shades of yellow. Of the 10 indigenous species, bee visits have only been recorded on the flowers of **J. abyssinicum** and **J. glaucum**.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Jatropha curcas** (EUPHORBIACEAE)	Physic nut Purging nut *Purgeerboontjie*	N2? P1?	1–12?

Remarks

Mexico to South America. Naturalised in LIM, MP, SZ, KZN. Shrub or small tree. Used in the Lowveld as a living fence or as street tree. Large lobed leaves. Small greenish flowers. In recent years the plant has received attention as a source of biofuel. A large commercial plantation in Mozambique uses honeybees for pollination.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Karomia speciosa (=*Holmskioldia tettensis*) (VERBENACEAE)	Parasol flower *Sambreelblom*	N0–2 P0–1	1–12 (3–5)?

Remarks

KZN, SZ, MP, LIM. Widely cultivated indigenous shrub or small tree of mixed bushveld. The mauve parasol is the flower calyx. There is a tubular, irregular 'flower' in its centre, from which bees and birds obtain nectar. Long-extended stamens are infrequently used to collect pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Kraussia floribunda (RUBIACEAE)	Rhino coffee *Renosterkoffie*	N2 P1	10–3 (11–12)

Remarks

KZN, SZ, MP, LIM. Shrub or small tree in dune scrub and riverine bush. Small white flowers in hanging clusters, faintly scented, attracting different kinds of insects.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Lagerstroemia indica** (LYTHRACEAE)	Pride-of-India Crêpe flower *Trots-van-Indië*	N0? P0–4	10–3 (12–1)

Remarks

India to Japan. Hardy shrub or small tree, usually with several smooth stems. A frequently planted ornamental. Pellets light yellow to brownish-yellow to orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Lavatera arborea** (MALVACEAE)	Tree mallow Lavatera	N1–3? P0–2	9–2

Remarks

Europe. Branched, woody perennial. Pink to lilac flowers with dark veins on the petals. Pollen whitish and infrequently collected. Invasive escape in coastal areas of the WC.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Leptospermum polygalifolium** (= *L. flavescens*) (MYRTACEAE)	Common tea tree Australian wild may	N2–3 P2	10–12

Remarks

Eastern Australia. Large, hardy, multi-stemmed shrub for both coast and interior. It produces a dark thixotropic honey in Australia, where the flow is suitable to make increases and to rear queens.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***L. petersonii** (= *L. citratum*)	Lemon-scented tea tree	N2? P1–2	10–11

Remarks

Australia, where it is also planted as an ornamental. Strong lemon scent when leaves are crushed. Well worked by bees, although not as floriferous as other species. Not well known in S. Africa.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***L. scoparium**	Manuka Crimson tea bush *Manuka mirt*	N0–3? P0–2	5–10

Remarks

New Zealand. Small to large cultivars are planted in many S. African gardens. Double-flowered cultivars are less attractive to bees. At times the flowers have no nectar for unknown reasons. Escapes in Knysna are said to contribute to surplus honey. Pollen 'muddy-white'.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Leucadendron spp. (PROTEACEAE)	Leucadendron	N0–2 P0–3	1–12 (7–11)
L. brunioides	Cone bush		
L. daphnoides	Yellow bush *Geelbos*		
L. laureolum	*Tolletjie*		
L. sessile	*Knopbos*		
L. tinctum			

Remarks

Mainly southwestern Cape and SC; also EC. Leaves around the cone-like flower heads, the so-called involucral leaves, are mostly yellow, hence the common name. Dioecious. Both male and female flowers of many leucadendrons secrete nectar, but this is not necessarily available to bees: bracts may enclose flowers. Male plants may bloom for much longer periods than female plants. Dry and sticky types of pollen are produced in different species. The listed species are visited by honeybees, but the use of cone bushes as sources of pollen probably occurs more generally. Brownish-yellow pellets noted. No records yet of the resin on cone bracts being collected as propolis. Many species are harvested commercially as Cape greens and as dry cones. More observations are needed.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Leucosidea sericea	Oldwood	N?	8–2
(Rosaceae)	*Ouhout*	P?	(8–10)?

Remarks

EC, KZN, L, FS, SZ, northern provinces, ZIM. Large shrub or small tree with gnarled, twisted trunk and shaggy appearance. In high altitude grassland, where it becomes invasive in mismanaged veld. Small yellow flowers in dense spikes. C.A. Smith (1966) stated that the flowers secreted a rich nectar supply, favoured by bees, but this could not yet be confirmed despite many observations.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Leucospermum spp.	Pincushion	N0–3	1–12
(Proteaceae)	*Speldekussing*	P0–2	(8–12)
		PR0–1	
L. bolusii			
L. catherinae			
L. conocarpodendron			
L. cordifolium			
L. cuneiforme (= *L. attenuatum*)			
L. erubescens			
L. formosum			
L. glabrum			
L. mundii			
L. oleifolium			
L. praecox			
L. reflexum			
L. tottum			

Remarks

From Namaqualand to southwestern Cape to EC, with few species further north. Long styles give pincushion effect. Most species have leaves with glandular teeth at their tip. The red gland on the tip of **L. conocarpodendron** leaves secretes extrafloral nectar, which has been seen to be collected by ants. Nectar and pollen attract pollinators, mainly birds and beetles. Generally the flowers seem not to be very appealing to honeybees, but observations are lacking. In some species the colour of the flower head changes from yellow to red, and nectar sugar concentration is above 30%. These two features are indicative of flowers that attract insect pollinators such as bees. The listed species were seen to be visited by honeybees. In an older flower head of **L. reflexum** it was noticed that the last florets at the top had their bases pierced, possibly by carpenter bees. Honeybees were obtaining nectar through these holes. Pollen i.a. light brown. Dark brown propolis reported. Two old notes by Dr A.E. Lundie: 'Light, good quality honey: Aug.–Nov.' from **L. attenuatum** (Mr Hillary, Albertinia, no date). 'Luisbos honey [probably **L. cuneiforme**] is dark amber, of strong flavour and candies quickly; Aug.–Oct.' (Mrs Jackson, [Southern Cape], 1923-02-15).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Ligustrum ibota**	Hedge privet	N1–3	10–12
(Oleaceae)	Small-leaved privet	P0–1	

Remarks

Japan, Korea. Mostly used as a hedge plant. Clusters of small white flowers. Nectar foragers are often dusted with pollen, but they rarely collect it. The pellets have a beige colour and a slightly bitter taste.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Lippia javanica (Verbenaceae)	Verbena lippia Fever tea lippia *Beukesbossie*	N0–2 P0–1	1–12 (12–4)

Remarks

EC, KZN, SZ, FS, northern provinces, BOT. Much-branched aromatic shrub of grassland and bushveld. Small white flowers that are carried in heads that change shape as flowering progresses, from pyramidal to globose to oval. Long flowering period. Pollen olive-coloured. Flowers are sometimes ignored for unknown reasons.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Lonicera** spp. (Caprifoliaceae)	Honeysuckle *Kamperfoelie*	N0–2 P0–2	8–3 (9–10)

L. × americana

L. caprifolium

L. japonica

L. sempervirens

L. tatarica

Remarks

Northern hemisphere. Evergreen climbing ornamentals with fragrant flowers, mostly long-tubed. The majority produce nectar abundantly, which however is generally not within reach of the bees' tongues. There are few exceptions with short flower tubes, like **L. japonica**. Honeybee nectar thieves may make use of carpenter bee slits. Pellet colours are light yellowish-brown to light pinkish-brown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Lopholaena coriifolia (Asteraceae)	Tuft flower *Pluisbos*	N1? P2?	6–11

Remarks

Northern provinces, SZ. Much-branched woody shrub of rocky grassland. The flower head has a long, well-developed calyx tube from which the florets emerge as a tuft, and later the white 'seeds'. Beeplant value based on a single record.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Ludwigia octovalvis (Onagraceae)	Swamp primrose Shrubby ludwigia	N2 P1?	1–12 (12–4)?

Remarks

EC, KZN, SZ, MP, LIM, BOT, NAM. Robust shrub of damp, swampy areas. Yellow flowers open in the morning, unlike the evening primroses. High bee activity noticed. **Ludwigia abyssinica** has also been seen with nectar-foraging bees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Lycium afrum (SOLANACEAE)	Honey thorn *Kraal-kriedoring* *Bokdoring*	N2–3 P2?	1–12? (7–9)

Remarks

Southwestern Cape to EC. Infrequent thorny shrub of dry coastal and karooid scrub. Used as hedge plant. Brownish-purple, tubular flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
L. cinereum	Honey thorn *Heuning-kriedoring*	N0–3 P0–3	1–12 (4–6)

Remarks

Dry regions of southern Africa, particularly the Karoo. Sandy clay soils of flats, apron veld and dry river courses, even in the Kalahari. Very spiny, low-growing bush. Honey flows about once every five years. Opportunistic flowering in response to rainfall. Honey: dense, mild aroma, distinct acidity, pale lemon colour, soft fine granulation. Pellets beige to cream-coloured. Nutritious pollen that stimulates brood rearing. Of the pollen pellets trapped in April during a honey flow from honey thorn in the southern FS, 68% belonged to this species. Also an 'important' source of honey on a farm in the Middelburg district, EC.

Botanical Name	Common Name	Beeplant Value	Flowering Time
L. ferocissimum	Box thorn *Kriedoring* *Slangbessie*	N3 P3?	1–12 (3–5)

Remarks

Namaqualand and western Karoo to EC. Widespread, stiffly branched, thorny shrub. Campanulate light mauve flowers. Contributes to honey crops in the EC and probably elsewhere as well. Pollen dirty white. In Australia and New Zealand **L. horridum** is called the African boxthorn, which provides surplus honey in those countries. This indigenous species is widespread in southern Africa.

Botanical Name	Common Name	Beeplant Value	Flowering Time
L. hirsutum	*Wolwedoring* *Rivier-kriedoring*	N? P3	1–8

Remarks

Karoo, FS, NW, NC, NAM. Mostly alongside streams or in seasonal stream beds. Hardy shrub with leaves on long thorns. Unlike other **Lycium** species, which have widened flowers, the *wolwedoring* flower has a long, narrow corolla, which bees cannot enter. However, the five exserted anthers provide ample pollen that is readily available to honeybees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Mackaya bella (ACANTHACEAE)	River bells *Rivierklokkies*	N1? P1?	8–12 (9–10)

Remarks

Transkei [EC], KZN, SZ, MP, LIM. Shrub or small tree of forest understorey along streams. Small scale use as a garden ornamental. Flower tube widely expands into five pale lavender petals with purple nectar guides. Only two stamens per flower. Pollen pale yellow. Bees are not often seen to attend the flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Maesa lanceolata (= *M. rufescens*) (MAESACEAE) (MYRSINACEAE)	False assegai *Basterassegaai*	N0–2? P0–1?	10–8 (3–6)?

Remarks

KZN, SZ, MP, LIM, ZIM. Shrub or small tree, along rivers and forest margins. Very small, cream-coloured, sweetly scented flowers, clustered in loose panicles. Evaluation based on two published records. Never were bees seen in many own observations.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Magnolia** × **soulangeana** (MAGNOLIACEAE)	Tulip magnolia *Tulp-magnolia*	N0 P0–2	6–10 (7–9)

Remarks

Hardy garden hybrid. Large multi-stemmed shrub or small tree. Showy flowers are light maroon on the outside. Pellets whitish to very light grey. Other **Magnolia** species grown in S. Africa have been recorded as minor pollen sources overseas.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Mahonia** spp. (BERBERIDACEAE)	False holly	N1–3 P0–2	5–10 (6–8)
M. aquifolium			
M. japonica			
M. lomariifolia (= **Mahonia oiwakensis**)			

Remarks

North America, Asia. Evergreen shrubs grown for their beautiful foliage: large compound leaves, each leaflet resembling the dentate holly leaf. Also long clusters of yellow fragrant flowers and blue-black berries. Generally the mahonias are highly attractive to honeybees and should be included in any bee garden. Pollen pellets dark yellow to light brown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Malvaviscus arboreus** (= *M. mollis*) (MALVACEAE)	Fire dart bush *Rooi pylblom*	N0–2 P0–2	1–12 (3–5)

Remarks

Central and South America. Tall rounded shrub with bright red flowers, of which the petals remain furled. Bees force the petals apart to enter the flower, or they collect the nectar that runs out onto the anthers in hanging flowers. Else they have easy access to the nectar in the calyx cup after the corolla has dropped.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Maytenus undata (CELASTRACEAE)	Koko tree *Kokoboom*	N0–1? P0–1?	9–6 (11–1)

Remarks

EC, KZN, FS, SZ, northern provinces, ZIM. Multi-stemmed shrub or small tree, from coast to Highveld, in forest and bushveld. Unlike the closely related spike thorns, **Gymnosporia** spp., the koko tree is spineless. Small, light green flowers in dense clusters. Beeplant value based on a single record.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Melaleuca** spp. (MYRTACEAE)	Honey myrtle Tea myrtle *Heuning mirt*	N1–3 P0–3	8–5 (10–1)
M. bracteata 'Gold'	*Tee mirt*		
M. diosmifolia			
M. ericifolia			
M. huegelii			
M. hypericifolia			
M. lateritia			
M. nesophila			
M. squarrosa			
M. thymifolia			
M. wilsonii			

Remarks

Western and eastern Australia. Closely related to the bottle brushes (**Callistemon** spp.), which have large colourful brushes made up from stamens that are free and arranged around the flower cup. In the honey myrtles, the brushes are small, cream-coloured (with some exceptions) and the stamens are fused at their bases in several bundles. The listed species have all been cultivated in S. Africa, and all of them are sources of nectar and pollen, the latter in shades of lemon. Some are rare, others are widely grown, like the 'Gold' cultivar, which has a N3 P1 rating (one evaluation). The red-flowered bottlebrush melaleuca, **M. hypericifolia**, is an escape on the Cape Peninsula. At times a few species in Australia produce a dark honey of strong flavour, but mostly they only support colonies during hot summer months. (See also **Melaleuca** under TREES).

Botanical Name	Common Name	Beeplant Value	Flowering Time
Michelia figo* (= *M. fuscata*) (= **Magnolia figo) (MAGNOLIACEAE)	Port wine magnolia Banana magnolia	N0–2? P0–2?	8–11

Remarks

Southeastern China. The michelias are related to the magnolias. Although this species has been planted in different regions of S. Africa, particularly where winters are warm, it is not common. Flower buds resemble a thick banana before opening. The large sepals that initially cover the flower bud are persistent and have a light red wine colour. The cream-coloured flowers are heavily sweet-scented – a source of perfume in the East. The beeplant value is based on one record from Harare.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Mikania capensis (Asteraceae)	Mikania	N3? P2?	1–12 (7–9)

Remarks

EC, KZN, SZ, MP, LIM. Vigorous perennial climber of forest margins. The cream-coloured florets are scented and have an 8–10 mm long corolla tube, which enables honeybees to easily reach any nectar. Several **Mikania** species of tropical America are sources of light-coloured honeys and brownish-yellow pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Mimetes chrysanthus (Proteaceae)	Golden pagoda *Goue stompie*	N2? P1?	3–7 (4–5)

Remarks

Sandstone slopes of Little Karoo mountains. A rare, sparsely branched shrub with a single main trunk. Large, cylindrical flower head on the top part of an upright branch, and composed of a multitude of thin, yellow florets with extended styles. Light orange pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
M. cucullatus	Common pagoda *Rooi stompie*	N2? P?	1–12 (8–3)

Remarks

Koue Bokkeveld to Outeniqua and Kouga mountains. From flats to middle slopes. Erect stems on an underground rootstock. Green leaves, but top of stem has leaf-like yellow bracts with red tips. Florets are fluffy white. Trapped protea-type pollen, most probably from **Mimetes**, had a brownish-orange colour.

Botanical Name	Common Name	Beeplant Value	Flowering Time
M. hirtus	Marsh pagoda *Vlei stompie*	N0–3? P?	4–11 (7–8)

Remarks

Cape Peninsula to Elim flats, on wet coastal plains. Yellow flower heads between leaves, with red and hairy white florets emerging from each head. The base of each flower head can be filled with nectar that is secreted from four scale-like nectaries at the bottom of each floret. Sometimes well-visited by honeybees for nectar; other times not. Mimetes-type pollen grains were found in low numbers in Elim fynbos honey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Mimosa pigra** (Fabaceae) (Mimosaceae)	Sensitive weed *Raak-my-nie*	N1? P3?	1–12 (10–5)

Remarks

Tropical America. KZN northwards to tropical Africa. Sprawling shrub of floodplains and shallow water locations in subtropical regions, where it has become invasive. Thorns on stems and leaves. Leaflets fold up when touched. Flower balls pink or mauve, changing to white on aging. Pollen whitish.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***M. pudica**	Sensitive plant *Raak-my-nie*	N2? P0–3	12–4

Remarks

Brazil. Commonly cultivated ornamental. Naturalised in KZN, LIM. Thorns on stems, but not on leaves, which close when touched. Pink flower balls in summer and autumn. Pollen pellets whitish.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Mina lobata* (= **Ipomoea lobata) (CONVOLVULACEAE)	Mina lobata	N1–3 P0–1	3–5

Remarks

Mexico. Semi-perennial twiner. Crimson flowers that change through orange to yellow as they mature. Copious dilute nectar. Bees force their way into the narrow flowers. Light-coloured pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Montanoa hibiscifolia** (ASTERACEAE)	Tree daisy Montanoa	N2 P1–3	4–10 (5–6)

Remarks

Central America. Large shrub-like perennial with semi-woody erect stems or canes. White 'daisies', 40 mm across, with a yellow domed centre. All day bee visitation noted, but attractiveness varies from no bees to intense activity. Invasive in KZN coastal areas – declared weed.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Morella cordifolia (= *Myrica cordifolia*) (MYRICACEAE)	Wax berry Candle berry *Wasbessie* *Glashout*	N0–3 P0–2?	5–10

Remarks

Southwestern Cape to EC. Large shrub that commonly colonises dunes. Serrated leaves are closely packed on the stems. Inconspicuous male and female flower spikes are separate on the same or on different plants. Flowering possibly also takes place outside the given period. Black 'berries' are warty and covered with a layer of light grey wax. A honey sample from Albertinia was of medium colour, granulated slowly, and had a pleasant fragrant taste. **Morella pilulifera** was noticed to be visited by honeybees in KZN.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Mundulea sericea (FABACEAE) (PAPILIONACEAE)	Cork bush *Kurkbos*	N0 P0	9–2 (10–11)

Remarks

KZN, SZ, northern provinces, ZIM, BOT, NAM. Bushveld and wooded grassland. Very attractive shrub or small tree: corky stem, silver-grey leaves, purple pea flowers. Despite several published records of the cork bush being visited by honeybees, and even being a source of honey, none of these could be authenticated. Over many years bees were never seen on flowers in the bushveld, even when bee colonies were present.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Murraya paniculata** (= *M. exotica*) (RUTACEAE)	Orange jasmine *Lemoenjasmyn*	N1–2 P0–1	9–4 (9–10)

Remarks

India to Australia. Widely grown ornamental shrub with glossy, dark green, compound leaves. Fragrant white flowers in clusters at the end of branches. One main spring flowering, followed by lesser flowering bouts through summer and autumn. Pellets light greyish-cream.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Myoporum tenuifolium** (= *M. montanum*) (MYOPORACEAE)	Manatoka Boobialla	N1–3 P0–2	7–10

Remarks

Australia. Shrub or small tree of coasts and flats. Invasive along WC coasts. Irregular flows. Honey is light-coloured, raisin-scented. Pollen muddy-white (one record). Closely related **M. insulare** and **M. laetum** have thicker, fleshier leaves that are not long-tapering. They are also well-visited by honeybees. Soft black resin around the bases of leaf stalks and on leaf buds of **M. laetum** was seen to be collected as propolis. This species, also called the dotted-leaf manatoka, may be found in gardens in the interior of S. Africa.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Myrtus communis** (MYRTACEAE)	Common myrtle *Gewone mirt*	N0–3 P1–3	10–3

Remarks

Mediterranean. Hardy shrub grown in most parts of S. Africa. Uses: culinary, medicinal, insecticidal, and ornamental in different cultivars. Cream-coloured flowers have a distinct smell of 'Leberwurst' [liver sausage]. Numerous stamens are responsible for the high pollen values at times. Main flowering is in spring. Pollen colour variable: greyish to dirty biscuit to light yellow. Honey from Italian coast.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Nandina domestica** (BERBERIDACEAE)	Japanese bamboo Sacred bamboo *Japanese bamboes*	N1 P1–3	10–12

Remarks

China, Japan. Semi-evergreen shrub with bamboo-like stems and pinnate leaves. Small white flowers and red berries. Pellets biscuit-coloured.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Nerium oleander** (= *N. indicum*) (APOCYNACEAE)	Oleander *Selonsroos*	N0 P0	10–4

Remarks

Mediterranean to China. Familiar ornamental. Entire plant is very poisonous. Weed of Cape mountain rivers. Persistent, unsubstantiated reports of poisonous honey: honeybees do not visit the flowers. There is one publication, however, which states that honeybees collect nectar in Italy.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Nymania capensis (Meliaceae)	Chinese lanterns *Klapperbos*	N P	5–12

Remarks

Arid areas of Little Karoo to Uitenhage; also NC and NAM. Erect woody shrub. Pale to dark pink, bell-shaped flowers. Inflated pink to reddish fruit. Valuable stock forage, particularly for goats.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Oldenburgia grandis (= *O. arbuscula*) (Asteraceae)	Suurberg cushion bush Rabbit's ears *Baster suikerbos* *Suurbergse kussingbos*	N2? P2?	9–1

Remarks

EC. On quartzite outcrops of the Suurberg mountain range. Unusual shrub or small tree with gnarled black stems and large leaves that are white-woolly below. Very large flower head without ray florets. Disc florets whitish, with long-extended styles, vaguely resembling some members of the protea family. Evaluation based on one observation.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Olearia** spp. (Asteraceae)	New Zealand daisy bushes	N1? P1–3	8–3

Remarks

New Zealand; few in Australia. Most tolerate calcareous soils and sea winds. Floriferous hardy shrubs, some with fragrant white daisies, each with about 10–20 white petals. Pollen shades of yellow to ochre. Not well known in S. Africa.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Paranomus bracteolaris (Proteaceae)	Tree sceptre *Bokkeveld poppiesbos*	N0–2? P0–1?	8–10

Remarks

Bokkeveld and Olifants River mountains. Much-branched shrub with a single, short, stout trunk. Inflorescence purplish-pink, lightly scented.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. reflexus	Van Staden's sceptre	N0–2 P0–2	5–9 (6–8)

Remarks

Van Stadens Mountains, EC. Lemon-coloured flower spikes. Florets bend down (reflex) on maturing. Pollen greenish-grey or light brown. Limited garden cultivation as yet.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Parkinsonia aculeata** (Fabaceae) (Caesalpiniaceae)	Jerusalem thorn *Groenhaarboom*	N0–2? P0–2	8–4 (10–12)

Remarks

Tropical America. Large shrub or small thorny tree with one or more greenish-yellow, smooth stems. Common ornamental. Very long, thin, pendulous midribs of leaves act as leaves. Pollen brownish-orange. Naturalised in many provinces, and partly invasive in some localities.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. africana	Wild green-hair tree *Wilde groenhaarboom*	N0–1 P0–1	10–1

Remarks

NC, NAM. Shrub or small spiny tree with a few main stems. In desert areas, often near water courses. 'Leaves' are long, thin midribs of leaves. Beeplant value based on two records.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Parthenocissus quinquefolia** (Vitaceae)	Virginia creeper *Virginiese klimop*	N0–3 P0–4	9–12

Remarks

Eastern USA. Hardy wall creeper with compound leaves, each made up of five leaflets. Several flowering periods, each with two days of pollen collection, but several days of nectar. Light yellow pollen. High pollen value only on one day during a flowering period.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***P. tricuspidata**	Boston ivy Japanese ivy *Japanese klimop*	N0–3 P0–2	9–12

Remarks

Japan, China. Well known creeper with three-lobed leaves, presenting spectacular autumn colours. Long on-and-off flowering period. Pellets light olive.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Pavetta edentula (Rubiaceae)	Gland-leaf tree *Kliertjiesboom*	N3? P1	10–5

Remarks

KZN, SZ, MP. Shrub or small tree of bushveld, usually on rocky hillsides. Leaves have scattered dark dots. Many white flowers in dense heads, sweetly scented, with long-exserted styles. Despite being moth flowers with narrow, relatively long flower tubes, bees seem able to obtain much nectar. Beeplant value based on one SZ record.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. gardeniifolia (= *P. assimilis*)	Common bride's bush *Gewone bruidsbos*	N0–2 P0–2	10–4

Remarks

KZN, northern provinces, ZIM, BOT, NAM. Shrub or small tree of open or rocky woodland. White to cream-coloured flowers with long-extended styles, in clusters, sweetly scented. Although being moth flowers, the relatively short 10 mm flower tube enables bees to reach the nectar. Pellets light yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Petrea volubilis** (= *P. racemosa*) (Verbenaceae)	Purple wreath *Petrebos* *Perskransie*	N2–3 P0–1	8–6 (8–9) (11–1) (2–4)

Remarks

Mexico to Brazil. Hardy semi-climber. Two or three flowerings per season, the main period being September, when it is covered in sprays of violet-blue flowers. Small yellowish pellets.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Phaeoptilum spinosum (Nyctaginaceae)	Wing-fruited thorn *Vlerk doringbos* *Bros doringbos*	N? P?	8–1 (11–12)

Remarks

NC, NW. Woody shrub, with twigs hardening into spines. Few leaves, deciduous. Small white to yellow flowers are visited by bees, but value unknown. The 4-winged pink or cream-coloured fruit are characteristic, these are grazed.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Philadelphus coronarius** (Hydrangeaceae) (Saxifragaceae)	Mock orange *Boere jasmyn*	N0–1 P0–1	10–12

Remarks

Southeastern Europe to Asia Minor. Deciduous shrub found in many gardens in the interior. Cold- and drought-hardy. Flowers with four white roundish petals and numerous stamens. Strong orange blossom fragrance at times, but this may be absent for unknown reasons. Flowers are variously attractive to bees, but are mostly without them. Pollen yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Phormium tenax** (Xanthorrhoeaceae) (Agavaceae)	New Zealand flax *Nieu-Seeland vlas*	N0–3 P0–2	10–1

Remarks

New Zealand, where the honey is dark and of poor flavour. Bees insert tongues between overlapping petals to reach the nectar. Pollen dark orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Photinia** spp. (Rosaceae)	Chinese hawthorn Photinia	N1–3 P0–3	7–10
P. glabra			
P. serratifolia (= *P. serrulata*)			
P. villosa			

Remarks

China, Japan. Large shrubs or small trees with shiny red and green leaves. Very frost-hardy and somewhat drought-hardy. Generally encountered in Highveld gardens. Clusters of small, white, rosaceous flowers. Pellets cream-coloured to light lemon to light yellow to white. Highest beeplant values were obtained from **P. glabra**. Autumn flowering may occur occasionally.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Plectroniella armata (= *Vangueria armata*) (Rubiaceae)	False turkey-berry *Basterbokdrol*	N2 P1	11–5

Remarks

KZN, SZ, MP, LIM. Large shrub or small tree in bushveld and thickets, also rocky sites and Mopane woodland. Branchlets with paired, straight thorns. Small, white, scented flowers with short tubes, i.e. bees can reach the nectar. Evaluation based on one SZ record.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Pluchea dioscoridis (Asteraceae)	Vimba	N2? P2?	1–12 (6–8)

Remarks

LIM, MP, SZ, KZN? Woody shrub with thin stems. Sandy banks of escarpment and Lowveld rivers. Leaves have a strong unpleasant smell. Clusters of few flower heads, light purple, extended styles.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Podranea ricasoliana (Bignoniaceae)	Port St Johns creeper	N0–2 P0–1	1–12 (11–5)

Remarks

EC, KZN. Robust semi-climber of forest margins. Popular garden plant. In the wild, flowers may be present any time of the year. In cultivation in the interior, peak flowering is in autumn. Bunches of short, trumpet-shaped, pink flowers. Bee attractivity generally low. The closely related Zimbabwe creeper, **P. brycei**, is also attended by bees at times, and probably has the same beeplant value.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Polygonum aubertii* (= **Fallopia aubertii) (POLYGONACEAE)	Cascade creeper Silver lace vine *Kantblomranker*	N1–2 P1	12–4

Remarks

Western China. Profusion of small, cream-coloured flowers. Long-flowering. Pellets ivory, dirty white or light lemon.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Portulacaria afra (DIDIEREACEAE) (PORTULACACEAE)	Elephant's food *Spekboom*	N0–2 P0–1	9–3 (11–1)

Remarks

Little Karoo, EC, KZN, SZ, MP, LIM. Succulent shrub or small tree. Karooid and bushveld vegetation. Dominant in parts of the EC, the so-called 'spekboom veld'. Clusters of pink florets at the end of branches. Surplus honey has been reported from the EC and Little Karoo. Honey characteristics: low viscosity, dark brown colour, singular medicinal aroma, and a very slight non-persistent peppery taste. At Uitenhage a good set of flowers developed on all plants following showers of ± 30 mm rain or more. Some flowering was recorded every year during an 11-year span, but the intensity varied markedly from year to year. In only 4 years was some surplus honey recorded.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Protea spp. (PROTEACEAE)	Protea	N0–3 P0–2	1–12 (4–9)

Remarks

Mainly southwestern Cape, SC and EC, with a few species extending into eastern S. Africa and ZIM. Mixed flows from southwestern Cape, often with ericas. Honey: light golden to dark, slow-granulating. Nectar is diluted by rain, and this may lead to fermentation. Stiff styles restrict movement of bees and may even trap them. The secretion of dilute nectar may be so prolific that it overflows from the florets and collects in the base of the flower head. Generally little is known about proteas as sources of honey. Protea-type pollen figured prominently in bee bread at Cape Point during November, also in pollen traps at Jonkershoek during June–July. Trapped pellets had variable colours: light yellowish-lemon, light greyish-green, yellowish-mustard, light yellow. Collection of protea pollen by honeybees, and their possible role in pollination, has hardly been studied.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. aurea	Shuttlecock protea	N P?	1–12 (1–6)

Remarks

Riviersonderend to Outeniqua Mountains. Foragers observed in young as well as old flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. burchellii (= *P. pulchra*)	Burchell's protea *Vals suikerkan*	N2–3 P?	6–8

Remarks

Piketberg to Hottentots Holland foothills. Contributes to surplus in Ceres area. With **P. repens** and **P. nitida** considered the better nectar sources for honeybees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. caffra	Highveld protea *Transvaal suikerbos*	N0–2 HD0–1 P0–2	10–3

Remarks

EC, KZN, SZ, northern provinces, ZIM. Rocky grassland. Honey: dark colour (103 mm Pfund), strong aroma and taste, low density, slow granulation. Surplus honey once every 4–5 years. No flowering in 2 out of 12 years, mainly due to drought the previous season. Cool nights during flowering increase nectar secretion. Nectar foraging starts late afternoon, continuing in moonlight (two reports). Pollen: shades of grey, good brood stimulant. One report of active honeydew collection from a scale insect **Marsipococcus proteae**.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. compacta	Bot River protea Compacta	N2–3 P?	2–10 (4–6)

Remarks

Bredasdorp to Betty's Bay coastal flats and slopes. Extensive plantings: cut flower trade. Reportedly a source of light-coloured honey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. compacta × magnifica	'Lady Di'	N3? P2	5–9 (6–7)

Remarks

Commercial hybrid for fresh floral fynbos trade. Pollen lemon-coloured.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. cynaroides	King protea	N1–2 P1?	1–12 (6–11)?

Remarks

In mountainous fynbos vegetation. Largest flower head of all proteas. Important species in commercial trade. South Africa's national flower.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. eximia	Broad-leaved protea *Breëblaar suikerbos*	N2? P?	7–12 (8–10)

Remarks

Mountains of Little Karoo to EC. Reddish-flowered sugarbush mostly of mountain slopes. Dense stands in many places.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. gaguedi	African savanna sugarbush *Transvaal wit protea*	N2 P?	8–2 (11–1)

Remarks

KZN, SZ, northern provinces, ZIM. Rocky grassland to open sandy woodland. Small gnarled shrub. Solitary white flower heads with a strong sweet smell at times.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. humiflora	Patent-leaf protea	N2? P2?	7–9

Remarks

Du Toitskloof to Gamkasberg. One of the so-called 'rodent sugarbushes', which have brownish flower heads at ground level, and a yeasty smell in some species.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. mundii	Forest protea	N1? P?	1–9 (2–4)

Remarks

Southeastern Cape. Small tree. Moist slopes and forest margins of mountains. Bees force their way into the flower head.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. neriifolia	Narrowleaf protea *Baardsuikerbos*	N0–2 P?	2–11

Remarks

Jonkershoek to Port Elizabeth on sandy, low, southern slopes. Bees shun flower heads with ants. Flowering peak in the west is in autumn, in the east it is spring.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. nitida (= *P. arborea*)	Wagon tree protea *Waboom*	N2–3 P?	1–12 (5–8)

Remarks

Southwestern Cape to EC. Locally abundant tree, from sea to mountains. Light lemon-coloured flower heads. Honey is light-coloured, crystallising to fine white granules.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. obtusifolia	Limestone protea Bredasdorp protea	N2? P2?	4–9 (6–8)

Remarks

Southwestern Cape coastal flats. Grows on limestone in dense stands. Most probably contributes to surplus honey. Pellets biscuit-coloured.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. pruinosa	Frosted protea	N? P2?	1–3

Remarks

Swartberg of Little Karoo at high altitudes. Rare plant. White woolly flowers at ground level. Long flower bud development.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. pudens	Bashful protea *Skaamgesig*	N1? P?	5–9 (7–8)

Remarks

Elim flats. Endangered. Bees enter flower heads, which are mostly on the ground, with difficulty.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. punctata	Water sugar bush	N2? P0?	12–6 (3–4)

Remarks

Cederberg to Kouga Mountains, on dry rocky slopes. Pink bowl-shaped flower heads. Common name probably refers to a watery nectar.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. repens (= *P. mellifera*)	Common sugarbush Repens *Gewone suikerbos* *Stroopbos* *Suikerkan*	N0–3 P0–2 PR	1–12 (5–10) (9–3)

Remarks

Main flowering times as for southwestern Cape, and for southeastern Cape and EC respectively. Prolific nectar yielder, but honey characteristics uncertain. Note from a Mrs Jackson, SC, 1924-02-15: 'Blooms in April or May; a white honey'. Pollen biscuit- or cream-coloured; also 'yellowish-green'. High crude protein of 33.5% (Köttner 1991). Source of propolis. This protea has been used as a so-called 'indicator species' for the Cape honeybee, i.e. its distribution matches that of the bee.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. roupelliae	Silver sugarbush	N2? P1?	1–12 (2–4)

Remarks

EC, KZN, L, FS, SZ, MP, G, LIM. Large shrub or small tree of open woodland. The bracts ('petals') are pink to reddish-brown and spoon-shaped, with silky silver hairs. Only a single beeplant record.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. rubropilosa	Transvaal mountain sugarbush *Transvaal bergprotea*	N0–2 P?	(8–12) (10)

Remarks

Wolkberg to Lydenburg in mountain mistbelt. Showy flower head with pink to reddish-brown, hairy bracts to which the species name refers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. subvestita	Lip-flower protea	N2? P1?	12–6 (1–3)

Remarks

EC, KZN, L, MP. Large shrub or small tree of highland sourveld. Cream-coloured flower bracts with hairy margins, the tips folding backwards, forming a lip. Beeplant value based on one record.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Pseudarthria hookeri (FABACEAE) (PAPILIONACEAE)	Velvet bean *Fluweelboontjie*	N2? P?	9–6 (1–3)

Remarks

EC, KZN, SZ, MP, LIM, ZIM. Deciduous shrub, resprouting from woody rootstock. Stems and trifoliolate leaves are velvety. Sandy soils of bushveld, grassland and forest margins. Small pink pea flowers crowded on straight stalks. Evaluation based on one record.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Psidium cattleianum** (= *P. littorale* var. *longipes*) (MYRTACEAE)	Strawberry guava Cherry guava *Aarbei-koejawel*	N1? P2	10–12

Remarks

Brazil. Large shrub or small guava tree with small, purplish-red, round fruit. Cultivated for its edible fruit or as an ornamental. Naturalised and invasive along KZN coastal areas. Hardier than the common guava.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Psoralea pinnata (FABACEAE) (PAPILIONACEAE)	Blue pea Fountain bush *Bloukeur* *Fonteinbos*	N2–4 P0–2?	9–4 (10–12)

Remarks

Cape Peninsula to Kogelberg. The same or a closely related species is found from the EC to MP. Large shrub of moist localities. White and blue pea flowers. Surplus honey from escapes in New Zealand and Western Australia: 'Extra light amber; slow-granulating'.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. wilmsii (= **Otholobium wilmsii**)	Grassland blue pea	N2? P?	7–3 (11–2)?

Remarks

KZN, SZ, MP, LIM. Higher-lying grassland, forest margins and rocky slopes. Woody shrub with trifoliolate leaves. Small white and blue pea flowers. Beeplant value based on one observation.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Psychotria capensis (Rubiaceae)	Black bird-berry *Swart voëlbessie*	N3? P1	6–3

Remarks

SC, EC, KZN, SZ, MP, LIM, ZIM. Shrub or small tree of forests, scrub or dune bush. Yellow flowers with densely hairy throats that prevent rain water from entering. Pollen light brown. Earlier flowering in its southern range. Birds eat the red or black round fruit.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Pterolobium stellatum (Fabaceae) (Caesalpiniaceae)	Redwing *Rooivlerk*	N3? P2	12–6 (4–6)

Remarks

MP, LIM, ZIM. Thorny scrambling shrub of arid bushveld. Prickles even on their acacia-like leaves. Many cream-coloured florets on erect, cylindrical spikes; very attractive to bees. Pellets orange. Conspicuous fruit: a red wing attached to a red fruit.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Pycnostachys reticulata (Lamiaceae)	Hedgehog flower Slender pycnostachys	N2? P1?	11–6

Remarks

EC, KZN, SZ, northern provinces, ZIM. Robust erect herb of moist grassland. Inflorescence upright, brownish, somewhat spiny, with mauve flowers that open in whorls. Evaluation based on a single record. There is also one report of bees on **P. urticifolia**, or blue boys. The inflorescence is similar, but the flowers have a gentian blue colour.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Pyracantha angustifolia** (Rosaceae)	Orange firethorn Yellow firethorn *Oranje vuurdoring* *Geel vuurdoring*	N0–2 P0–2	10–12

Remarks

Western China. Very hardy, thorny shrub. Ornamental and security hedge. Berry masses in autumn. Invades highland grassland. Rarely attractive to honeybees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***P. coccinea**	Red firethorn *Rooi vuurdoring*	N0–3 P0–1	9–11

Remarks

Eurasia. One of the most popular shrubs of the past in S. Africa. Valued for its display of scarlet berries in autumn. The nectar has the same unpleasant smell of the flowers. Pollen light yellow to lemon-coloured. The high nectar value is rarely attained. The closely related ***P. crenulata** invades high altitude grassland. Its beeplant value is unknown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Pyrostegia venusta** (= *P. ignea*) (BIGNONIACEAE)	Golden shower *Goue reën*	N0–2 P0–1	12–8 (3–4)

Remarks

South America. Popular, widely grown creeper. Bees can only enter the first half of the flower tube. They also obtain nectar by using slits in the damaged corolla, or they lick exposed flower bases. Pellets orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Rhamnus prinoides (RHAMNACEAE)	Dogwood *Blinkblaar*	N0–2 P0–1	8–6 (10–12)

Remarks

SC to KZN and northwards to tropical Africa. Shrub or small tree in scrub forest or grassland. Small yellowish-green flowers on slender stalks. Flower buds, open flowers and fruit may be found on the same branch. Long drawn-out flowering with relatively few flowers at any given time. Active foraging by bees is rarely seen – as a beeplant it is generally overrated.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Rhigozum obovatum (BIGNONIACEAE)	Karoo rhigozum Karoo gold *Geel granaat*	N1–3 P1–2	1–12 (10–1)

Remarks

EC to Little Karoo and northwards into Great Karoo, also southern NAM. Valley Bushveld and karooid scrub. Rigid, compact shrub or small tree. Yellow flowers are produced 2 or 3 times per year after good rains, when flowering starts within days. Pollen light yellow. Three reports of honey, but no other information. Valuable grazing plant.

Botanical Name	Common Name	Beeplant Value	Flowering Time
R. trichotomum	Three thorn rhigozum *Driedoring granaat*	N1–2 P1–3	8–5 (9–11)

Remarks

Karoo, FS, NC, NAM, BOT. Serious invader of Karoo. Forms dense thickets in overgrazed veld. Woody shrub with stems branching in threes. Flowering after at least 25 mm rainfall. White to salmon-coloured, funnel-shaped flowers. Colonies build up on the orange pollen. The short thorn rhigozum, **R. brevispinosum**, is also a beeplant of unknown value.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Rhoicissus tomentosa (VITACEAE)	Forest grape *Bosdruif*	N2? P0–1	10–2

Remarks

Southwestern Cape to EC and northwards to tropical Africa. Woody climber in kloofs, forests and riverine bush. Pellets lemon-coloured. Pollen crude protein 21.7% (Köttner 1991). The baboon grape, **R. digitata**, has been recorded as a source of nectar.

Botanical Name	Common Name	Beeplant Value	Flowering Time
R. tridentata	Bushman's grape *Boesmansdruif*	N0–2 P0–1	11–4 (1–2)

Remarks

Eastern half of S. Africa, ZIM. Strong climber, sometimes a shrub. Various habitats. Three leaflets per leaf. Flowering period may last up to a fortnight, with three separate stages of only 2–3 days each. Foraging all day during the short flowering stages.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Rosmarinus officinalis** (LAMIACEAE)	Rosemary *Roosmaryn*	N0–4 P0–2	1–12 (9–10) (4–5)

Remarks

Mediterranean. Popular aromatic, ornamental shrub with pale blue flowers. Also a minor commercial and garden crop. Two flowering peaks. Rarely without bees. Pellets dirty white. Source of very light honey in France and Spain.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Rubus apetalus (ROSACEAE)	Sombre bramble	N2? P2?	1–12 (4–6)?

Remarks

EC, KZN, SZ, MP, LIM, ZIM. Forest margins, streamsides and scrub at higher altitudes. Scattered hooked thorns on stems. Flowers without petals, sepals light green, flower centre pinkish to mauve. Edible black fruit. Evaluation based on one record.

Botanical Name	Common Name	Beeplant Value	Flowering Time
R. rigidus	Wild bramble *Wilde braam*	N2 P2?	9–2 (10–11)

Remarks

Wide distribution in moister regions of southern Africa, from the coast to high mountains. Woodland, forest margins and scrub. Recurved thorns. Flowers pink, reddish stamens. Black edible fruit.

Botanical Name	Common Name	Beeplant Value	Flowering Time
R. rosifolius	Wild raspberry *Wilde framboos*	N2 P3	5–7

Remarks

KZN, SZ, MP. Forest undergrowth and forest margins, from coast to KZN Midlands. Few small thorns. Five long, thin sepals are distinctive. The edible red raspberry is rather tart.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Ruspolia hypocrateriformis (Acanthaceae)	Red ruspolia	N0–2 P0	12–6

Remarks

KZN, MP, LIM. Scrambling shrub on dry wooded hillsides. Red flowers with long, thin corolla tubes, i.e. not bee flowers. Honeybees rob nectar at the base of the flower, between the corolla tube and the short calyx tube.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Sambucus nigra** (Caprifoliaceae)	European elderberry *Europese vlier*	N0–1 P0–2	9–5 (10–12)

Remarks

Europe. Large ornamental shrub, sometimes with variegated leaves. Small white flowers in large flattened clusters, which are not often visited by bees. Pellets light yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Sarcostemma viminale (Apocynaceae)	Caustic vine *Melktou*	N1–2 P0	1–12 (12–4)

Remarks

Southwestern Cape, Little Karoo, northwards and eastwards to the rest of southern Africa. Widespread in different habitats, but nowhere plentiful. Vigorous climber with succulent stems. No leaves. Milky latex. Sweetly scented flowers in clusters on the stem nodes. Irregular flowering, i.e. after heavy rain. Contributes a 'good quality honey' to the flow in the EC.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Scutia myrtina (Rhamnaceae)	Cat thorn *Drogie*	N1–3 P0–1	9–4 (12–2)

Remarks

Southwestern Cape eastwards to KZN, SZ, MP, LIM, ZIM. Coastal forest, scrub forest and forest margins. Scrambling shrub with characteristic pairs of climber thorns. Small, insignificant, yellowish-green flowers together in mini clusters. Major honey source in the EC in some years. Strong nectar flows only after substantial rainfall. Small honey yields recorded in KZN. Honey: dark golden, strong flavour reminiscent of caramel and toffee, slow-granulating. Pollen collection rarely observed.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Senecio tamoides (Asteraceae)	Canary creeper *Kanarieranker*	N1 P1–3	10–7 (3–5)

Remarks

EC and further north on forest margins. Vigorous climber over other vegetation. Nectar has an unpleasant, sweaty smell. Pellets light orange-brown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Smodingium argutum (Anacardiaceae)	African poison oak Rainbow leaf *Pynbos*	N2? P1?	11–5 (2–4)

Remarks

Transkei [EC], KZN. Deciduous shrub or small tree with karee-like trifoliolate leaves, which turn red in autumn. Used as an ornamental for its colourful leaves and the red, papery fruit. Small cream-coloured flowers in drooping sprays. Beeplant value based on one observation. Skin contact with the plant results in painful blisters in some people.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Solanecio angulatus (Asteraceae)	Solanecio	N2? P2?	4–9

Remarks

KZN, LIM and further north to East Africa. Only one species in S. Africa, not common. Semi-succulent scrambling shrub of coastal and dry forest. Leaves divided or lobed. Pale yellow flower heads without ray florets, in a loose, roundish to erect inflorescence, which is said to be 'foul smelling'.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Sparrmannia africana (Malvaceae) (Tiliaceae)	Cape hollyhock *Kaapse stokroos*	N2 P2	6–11 (7–9)

Remarks

SC, EC. Large shrub or small tree of forest margins or mountain ravines, along mountain streams. White drooping flowers with numerous yellow and purplish stamens.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. ricinocarpa	Sparrmannia bush	N1 P2	11–7 (1–3)

Remarks

EC, KZN, L, eastern FS, SZ, MP, LIM, ZIM. Scrambling shrub of forest margins and clearings, also montane grasslands. White petals bent backwards. Tuft of yellow stamens. Fruit is a spiny capsule that sticks to clothing or animal fur.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Spartium junceum** (Fabaceae) (Papilionaceae)	Spanish broom *Spaanse brem* *Spaanse besem*	N0 P0	8–5? (9–11)

Remarks

Hardy, almost leafless shrub with many smooth upright stems. Yellow, scented pea flowers. Weed in southwestern Cape and SC. Does not attract honeybees. Often confused with true broom **Cytisus**.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Strelitzia reginae (Strelitziaceae)	Crane flower *Kraanvoëlblom*	N0–2 P0–2	1–10 (4–8)

Remarks

EC. Widely cultivated iconic ornamental. Nectar of this bird-pollinated flower is only reached with difficulty by bees. Pellets large and light brownish-grey. Bee visits for nectar and pollen are very rare on **S. albens** and **S. nicolai**, which grow on southern and eastern coasts.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Strychnos spp. (Strychnaceae) (Loganiaceae)	Monkey orange *Klapper*	N0–1 P0–1	9–2
S. cocculoides			
S. madagascariensis			
S. pungens			
S. spinosa			

Remarks

EC, KZN, SZ, northern provinces, ZIM, BOT, NAM. Large shrubs or small trees, some with spines. Fruit is large, round, with woody shell. Small, greenish-yellow flowers. Nectar gathering observed on rare occasions, the highest activity in cloudy, mild weather on **S. pungens**. September note from Zululand: 'Considerable bee activity at 06:00 on **S**. **spinosa**'. Pollen gathering only seen once, during late afternoon. Honeydew collected from mealy bugs on **S. madagascariensis**.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Symphoricarpos albus** (Caprifoliaceae)	Snowberry *Sneeubessie*	N3? P0–1	1–4

Remarks

North America. Hardy, deciduous shrub up to 2 m high and wide. It can tolerate urban conditions. A candidate beeplant for Highveld conditions. Tiny bell-shaped flowers in terminal clusters; pink outside, white inside. Berries and flowers may be found on the same shrub, i.e. more than one flowering period may occur. A light-coloured, mild, slow-granulating honey in Canada and the USA. Showy white berries in autumn and winter. The given flowering time was recorded in Bethal, MP.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Syzygium jambos** (= *Eugenia jambos*) (Myrtaceae)	Rose apple Jambos *Roosappel* *Jamboes*	N1–3 P0–2	8–3 (10–12)

Remarks

Southeastern Asia. Large shrub or small tree. Grown for its light yellow, egg-shaped fruit with rose aroma. Uncommon. Stiff stamens of newly opened flowers restrict bees' movements. Pollen light-coloured.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***S. paniculatum** (= *E. myrtifolia*)	Brush cherry *Australiese waterbessie*	N0–3 P0–1	1–12 (10–2)

Remarks

Eastern Australia. Semi-hardy large shrub or small tree that is widely grown. Red, edible, ornamental fruit. Different flowering peaks. At times does not attract bees, for no obvious reason. Pellets light greenish-grey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Tamarix** spp. (TAMARICACEAE)	Tamarisk *Vereboom*	N1–3 P0–3	9–3
***T. aphylla**			
***T. chinensis** (= *T. pentandra*)			
***T. gallica**			
***T. hispida**			

Remarks

Eurasia. Large shrubs or small trees. They are cold- and drought-hardy, and naturally found in dry river beds, often in saline soils. They develop a canopy of drooping branchlets or 'needles', which are covered by minute, salt-secreting leaves. As ornamentals, tamarisks are prized for their profusion of very small, pink flowers on long slender 'catkins'. Reported honey source in Little Karoo. Tamarisk honeys in Arizona have a strong flavour and a distinctive yellowish-green colour. Pollen light yellow to cream-coloured. No beeplant information could be found on ***T. ramosissima**, which, together with ***T. chinensis**, is invasive in the drier interior of S. Africa.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Tarchonanthus camphoratus (ASTERACEAE)	Camphor bush *Gewone vaalbos*	N0–3 P0–3	1–12 (3–5)

Remarks

Southern Africa, in a variety of habitats, mostly with sandy soils. Shrub or small tree with a greenish-grey appearance. Leaves have a camphor smell. Bee attractivity very variable, for as yet unknown reasons. Separate male and female plants, both of which provide nectar. Supplies wild bee colonies with winter stores. Occasional small honey surplus. Honey in Namibia: light greenish-yellow; mild but tart taste. It is the main pollen source in autumn in the veld where it occurs. Pellets in shades of yellow. One observation from NW: bees active for half an hour only during the forenoon.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Tecomaria capensis (= *Tecoma capensis*) (BIGNONIACEAE)	Cape honeysuckle *Kaapse kanferfoelie*	N0–2 P1–3	1–12 (12–1) (3–4)

Remarks

Eastern S. Africa and further north. Semi-climber. Widely-planted ornamental. Bird flowers: orange-red colour, narrow curved tube, much dilute nectar. Bees can enter flowers about halfway. Pellets light brownish-yellow or orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Tecoma stans** (Bignoniaceae)	Yellow bells *Geel klokkies*	N0–2 P0	1–12 (9–10) (12–1) (3–4)

Remarks

South and Central America. Semi-hardy ornamental shrub or small tree. Common in S. Africa. Different flowering peaks. Declared weed. Invasive in the northern provinces and KZN. ***Tecoma nyassae** from tropical Africa is a rare ornamental in S. Africa. It has a long flowering period and is visited by honeybees for nectar.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Tetradenia riparia (= *Iboza riparia*) (Lamiaceae)	Misty plume bush *Gemmerbos*	N2 P0–2	5–9 (6–8)

Remarks

KZN, SZ, MP, LIM. Wooded hillsides in frost-free areas. Indigenous shrub that has become a well-liked garden subject. The plant is aromatic and hairy. Very floriferous, becoming covered with small mauve flowers. Separate male and female plants, the latter being showier.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Tetrapanax papyriferus** (= *Fatsia papyrifera*) (Araliaceae)	Rice-paper plant Fatsia	N0–1 P0–2	3–5

Remarks

Taiwan. Evergreen shrub or small tree for mild climates. An ideal specimen for seaside gardens. Very large, fan-like leaves with 7–9 lobes, shiny green above, felty underneath. The cream-coloured, fluffy flowers are held in large, loose clusters. Pollen light grey to ivory.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Thevetia peruviana* (= **Cascabela thevetia) (Apocynaceae)	Yellow oleander *Geel oleander*	N0–1 P0	1–12 (10–2)?

Remarks

Mexico, West Indies. Invasive in KZN and a few localities in LIM. Densely leaved shrub or small tree. Garden and street ornamental. Poisonous. Fragrant, yellow trumpet flowers. Bees collect nectar from the flower base after the corolla has dropped, or on the fallen flowers themselves. Rarely do bees try to obtain nectar from the flower front, possibly when the nectar flow is strong.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Thunbergia alata (Acanthaceae)	Black-eyed susan *Swartoognooi*	N0–1 P0	1–12 (12–3)

Remarks

EC, KZN, SZ, MP, ZIM. Creeper on forest margins. Popular garden plant worldwide. Yellow to orange flower with a blackish-purple tube.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***T. grandiflora**	Sky vine *Blou trompetter*	N0–2 P0–1	1–12 (1–4)

Remarks

India. Semi-hardy, vigorous climber. Large lilac to light blue flowers. Dilute nectar. Pollen is collected in the top part of the flower tube while the bees are in an upside-down position. Pellets light biscuit.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Tinnea barbata (Lamiaceae)	Blue tinnea	N2? P1?	11–3

Remarks

MP, SZ. Lanky shrub in understorey or margin of montane forest. Small showy flowers: deep blue to mauve petals. Four filaments, two of which have large yellow anthers in the flower throat. These anthers, as well as the dark lines on the lower lip, act as nectar guides.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Tricalysia lanceolata (Rubiaceae)	Jackal coffee *Jakkalskoffie*	N2? P1?	7–12

Remarks

Transkei [EC], KZN, SZ, northern provinces. Shrub or small tree in forest, bushveld ravines and streambanks. Flowers: small, white, sweetly scented, in clusters. Plant value is based on one record. No reference to the common names could be found; possibly used in the sense of 'spurious'.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Ulex europaeus** (Fabaceae) (Papilionaceae)	Prickly gorse Furze *Steekbrem* *Gaspeldoring*	N0–2? P2–3	1–12 (8–10) (3–5)

Remarks

Western Europe. Thorny, yellow-flowered shrub for hedges or dry slopes. Now a declared weed, invading forestry areas of Hogsback and KZN Drakensberg. Also a weed in New Zealand and Australia, where it has build-up value. Pollen dull yellow to dark tan.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Umtiza listeriana (Fabaceae) (Caesalpiniaceae)	Umtiza	N2? P2?	3–7

Remarks

EC. Shrub or small tree in coastal kloofs. Branchlets modified into strong spines. Inflorescence a loose panicle of shallow, open, cream-coloured flowers with five small petals and ten stamens. The flowers are borne on top of the tree and are conspicuous in bloom. Single anonymous beeplant record.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Vangueria spp. (RUBIACEAE)	Medlar *Mispel*	N0–2 P0–1	9–2 (10–11)
V. esculenta			
V. infausta			
V. parvifolia			
V. randii			

Remarks

EC, KZN, SZ, northern provinces, ZIM, BOT, NAM. Large shrubs or small trees. From coastal scrub to interior bushveld and wooded grassland. Small, light yellowish-green flowers with hairy throats, in clusters, sometimes with a sweet scent. Flowers rarely attract bees, possibly because of low nectar sugar, such as the 10–17% in **V. infausta**, combined with the availability of superior bee flowers during the general spring flow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Vernonia spp. (ASTERACEAE)	See below	See below	See below

Remarks

The genus **Vernonia** has been revised in recent years and the species are now classified under several new genera. In this book the genus name **Vernonia** has been retained on purpose, because this is the name under which beekeepers will find the different species in the various recommended identification guides. The new names have nevertheless been included in bold, between brackets. (See also other species under SMALL SHRUBS).

Botanical Name	Common Name	Beeplant Value	Flowering Time
V. adoensis (= **Baccharoides adoensis**)	Sandpaper vernonia	N2 P2	1–12 (3–5)

Remarks

KZN, SZ, MP, LIM and northwards. Stout shrub of grassy woodland, or scrub vegetation. Leaves with rough surfaces. Flower heads white, except for the open florets which are mauve. Pellets cream-coloured.

Botanical Name	Common Name	Beeplant Value	Flowering Time
V. amygdalina (= **Gymnanthemum amygdalinum**)	River vernonia	N3–4 P0–3	5–10

Remarks

KZN, MP, LIM, ZIM, BOT. Shrub or small tree of riverine thicket, and grassland along streams. Flower heads small, thistle-like, grouped together in large loose clusters. Florets cream-coloured, touched with mauve; sweetly-scented during evenings.

Botanical Name	Common Name	Beeplant Value	Flowering Time
V. angulifolia (= **Distephanus angulifolia**)	Trailing vernonia	N2? P2?	5–8

Remarks

EC, KZN. Scrambling shrub or climber on forest margins. Small pink flower heads massed in branched inflorescences; sweetly scented. Very bee attractive – no further information.

Botanical Name	Common Name	Beeplant Value	Flowering Time
V. aurantiaca (= **D. divaricatus**)	Golden vernonia	N2 P1?	4–8

Remarks

KZN, MP. Uncommon, robust semi-climber. At low altitudes in thickets, riverine scrub, rocky woodland and sand forests. The bright orange flower colour is unusual in vernonias. Florets have long-extended styles. Sweetly scented during early morning when bees visit it. Short flowering.

Botanical Name	Common Name	Beeplant Value	Flowering Time
V. colorata (= **Gymnanthemum coloratum**)	Lowveld vernonia	N2–4 P1–2	3–9 (4–6)

Remarks

KZN to LIM to ZIM and further north. Large shrub or small tree at low altitudes: mixed woodland and riverine bush, also along base of escarpment. Flower heads mauve to white, in large round clusters on the ends of branches, sweetly scented. Nectar deep yellow, with strong chrysanthemum smell. Pollen greyish. Excellent beeplant, but nowhere found in significant numbers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
V. myriantha (= *V. ampla*) (= **G. myrianthum**)	Forest vernonia Eared vernonia	N3 P0–2	4–11

Remarks

KZN, SZ, MP, LIM and further north. Large shrub of high rainfall woodland, forest margins and riverine bush. Base of leaf stalk often with two small green ‘ears’. Inflorescence large, dome-shaped, with many mauve flower heads.

Botanical Name	Common Name	Beeplant Value	Flowering Time
V. tigna (= *V. neocorymbosa*) (= **G. corymbosum**)	Mountain vernonia *Swart teebos*	N3? P1	12–5

Remarks

EC, KZN, SZ, MP, LIM. Scrub and forest margins of coast to Midlands in EC and KZN, but in mountain grassland and rocky hillsides further north. Leaves wedge-shaped, coarsely toothed, distinctly bi-coloured. Small flower heads together in relatively small clusters, mauve to violet, fading to white.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Viburnum** spp. (ADOXACEAE)	Viburnum Snowball	N0–3 P0–2	5–11 (8–10)
V. carlesii	Korean viburnum		
V. fragrans	Fragrant viburnum		
V. odoratissimum	Sweet viburnum		
V. opulus	Snowball		
V. suspensum	Warty viburnum		
V. tinus	Laurustinus		
(Names in italics above are unresolved names)			

Remarks

Eurasia, North America. Generally grown in cold, moist regions of S. Africa, i.e. Highveld gardens. Hardy shrubs with flat or spherical flower heads, which often are delightfully fragrant. Bees pay no attention to the showy, white 'ray florets', and only visit the fertile flowers in the middle of the flower head. Pollen-dusted nectar foragers may totally ignore the pollen. Pellets light yellow to light creamy-grey to slate grey. The darker colours are probably due to air pollution.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Vitex** spp. (VITACEAE) (LAMIACEAE)	Vitex Fingerleaf	N0–3 P0–2	10–4 (3–4)
V. agnus-castus	Chaste tree		
V. negundo	Chinese fingerleaf		
V. trifolia	Three-finger vitex		

Remarks

Many species in tropical to temperate regions of the world. Compound 'hand-shaped' leaves with five leaflets. Terminal inflorescences crowded with small, tubular, fragrant flowers in mostly blue to purple colours. Attractive to honeybees almost without exception. **Vitex negundo** was formerly strongly promoted as an exotic beeplant in the USA. Its pollen loads were described as 'light olive brown'.

Botanical Name	Common Name	Beeplant Value	Flowering Time
V. harveyana	Three-fingerleaf *Drievingerblaar*	N3? P1	9–2 (10–12)

Remarks

KZN, MP. Erect or scrambling shrub of rocky outcrops or thickets. Mostly three, but also five leaflets per digitate leaf. Only a few, scented, mauve flowers on an inflorescence.

Botanical Name	Common Name	Beeplant Value	Flowering Time
V. pooara	Smelly-berry fingerleaf *Poerabessie*	N3? P?	10–1

Remarks

Western bushveld of LIM and NW. Small dense flower heads. Light mauve to purple flowers. The purplish-black fleshy fruit is edible, but unpleasantly scented when ripe.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Wigandia urens** (= *W. caracasana*) (Boraginaceae)	Wigandia	N2? P2?	8–5 (8–10)

Remarks

Mexico to Venezuela. Hardy shrub or small tree with large rough leaves. The purple flowers provide a whitish pollen. A flowering peak may also come about in autumn.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Wisteria sinensis** (Fabaceae) (Papilionaceae)	Wisteria *Bloureën*	N0–2 P0–1	8–9

Remarks

China. Woody climber with sprays of violet-blue, faintly fragrant pea blossoms. Found in many S. African gardens and parks. Flowers are well-attended by carpenter bees, and less so by honeybees, which 'rob' nectar from the side of the flower. They also approach the flowers from the front, forcing their mouthparts between the petals. Low honeybee attractivity of the flowers may be due to one or more of the following reasons: the nectar is difficult to reach physically; carpenter bees may have emptied the flowers; flowering is during spring when other, more profitable flowers are available.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Yucca filamentosa** ***Y. gloriosa** (Asparagaceae)	Adam's needle Spanish dagger *Palm lelie*	N0–2 P0–2	11–3

Remarks

USA. Stems crowded with rosettes of stiff, spine-tipped leaves. Showy tall panicles of white, drooping, bell- to cup-shaped flowers. Bees are rarely observed to attend the flowers, but at times bee activity can be quite noticeable. Nectar collection observed from the front of the hanging flower, as well as from the outside at the flower base, where the petals overlap. Pollen loads are very light-coloured.





Abutilon × hybridum. Chinese lanterns are widely grown as ornamentals, but nowhere are they plentiful.



Aloe arborescens. The krantz aloe is a popular garden subject and a useful source of winter food for bees.



Agave sisalana. An abandoned sisal plantation that can still be of value to bees.



Aloe castanea. Bees do not collect the copious nectar in the open flowers of the cat's tail aloe.



Aloe ferox. The bitter aloe is harvested commercially for its medicinal leaf sap.



Aloe marlothii. The mountain aloe epitomises the northern bushveld in winter.



Antigonon leptopus. It is worthwhile to plant the hardy coral creeper as an ornamental and for bee food.



Bauhinia tomentosa. This is the only indigenous bauhinia with yellow flowers.



Asparagus densiflorus. Generally the wild asparagus species are valuable sources of pollen and nectar.



Berberis sp. Barberries are commendable ornamentals and reliable beeplants.



Buddleja davidii. The butterfly bush is one of several exotic ornamental sagewood species in S. Africa, all of which attract honeybees with their sweet smell, pollen and nectar.



Buddleja salviifolia. The indigenous wild sagewood is found in different habitats. Where plentiful, it contributes honey to the spring flow.



Callistemon citrinus. The crimson bottle brush from Australia is well-frequented by honeybees, just like other members of the genus.



Citharexylum quadrangulare. The fiddle wood is better known for its colourful foliage in late winter, than for its small white flowers in summer.



Clematis brachiata. The sweetly scented flowers of traveller's joy furnish bees with nectar and much pollen from the many stamens.



Cotoneaster salicifolius. All cotoneaster species supply bees with nectar and pollen. A few are excellent beeplants.



Crataegus sp. Hawthorns carry red, miniature 'apples' during autumn. Bees collect some pollen and nectar from the flowers in spring.



Dichrostachys cinerea. The bi-coloured 'lantern flowers' (inflorescences) of the sickle bush are variably attractive to honeybees.



Diospyros lycioides. The blue bush is more easily identified by its fruit than by its unobtrusive flowers.



Dombeya burgessiae. The pink wild pear has gained some acceptance as an ornamental because of its pink flowers and large leaves.



Dovyalis caffra. The Kei apple is grown in gardens as a hedge plant and for its rather acidic fruit.



Duranta repens. The fragrant mauve flowers and bunches of yellow 'berries' make the vanilla bush a much sought-after ornamental.



Ehretia rigida. The intertwined branches give the puzzle bush its common name.



Euclea crispa. The blue guarri and other guarri species supply bees with much nectar from their nondescript flowers.



Euphorbia ledienii. A typical flowering branch of *noors* and tree euphorbias.



Hypericum revolutum. Visitors to the eastern escarpment areas of S. Africa are most likely to encounter curry bushes with flowers.



Grevillea sp. Exotic grevillea shrubs are widely grown in S. Africa. Although they are primarily bird flowers, honeybees secure dilute nectar from most of them.



Grewia caffra and **G. occidentalis**. Raisin bushes are typical constituents of bushveld and savanna flora.



Leptospermum sp. Tea bushes or tea trees can be found in many S. African gardens. They are variably attractive to bees.



Leucadendron argenteum. More observations are needed to establish the value of fynbos cone bushes to bees.



Leucospermum sp. Pincushions do not seem to be particularly good beeplants.



Ligustrum ibota. Honeybees forage eagerly on the nectar of the hedge privet.



Malvaviscus arboreus. Typically the flower petals of the fire dart bush remain furled.



Mimetes hirtus. The genus **Mimetes** is distinguished by its cylindrical inflorescence, which is comprised of an aggregation of flower heads, each of which is supported by a leaf, and contains 3–22 florets.



Montanoa hibiscifolia. The tree daisy is an unusual, large, semi-woody member of the Asteraceae.



Mimosa pudica. The leaves of the sensitive plant fold together on being touched.



Petrea volubilis. The profusion of violet-blue flowers of the purple wreath catches the eye in spring.



Portulacaria afra. For the *spekboom*, abundant flowering with a honey flow only comes about after heavy rain showers.



Protea repens. Although common sugarbush yields nectar abundantly, its honey characteristics remain uncertain.



Psoralea pinnata. Honey from the indigenous blue pea is only known in Western Australia and New Zealand from plants that have escaped from cultivation.



Pyracantha coccinea. The firethorns can be recognised by their berry masses and spiky thorns.



Pyrostegia venusta. The golden shower needs no introduction. Its flowers are of intermediate value to bees.



Senecio tamoides. Canary creepers adorn forest margins with a yellow shower during autumn.



Rhigozum obovatum. The Karoo gold provides valuable grazing to small stock, as well as pollen and much nectar for bees.



Sparrmannia africana. The showy Cape hollyhock is found along mountain streams of the southern Cape.



Tetradenia riparia. The indigenous misty plume bush has gained favour among many gardeners in frost-free localities.



Tarchonanthus camphoratus. *Vaalbos* is the most widely distributed shrub in southern Africa. The shrub in front is a male, the other a female with white, woolly seeds.



Vernonia myriantha. All vernonias appear to be of above-average usefulness to honeybees.



Vitex sp. Exotic as well as indigenous fingerleafs draw bees to their flowers with nectar and some pollen.



5. Small Shrubs

This category has the most beeplant species and includes woody shrublets, ground creepers, succulents and herbs. Plant groups with a large number of species, such as mesembs, ericas, aloes and senecios, count amongst their members some exceptional beeplants, either as single species or as an assemblage of species. In summer rainfall regions in particular, the flowering time and flowering intensity of small shrubs are mainly determined by strong showers, which are followed 4–6 weeks later by blooming plants.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Abelia** × **grandiflora** (Caprifoliaceae)	Glossy abelia *Blink abelia*	N1–3 P0–1	10–4

Remarks

Garden hybrid of Chinese parents. Popular garden plant or hedge plant. Tough and adaptable. Small trumpet-shaped flowers; white tinged with pink. Pellets white, small.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Abrus precatorius (Fabaceae) (Papilionaceae)	Lucky bean creeper Crab's eyes *Paternostertjie*	N2? P?	9–4 (10–12)

Remarks

EC, KZN, northern provinces, BOT, NAM. Robust, perennial, deciduous twiner of grassland and bushveld. Pink to mauve flowers on a short, upright inflorescence. Many small pods clustered together. Red shiny seeds with a black spot. Bee value unexplored.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Abutilon mauritianum (Malvaceae)	Wild abutilon	N1? P1?	(10–4)?

Remarks

KZN to LIM, BOT. Little-known, twiggy shrub covered with hairs. Petals yellow to orange when unfolded. Along river banks and in woodland shade. Nectar and pollen value unknown, but probably low.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Acalypha angustata (Euphorbiaceae)	Brooms-and-brushes *Valsnetel*	N0 P0–2?	10–1

Remarks

Widespread in grasslands of northern provinces; also FS, SZ, KZN. Shrublet with upright stems that are annual. Perennial woody rootstock. Dioecious. Male flowers in dense clusters, yellowish- to reddish-brown. Female flowers on tips of stems, with long red styles.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Acanthosicyos naudinianus (Cucurbitaceae)	Gemsbok cucumber *Gemsbok komkommer*	N1–2? P0–2?	12–2

Remarks

LIM, NW, NC, BOT, NAM. Perennial trailer of sand dunes. Thick taproot is excavated by game for its bitter moisture, which is then also utilised by bees as water. Yellow flowers appear after good summer rains.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Achillea millefolium** (Asteraceae)	Yarrow Milfoil *Duisendblaar* *Nieskruid*	N1–2 P0–3	10–4

Remarks

Eurasia. Hardy, aromatic perennial used as ornamental, in medicine and for pasture. Leaves finely divided into a multitude of leaflets. Pollen orange; bitter medicinal taste. Nectar has sweaty smell.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Acmadenia heterophylla (Rutaceae)	Limestone buchu	N3? P1?	9–4

Remarks

Agulhas to Mossel Bay. Aromatic shrublet of coastal limestone. Major nectar activity seen in April. Light orange pollen. The somewhat similar **A. mundianum**, with the same flowering time and the same habitat, was noticed to be worked by bees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. obtusata	Dune buchu *Duineboegoe*	N3 P	4–11 (9–11)

Remarks

Caledon to Alexandria coastal limestone and dunes. Pink, star-shaped flowers. Closely related genera of the Rutaceae, i.e. **Adenandra**, **Agathosma** and **Diosma** are all called buchu. Their gland-dotted leaves contain essential oils with characteristic smell and taste. More information is needed.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Adenandra fragrans (Rutaceae)	Shepherd's delight *Anysboegoe* *Klipsissie*	N P?	9–4? (9–11)

Remarks

Langeberg Mountains. Hardy, neat ornamental for rocky sites. Fragrant pink flowers borne in abundance.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. uniflora	China flower *Skaap bergboegoe* *Betsie*	N P?	5–11 (8–10)

Remarks

Cape Peninsula to Kleinrivier Mountains. Hardy shrublet. Flowers solitary, up to 30 mm diameter, white with pink nectar guides. Encourage planting in the WC.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. villosa	Shepherd's delight China flower *Baster bergboegoe* *Porseleinblom*	N P?	4–12 (8–11)

Remarks

Southwestern Cape sandstone slopes. Closely leafy, aromatic, 1 m shrub. Flowers white or shades of pink. Bee observations are needed for *bergboegoes*.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Aeonium arboreum** (CRASSULACEAE)	Caesar's crown	N3? P2?	6–9

Remarks

Canary Islands. Herbaceous succulent. Leaf rosettes at the end of upright branches. Small, yellow flowers carried in dense pyramidal spikes. Very attractive to bees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Agathosma spp. (RUTACEAE)	Buchu *Boegoe*	N1–4 P0–1?	1–12 (7–11)
A. cerefolium			
A. ciliaris			
A. collina			
A. glabrata			
A. gonaquensis			
A. mucronulata			
A. ovata			
A. peglerae			
A. scaberula			
A. serpyllacea			

Remarks

Southwestern Cape to EC. Small shrubs with aromatic, glandular, ericoid leaves. Flowers in terminal clusters; white, pink or mauve. Long-exserted stamens. Pollen mustard-coloured. One report: 'Rich yellow honey; strong flavour'. Another two notes dated 1924, from the Southern Cape: 'Contributes to winter and spring nectar flow.' and 'Honey has blue-green colour; May–Jun.'. Suggested ornamentals: **A. ciliata**, **A. erecta** and **A. perdita**. Medicinal: **A. betulina** and **A. crenulata**. (See CROP PLANTS). There are about 150 **Agathosma** species in the Cape flora. Some are sold as so-called 'Cape greens'. Wild plants and planted crops are poached.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Ajuga ophrydis (LAMIACEAE)	Bugle plant	N2? P1?	10–4 (12–2)

Remarks

Grasslands, from LIM to EC. Low-growing perennial herb. Flowers white, mauve or blue; two or more per cluster on an upright leafy inflorescence.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***A. reptans**	Carpet bugle	N0–1 P0–1	9–11

Remarks

Europe. Creeping ground cover for semi-shade locations. Blue flowers are rarely visited in S. Africa.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Aloe aculeata (ASPHODELACEAE)	Prickly aloe	N0? P1–3	5–8

Remarks

LIM. Rocky areas of open bushveld and grasslands. Large rounded leaf rosette, with tuberculate spines on the leaves. Reddish flower buds and yellow open flowers. Major pollen foraging observed. Pellets orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. chabaudii	African bushveld aloe	N0–1? P1–2	5–8

Remarks

MP, LIM, ZIM and further north. Medium-sized, stemless aloe with upright, greyish-green leaf rosette. Stony or rocky habitats of warm bushveld regions. Bees cannot enter the relatively small, narrow flowers, but obtain some nectar when it moves down the corolla tube between the filaments by capillary action.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. claviflora	Kraal aloe *Kanon aalwyn*	N2? P3?	8–9

Remarks

Dry central interior of S. Africa. Well-drained stony flats or rocky slopes. Long horizontal inflorescence (Afrikaans: *'kanon'* = canon). Average nectar sugar = 10.4%. Nectar volume: 0.08 ml/floret. Pollen yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. cryptopoda	Yellow aloe	N0–1 P0–3	2–9 (6–7)

Remarks

Southern LIM. Stony or gravelly bushveld. Medium size aloe with dense rosette of greyish-green, upturned leaves. Red flower buds turn yellow as flowers mature. Also a red flower form. Pollen orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. gariepensis	Gariep aloe	N2? P2?	7–9

Remarks

Along Orange River from Keimoes westwards. On rocky slopes or in rock crevices. Leaves turn reddish-brown during dry periods. Long, thin, upright inflorescence with flowers either green and yellow, or red and yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. gerstneri	Gerstner's aloe	N0–2 P1–3	2–3

Remarks

A critically rare species from one area in KZN. A medium-sized aloe with a densely flowered and pointed inflorescence. Nectar and pollen are collected throughout the day from pale yellowish-pink flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. grandidentata	'Kanniedood' aloe	N1–3 P1–4	6–10 (7–9)

Remarks

Western FS, NW, NC. Small, spotted aloe, mostly of stony thornveld. Frost- and drought-hardy. Characteristic club-shaped flowers. Nectar sugar 11%. Honey: light-coloured, slight smoky aroma, quick-granulating. Provided honeyflows for beekeeper Edmunds of Vryburg during the 1920s.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. greatheadii var. **davyana** and var. **mutans**	Davyana aloe	N1–3 P1–4	6–9 (7–8)

Remarks

Northern provinces, ZIM, BOT. Small spotted aloe of thorny bushveld. Honey: almost colourless, without aroma or characteristic flavour, quick-granulating. Very nutritive red pollen; crude protein a high 33.8%; promotes brood production and swarming, i.e. queen rearing. Utilised by commercial beekeepers for the past 60 years. This started in July 1949 with Mr A.E. Schnetler of Pretoria, when the visiting apiculturist from Southern Rhodesia, Ms Penelope Papadopoulo ('Miss Poppy') encouraged him to place beehives on the aloe fields at Pienaars River. The Cape bee problem is particularly prevalent on this flow due to the strong build-up of colonies.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. hereroensis	Herero aloe	N0–1 P2?	6–9

Remarks

NC, NAM. An aloe of stony ground, exposed to frost, heat and drought. Pale-coloured leaves are faintly lined, with tips curved inwards, giving the rosette a rounded appearance. The red or yellow flowers are tubular, i.e. without a basal swelling. Bees can only collect the little nectar that runs into the corolla mouth. Nectar sugar 12–13%.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. longibracteata	Long-bract aloe	N0–2 P1–2	6–9 (7–8)

Remarks

LIM, MP. Highveld grassland is the prime habitat. A variable species of spotted aloe, but a long, white, dry bract (modified leaf) below each flower is diagnostic. Bees can partly enter the flowers. Most of the nectar, with 20% sugar, is retained in the bulbous flower base.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. maculata (= *A. saponaria*)	Blotched aloe Soap aloe	N0–2? P0–2?	1–12

Remarks

WC, EC, L, KZN, MP, ZIM. Grassland and rocky outcrops, from the coast to high altitude Drakensberg. Inflorescence a round cluster of flowers, red or yellow. Variable flowering times, even in the same location. Foraging observed all day.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. mudenensis	Muden spotted aloe	N0–1? P1–2?	6–8 (7)

Remarks

One area in central KZN. Bluish-green to purplish leaves aid identification. Flowers yellowish to red. Bees cannot enter them.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. parvibracteata	Pongola aloe Zululand spotted aloe	N1–2? P1–3?	6–7

Remarks

KZN, SZ, southern MP. Deflexed or flattened rosette leaves during dry periods, with dry, twisted leaf apices. A variable species, also in colour: pink, orange and dull red. The late Robin Guy migrated colonies to the Lebombo Mountains for build-up, but no honey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. peglerae	Magalies aloe	N0–1? P1–4	7–8

Remarks

Magaliesberg ranges of G and NW. A unique aloe with its compact, inwardly curved rosette. The inflorescence is cylindrical and densely packed with red flowers. The long-exserted stamens are deep purple to black. Bees cannot enter the flowers. They rely on the nectar, with 10% sugar, to reach the mouth of the flower by capillary action between the filaments. Pellets yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. petricola	Nelspruit rock aloe	N0–1? P2–4	7–8

Remarks

Granite koppies around Mbombela/Nelspruit, MP. Medium-sized aloe with greyish-green leaves curved inwards. Long, thin, upright flowering-stem. Red flower buds. Open flowers greenish-white to light yellow. Bees cannot enter the flowers. They obtain nectar, with 10% sugar, at the flower mouth, or insert their probosces between the petals where these are free.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. pretoriensis	Pretoria aloe	N0–1 P1–2	4–7

Remarks

MP, G, LIM, ZIM. Exposed rocky slopes in grassland. Dense, upright rosette of greyish-green leaves. Very tall, branched inflorescence with red, tubular flowers. Only rarely can a bee enter a floret up to its thorax.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. vanbalenii	Van Balen's aloe	N0–2 P2?	5–7

Remarks

KZN, SZ. Medium-sized aloe of rocky slopes, particularly Lebombo Mountains. Leaves coppery-red, recurved, twisted. Upright, yellow flower spikes. When nectar secretion is copious, it runs down the corolla where bees collect it at the mouth of the flower, which they can partly enter. Only minor nectar secretion following dry, hot summer and autumn: bees cannot reach this and collect pollen only. Nectar sugar 13%.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***A. vera**	Aloe vera	N2? P2?	8–9

Remarks

Northern Africa or Arabia. Small plant of which the leaves are pale green, spotted and with a tendency to be opposite. Grown in many house gardens. Flower colour varies from yellow to reddish. Only the nectar that reaches the flower tip is accessible to bees. Pellets yellowish. Cosmetic and medicinal products are available.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. zebrina var. **ammophila**	Sand aloe	N0–1 P1–4	2–4

Remarks

LIM. One of many species of so-called 'maculata' or spotted aloes. Dense groups in flat, sandy bushveld areas, often under thorn trees. Like the Transvaal aloe, the nectar is retained in the bulbous flower base, and only when there is a copious flow can bees collect some of it at the flower tip. Pellets reddish.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. zebrina var. **transvaalensis**	Transvaal aloe	N0 P1–3	1–4

Remarks

Northern provinces, ZIM, BOT, NAM. Small, spotted aloe similar to **A. davyana**, and often in the same habitat, but flowering time is different. Narrow flowers prevent bees from entering. Most nectar is held in the large bulbous base. Colonies build up on the nutritious red pollen if another nectar source is available simultaneously.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Alternanthera ficoidea** (Amaranthaceae)	Joseph's coat *Josefskleed*	N0–2 P0?	10–5

Remarks

South and Central America. Perennial ground cover with attractive, variegated foliage. Only occasionally has medium bee activity been observed on the insignificant flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Amaranthus salicifolius* (= **A. tricolor) (Amaranthaceae)	Willow-leaf amaranth	N1 P0–1	1–2

Remarks

Philippines. Ornamental amaranth with showy, rust-red, upright flower spikes. Minor bee activity observed in hot weather. Small pollen pellets greyish-brown. Water-white nectar without smell or specific taste.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Ambrosia artemisiifolia** (Asteraceae)	Common ragweed	N0 P3?	10–4 (2–4)

Remarks

North America. Naturalised in LIM to KZN, coast to Highveld, in disturbed soils. Robust annual or short-lived perennial. Unique flower arrangement for an asteraceous plant: inflorescence is an upright spike with male flowers; the female flowers are clustered together below the male spike, favouring wind- or gravity-pollination. Flowers whitish. Leaves deeply lobed. Köttner (1991) recorded it as a beeplant in the southwestern Cape: pellets orange-yellow, crude protein 11.6%.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Anisodontea anomala (Malvaceae)	Wild mallow *Roos malva*	N2? P1?	7–12
A. julii	Mountain mallow *Bergroos malva*	N2? P1?	10–3 (1–2)
A. scabrosa (= *Malvastrum scabrosum)* (= *Malva capense*)	Coastal mallow *Sandroos malva*	N2–3 P0–1	7–12

Remarks

S. Africa; mainly in the drier parts. Perennial, hairy shrubs, with white to pink to mauve *Hibiscus*-like flowers, which only last one day. Leaves are typically divided into 3 or 5 unequal lobes. Unlike the true *Hibiscus* flowers, which are generally not much visited by bees, the **Anisodontea** blooms are eagerly called on when the sun shines and the soil is moist. Nectar is reached either from inside the flower through the slits at the base of the petals, or from the outside where the bees insert their probosces between the petals and the sepals. One record of dark, reddish-purple pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Anthemis cupaniana** (ASTERACEAE)	Mock chamomile Dog fennel *Vals kamille*	N0–1? P2?	1–12 (11–2)

Remarks

Eastern Europe. Hardy, mat-forming ground cover with deeply lobed, aromatic leaves. White daisy flower with a large yellow 'eye'. **Anthemis tinctoria**, or golden chamomile, is a biennial with an apparently similar beeplant value and light orange-brown pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Apatesia sabulosa (AIZOACEAE)	Leaf mesemb *Blaarvygie*	N2? P1?	8–10

Remarks

Clanwilliam to Tulbagh. Small, tufted annual mesemb with flat, wide, slightly succulent leaves. Flowers with many yellow, long, thin, pointed petals.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Aptenia cordifolia (AIZOACEAE)	Heart-leaf mesemb Aptenia mesemb *Brakvygie* *Aptenia vygie*	N1–3 P0–1	1–12 (9–4)

Remarks

EC mainly. Popular, hardy ground cover. Small flowers mostly red, sometimes pale yellow. Small, light brown pellets.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Arctotheca populifolia (ASTERACEAE)	Sand daisy Sea pumpkin *Seepampoen*	N P	1–12 (9–5)

Remarks

S. African coast. Forms carpets on beach sand. White-felted, heart-shaped leaves. Yellow daisies. Pellets light yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. prostrata	Coastal daisy	N2? P2?	8–1 (9–11)

Remarks

Cape Peninsula to EC coast on sandy flats and slopes. Sprawling perennial, rooting at nodes. Lobed, green leaves. Pollen orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Arctotis spp. and hybrids (ASTERACEAE)	Spring arctotis *Gousblom*	N0–2 P0–2	8–11

Remarks

Namaqualand to EC. Silvery-grey, bushy or trailing perennials. Widely cultivated. Different flower colours. Pollen i.a. light orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. stoechadifolia	Trailing arctotis *Kus gousblom* *Room gousblom*	N1 P1	9–12 (9–10)

Remarks

Southwestern Cape. Perennial trailer for coastal gardens. Flowers cream, orange or maroon. The last-mentioned colour is preferred by bees. Pollen orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Argyroderma delaetii (Aizoaceae)	*Bababoudjies*	N2? P1?	4–6

Remarks

Namaqualand. Smooth, rounded, paired leaves at ground level. Single, red, glistening flower with a cup-shaped base. Found between quartz pebbles of the Knersvlakte.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Aridaria brevicarpa (Aizoaceae)	*Donkiebos*	N1? P1?	8–9

Remarks

Namaqualand to southern NAM. A shrubby mesemb of sandy areas. The succulent leaves are cylindrical and opposite. Flowers have a feathery appearance with their many white, long and narrow petals.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Armeria maritima** (Plumbaginaceae)	Thrift Sea pink *Seepienk*	N2 P1	9–1?

Remarks

European coasts, but considered circumpolar. Tufted plants with narrow, grass-like leaves. Ground cover. Pink florets are tubular, on a round flower head. Much-favoured by bees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Artemisia afra (Asteraceae)	Wild wormwood *Wilde als*	N0 P1–3	1–6 (3–5)

Remarks

S. Africa. Streamside medicinal shrublet. Attractive greyish-green feathery foliage with distinctive smell. Primarily wind-pollinated. Pollen yellow. Limited production of a blue-green oil used for flavouring and perfume.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***A. absinthium**	Common wormwood *Gewone als*	N0 P0–3	3–5

Remarks

Europe. Variable species, often without flowers. Small, drooping, yellowish flower heads without ray florets. Medicinal, e.g. vermifuge, or insecticidal. Limited use by beekeepers in the UK: avoiding stings by rubbing the hands with crushed leaves and to get a settled swarm moving by stroking it with bruised branches.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Asclepias buchenaviana (= **Gomphocarpus filiformis**) (APOCYNACEAE)	Karoo milkbush *Lammerlat*	N2? P0	11–3?

Remarks

Karoo. Higher-lying seasonal streams and disturbed areas. A shrub with thin, long, blue-green stems. Leaves also long and very narrow. Does not grow in great numbers anywhere.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. cancellata (= **G. cancellatus**)	Mountain milkbush *Tontelbos* *Berg melkbos*	N3? P0	3–12 (5–6)?

Remarks

Namaqualand to EC. Often on stony slopes. Widespread in mountainous areas of the WC. Clusters of cream, brown and maroon flowers. Leaves not linear as in other species.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. gibba	Sugar milkbush	N3? P0	7–2

Remarks

EC to BOT. Grassland and grassy thornveld. Perennial herb, but stems annual. Star-like greenish-mauve petals. Nectar-laden flowers picked by children in KZN.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Aspalathus spp. (FABACEAE) (PAPILIONACEAE)	Cape gorse *Penbossie*	N0–4 P0–1?	8–4 (10–12)
A. angustifolia			
A. araneosa			
A. astroites			
A. chortophila			
A. cordata			
A. cymbiformis			
A. flexuosa			
A. juniperina			
A. laricifolia			
A. quinquefolia			
A. spinescens			
A. spinosa			
A. subtingens			

Remarks

Mainly mountain fynbos of southwestern Cape, extending into KZN. About 280 species. Shrublets, some spiny. Leaves mostly in clusters. Yellow pea flowers usually together on branch tips. In many species they seem to be too tight for honeybees to open. Pods with one seed. Vernacular refers to well-developed taproot = *'penwortel'*. **Aspalathus quinquefolia**, the *sieperbossie*, is the source of *'sieperheuning'* (Smith 1966). Penbossies have yielded light, mild honeys in the EC and southwestern Cape. Light yellow pollen colour recorded. The listed species have been seen to be worked by honeybees. Some species are only visited by carpenter bees. More information is required.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Aspilia mossambicensis (Asteraceae)	Woodland aspilia	N2? P3?	9–5 (1–3)?

Remarks

KZN, MP, LIM, ZIM, BOT, NAM. Erect, perennial shrub, 1 m high. Open woodland. Not common, and variable. Leaves opposite, rough, and oval to lance-shaped. Eight yellow ray florets, with their large petals split at their tips.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Aster novi-belgii* (= **Symphyotrichum novi-belgii) (Asteraceae)	Michaelmas daisy *Herfsaster*	N1–2 P0–2	1–12 (3–5)

Remarks

North America. Trouble-free perennial with flower heads in white or shades of blue, purple, rose and near red. Main parents of today's garden hybrids, together with ***A. amellus** and ***A. novae-angliae**, which are also beeplants. Single blossom cultivars are preferred by bees. Pellets yellow to yellowish-brown. Useful in suburban gardens during autumn dearth in summer rainfall regions.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Astragalus atropilosulus (Fabaceae) (Papilionaceae)	African milkvetch	N0–2? P0–1?	9–5

Remarks

KZN, MP, LIM and further north. Spreading herb with upright flowering stems. Long, feather-type compound leaves. Many pinkish-purple, pea-type flowers on an erect axis. Upland grasslands and river banks. A variable species.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Asystasia gangetica (= *A. coromandeliana*) (Acanthaceae)	Asystasia	N2? P2?	1–12

Remarks

Lowveld of LIM to EC; also NAM, BOT, ZIM. Spreading, perennial herb of sandy soils, usually in lightly shaded woodland and coastal forest. Flowers broadly tubular, white, with purple nectar guides on lower lip. Pollen cream-coloured. Variable flowering times.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Athanasia dentata (Asteraceae)	*Klaaslouwbos*	N2? P2?	10–1

Remarks

Cape Peninsula to Grahamstown. Densely leafy shrub, mainly of sandy coastal slopes, but also in overgrazed grassland of the EC. Leaves small, serrate, recurved, ± alternating. Inflorescence a brownish-yellow disc, 40 mm across, without ray florets. (See also **Hymenolepis** with the same common name).

Botanical Name	Common name	Beeplant Value	Flowering Time
Augea capensis (Zygophyllaceae)	*Volstruiskos* *Kinderpiel*	N2? P2	8–12

Remarks

NAM, Bushmanland, Western and Little Karoo. Succulent annual or short-lived perennial, 0.4 m high, on dry sandy flats. Leaves diagnostic: opposite, cucumber-shaped. Earlier flowering with winter rain. Source of mixed honey east of Pofadder.

Botanical Name	Common name	Beeplant Value	Flowering Time
Barleria obtusa (Acanthaceae)	Barleria Bush violet *Bosviooltjie*	N1–2 P0–1	1–6

Remarks

Humansdorp to ZIM. Widely planted ornamental with large blue flowers. Nectar from base of loosened corolla. Pollen dark purple.

Botanical Name	Common name	Beeplant Value	Flowering Time
Berkheya spp. (Asteraceae)	Yellow thistle Wild thistle *Geel dissel* *Wilde dissel*	N0–2 P1–3	1–12 (7–11) WR
B. carduiodes			
B. carlinifolia			(11–3) SR
B. carlinopsis			
B. fruticosa			
B. glabrata			
B. heterophylla			
B. latifolia			
B. radula			

Remarks

Southern Africa. Rocky slopes and grassland. Thistle-like perennial herbs: spiny leaves and flower heads, but with yellow, open, daisy-type flowers. Leaves often felted or woolly. In two species the nectar was noticed to be light yellow (inferring a dark honey), with a distinctive unpleasant sweaty feet smell. Pollen loads come in shades of yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Berzelia spp. (Bruniaceae)	Berzelia *Knoppiesbos* *Kolkol*	N0–1? P0–2?	8–4 (9–11)

Remarks

Sandstone slopes of southwestern Cape, with two species reaching EC. Densely leafy shrubs, i.e. many small leaves enveloping the branches. Inflorescence a cluster of mostly cream-coloured, dense, spherical flower heads. Extended stamens or possibly styles that give a pom-pom effect. No reliable observations yet on nectar foraging. 'Considerable bee activity' most probably refers to pollen collection. **Brunia** spp. are closely related.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Blumea mollis (= **B. dregeanoides**) (Asteraceae)	Blumea	N2? P2?	8–4

Remarks

LIM, NW, G, MP, SZ, KZN. Damp grassland; often along streams. Perennial hairy herb to 0.9 m. Flower heads in clusters, drooping in bud stage. Tight flower head without ray florets. Disc florets pale pink.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Brachysiphon fucatus (Penaeaceae)	*Sissie*	N? P3?	5–8

Remarks

Cool sandstone slopes of Cape Peninsula. Compact shrub to 1 m, covered with small pink to reddish flowers. Pollen pellets yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Brunia spp. (Bruniaceae)	Brunia Silver knobs *Knoppiesbos* *Stompie*	N0–2? P1–2?	12–6 (1–4)

Remarks

Rocky sandstone slopes of southwestern Cape, with one species extending to the EC. Densely-leafy shrubs, with numerous small leaves covering the branches. Compact, globose flower heads with long-extended stamens. Flowers cream-coloured, except one species with red flower heads. Best known species is **B. noduliflora**, which is commercially harvested as 'spray brunia', flowering May–June. **Brunia** pollen colour is light lemon to yellowish-beige. It sometimes reaches a socalled 'secondary level' in the pollen sediment of honeys. Explorer Lichtenstein described Brunia honey as 'white, mild, delicious', yet A.V. Hall in Leistner (2000) states that **Brunia** florets have no nectaries (that are superficially visible?). Brunias are closely related to **Berzelia** spp. More information is needed on the relationship between honeybees and Bruniaceae.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Bulbostylis hispidula (Cyperaceae)	Slender sedge *Fyn biesie*	N0 P1?	10–5

Remarks

Southern Africa, except EC, WC, Karoo and most of NC. Small annual sedge of disturbed sandy soils, including Kalahari dunes and open woodland. Pellets yellow. Flowering time in KZN given as July–April.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Cadaba aphylla (Capparaceae)	Red storm *Rooi storm*	N2? P1?	8–4 (10–12)

Remarks

Little Karoo to Uitenhage, and northwards through the Great Karoo. A hardy, leafless, tangled shrub with bright red flowers. Different habitats. Copious dilute nectar: a typical bird flower.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Callicarpa americana** (LAMIACEAE)	French mulberry	N3? P0–1	12–2

Remarks

Southeast USA. An ornamental that is not as commonly grown as it deserves. Clusters of very small violet-blue flowers in leaf axils. These are followed in autumn by tight bunchlets of small berries that resemble mulberries. Bees observed foraging throughout the day.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Callilepis leptophylla (ASTERACEAE)	Wild ox-eye daisy *Berg bittermagriet*	N1 P2	9–1 (10–11)

Remarks

KZN, SZ, MP, G, ZIM. Slender, erect, perennial herb arising from a woody rootstock. Stony grassland. Eye-catching daisy with large white ray florets and prominently black disk florets. Cream-coloured pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Calluna vulgaris** (ERICACEAE)	Ling Scotch heather *Besemheide* *Skotse heide*	N2–4 P1–3	12–4?

Remarks

Temperate Europe, where the reddish thixotropic honey is well known. Pollen in shades of slate-grey or olive-grey, crude protein 23.7%. Hardy ornamental for cool areas. Deserves consideration when planting for bee food.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Campanula** spp. (CAMPANULACEAE)	Bellflowers *Blouklokkies*	N0–2 P1–3	9–4
C. carpatica	Tussock bellflower		
C. medium	Canterbury bells		
C. persicifolia	Peach-leaf bellflower		
C. portenschlagiana	Dalmatian bellflower		
C. poscharskyana	Poscharsky's bellflower		

Remarks

Temperate regions of Europe. Popular garden flowers in shades of blue and purple, shortly-tubular to shallowy bell-shaped. Mostly perennials; also few annuals and biennials, e.g. Canterbury bells. Anthers shed their pollen before the flowers open. Pollen collection has nevertheless been observed throughout the day. Pellet colour variable between species and cultivars: light grey to lemon-grey to light violet to light purplish-brown to light orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Canavalia virosa (Fabaceae) (Papilionaceae)	Savanna canavalia	N0–1? P1?	12–8 (2–5)

Remarks

LIM, MP, SZ, KZN. Perennial trailer or climber of woodlands and thickets. Deep pink, pea-type flowers are carried on long, hanging inflorescences. The flowers are turned upside down, i.e. the lower keel petal is positioned as a hood, and the two top petals or flags are at the bottom, serving as a landing platform, complete with streaked nectar guides. Honeybees have difficulty obtaining nectar and pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Carissa haematocarpa (Apocynaceae)	Karoo num-num *Karoo noem-noem*	N2? P0?	1–4

Remarks

Little Karoo, Central Karoo, Richtersveld, southern NAM. Evergreen, densely-branched, spiny shrub. Dotted throughout mountainous areas. White to cream-coloured, scented flowers. Narrow corolla tube short enough for bees to reach the nectar. May flower in spring in its western winter rainfall range. Mass flowering under favourable conditions with resultant honey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Carpobrotus spp. (Aizoaceae)	Sour fig Dune mesemb *Hotnotsvy*	N0–2 P0–3	1–12 (8–11)
C. acinaciformis	*Suurvy*		
C. deliciosus			
C. dimidiatus			
C. edulis			

Remarks

WC to EC to KZN. Mainly coastal regions. Tough, drought-resistent, much-used ground cover inland. Flower colours white, yellow, pink or purplish. The flowers are well-worked or sometimes ignored. Pellets in shades of yellow. In the Cape the fruits are harvested in summer. Two samples of mesemb pollen (unknown genus and species) had crude protein levels of 27.6% and 26.8%.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Cephalaria zeyheriana (Dipsacaceae)	Mock scabious	N2–3 P0–2	11–2

Remarks

Open grasslands of northern and eastern S. Africa. Perennial herb with a basal tuft of deeply lobed leaves. White flower head on a long stalk. Elongated stamens give pincushion effect. Pellets light grey. Nectar gatherers become dusted with white pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Cephalocroton mollis (EUPHORBIACEAE)		N0–2 P0–2	10–3

Remarks

KZN, MP, LIM, BOT, NAM. Hardy, hairy, perennial shrublet of sandy areas. Inflorescence with male flowers on top and females below. More than one flowering period. Pollen orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Cerastium tomentosum** (CARYOPHYLLACEAE)	Snow-in-summer *Somersneeu*	N2? P2?	10–2

Remarks

Italy to western Asia. Mat of silvery-grey foliage. White flowers. Popular, hardy carpeter. Pellets greyish-green.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Chironia purpurascens (GENTIANACEAE)	Pink star	N? P3	11–3

Remarks

Northern provinces to KZN to WC. In damp areas, often in spacious colonies. Five-petalled, star-shaped, magenta-pink flowers. The large yellow anthers in the flower centre become characteristically twisted.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Chlorophytum comosum (= *Anthericum comosum*) (ANTHERICACEAE)	Hen-and-chickens	N0–2 P0–3?	1–12 (11–3)

Remarks

LIM to KZN to WC. Moist forest floors and margins. Favourite garden ground cover. Star-shaped, white flowers that last one day. Major nectar and pollen foraging only in sunny warm weather, and not often observed. Orange pellets. **Chlorophytum saundersiae**, or fountain grass, has also become popular in garden landscaping. Honeybee foragers have been seen on its flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Chrysanthemum frutescens* (= **Argyranthemum frutescens) (ASTERACEAE)	Common daisy bush Marguerite *Gewone madeliefiebos*	N0–2 P0–1	1–12

Remarks

Canary Islands. Well-known white, pink, yellow and red daisy bushes. They flower heavily on and off. Generally of low attractivity for bees. Pollen loads dirty-yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***C. maximum** (= *Leucanthemum* × *superbum*)	Shasta daisy *Groot tuinmagriet*	N0–1 P0–2	10–4

Remarks

Pyrenees; garden origin. Hardy perennial ground cover found in many S. African gardens. Dense clumps from a low-growing rootstock. Large white daisies with yellow centres, on long flowering stems. Popular cut flower, despite a very unpleasant smell at times.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Chrysocoma ciliata (Asteraceae)	Bitter Karoo *Bitter karoobossie*	N2? P2?	1–12 (10–1)

Remarks

NAM and S. Africa, except the northeastern regions. Soft to woody shrublet, widespread on deteriorated veld. No ray florets, but disc florets curve outwards from a green bract cup. Poor grazing: only the flowers are eaten. One suspected case of honey being produced. There is one record of **C. coma-aurea** that was visited by honeybees in the southwestern Cape.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Cichorium intybus** (Asteraceae)	Chicory *Sigorei*	N0–2 P0–3	10–4

Remarks

Mediterranean. Widespread in southwestern to southeast and central S. Africa. Upright perennial herb. Moist places of fallow lands and roadsides. Crop plant (roots and leaves) that became established in the wild. Self-incompatible, sky-blue flowers. In summer pollen gathering was observed early morning, and thereafter nectar collection until late forenoon. White pollen sustains brood-rearing. The variety **C. intybus** var. **foliosum** is the leaf crop endive (*witloof*).

Botanical Name	Common Name	Beeplant Value	Flowering Time
Cineraria geifolia (Asteraceae)	Coastal cineraria	N0–1 P1?	7–1

Remarks

Cape Peninsula to KZN. Trailer of shore and coastal bush. Bright yellow daisies with an unpleasant scent. **Cineraria lobata** is an inland species, also foraged for nectar and pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Cistus** spp. (Cistaceae)	Rock rose *Kliproos*	N0–1 P2–3	8–2 (11–1)
C. albidus			
C. crispus			
C. ladanifer			
C. × purpureus			
C. salviifolius			

Remarks

Mediterranean. Cold- and drought-hardy, evergreen shrubs. Flowers with five large petals that look like single roses with a central mass of stamens. They open only in direct sunlight and are considered to be pollen sources exclusively. However, nectar secretion has been observed in ***C. villosus** in Europe, and once on an unidentified species in Pretoria. Pollen, in shades of orange, is collected until midday. Although the flowers are short-lived, flowering may continue for several months in some species.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Clematis villosa (= *Clematopsis scabiosifolia*) (Ranunculaceae)	*Pluimbossie* *Veerbossie*	N0–1 P0–1	11–4

Remarks

G, NW, BOT, NAM. Open woodland and grassland, in sandy and rocky locations. Perennial shrublet to 1 m, with woody rootstock. Large, sweetly scented, drooping flowers, with cream-coloured to pinkish petals. Fruiting heads: an aggregation of seeds, each with a long, curly style (feathery impression).

Botanical Name	Common Name	Beeplant Value	Flowering Time
Cliffortia spp. (Rosaceae)	*Rysbos* *Steekbos*	N0? P0–3	1–12 (9–12)
C. ilicifolia			
C. odorata			
C. ruscifolia			

Remarks

WC mountains; few species further east. Dioecious shrubs. Male flowers with many stamens, i.e. much pollen. Plumose stigmas often reddish. Major bee activity observed on the three species. Pellets light grey. Third most abundant pollen collected during February–April near Wellington. Crude protein only 9.5% (Köttner 1991).

Botanical Name	Common Name	Beeplant Value	Flowering Time
Clutia tomentosa (Euphorbiaceae)	*Wolbossie* *Wolbliksembos*	N2? P1?	6–9

Remarks

Southwestern Cape, SC, Little Karoo. Dioecious twiggy shrub with grey-felted leaves. Clay and gravel slopes in Renosterveld. Small flowers cream-coloured to brownish. Comments of Mrs Jackson, Albertinia (1924-02-15): 'The honey has a bad taste, and the pollen is suspected of killing young bees'. **Clutia pulchella** has also been recorded as a nectar and pollen source in the EC.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Coccinia adoensis (Cucurbitaceae)	Wild orange cucumber *Bobbejaan komkommer*	N0–2 P0–2	9–2

Remarks

KZN, SZ, northern provinces, ZIM, BOT, NAM. Climbs into bushes of grassland and bushveld. Flowers cream-coloured to light yellow. Separate male and female flowers on the same plant. Smooth reddish-orange fruit. Major bee activity at times.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Codon royenii (Boraginaceae)	*Soetdoringbos* *Suikerkelk*	N3? P2?	5–8

Remarks

Namaqualand, NAM. Erect perennial herb to 1 m, covered all over with straight white spines. On rocky slopes and dry river beds. Wide-tubed, cream flowers with much nectar at times. Flowers picked by Namas for the nectar.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Coleonema pulchellum (Rutaceae)	Confetti bush Cape may *Konfettibos*	N1? P2?	3–10

Remarks

SC to EC coastal flats. Aromatic, rounded, resin-scented shrub akin to the buchus. Cultivated. Pellets light reddish-brown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. pulchrum	Pink confetti bush	N2? P2?	8–11

Remarks

Langeberg mountain slopes. Willowy shrub with turpentine-scented leaves. Active foraging observed by honeybees for nectar and pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Commelina africana (Commelinaceae)	Yellow commelina *Geel commelina*	N0 P1	10–5

Remarks

SC to KZN, L, FS, northern provinces, ZIM, BOT, NAM. Prostrate, spreading, perennial herb. Widespread in different habitats. 'Petals': two large and one small; yellow. Flowers close before midday in sunny weather. Pellets yellow. Of the pollen trapped during December on a farm on the Springbok Flats, 26% constituted **Commelina** (species unknown).

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. erecta	Blue commelina *Groot blousel-blommetjie*	N0? P0–1	1–12 (12–3)

Remarks

KZN, MP, G, LIM, ZIM, BOT, NAM. Erect or spreading perennial herb. From coast to disturbed woodland. Blue flowers close mid-morning. One West African observation of nectar foraging. **Commelina** spp. have otherwise not been recorded as nectar sources, although young flowers have been found to contain minimal amounts of nectar.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Commicarpus pentandrus (Nyctaginaceae)	Cerise stars *Pienk veldpatat*	N0–2? P0–1	10–6 (1–4)

Remarks

FS, northern provinces, ZIM, BOT, NAM. Perennial trailer with woody rootstock. Prostrate stems are annual. Open grasslands and floodplains. Large, dark pink flowers close at night. White pollen during morning. The white-flowered **C. plumbagineus** (*wit-veldpatat*) has a similar value and flowering time. It is less common, growing in shady areas and on riverbanks.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Conicosia spp. (Aizoaceae) **C. elongata** **C. pugioniformis**	*Groot vetkousie* *Varkiesknol* *Snotwortel*	N1–2 P0–1	8–12 (8–10)

Remarks

Knersvlakte to southwestern Cape to Knysna. Tufted perennial mesembs. Thin, elongated leaves. Sandy soils of disturbed sites. Large yellow flowers with many fine, thin petals. Source of mixed honey from the western sandveld.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Convolvulus mauritanicus** (= *C. sabatius*) (Convolvulaceae)	Ground morning glory	N2–3 P0–2	10–3

Remarks

Northern Africa. Hardy perennial ground cover with many bluish to mauve flowers. These have a white nectar guide throat. Pollen loads white.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Conyza podocephala (Asteraceae)	Button conyza *Knoop conyza*	N0–2 P0–2	11–3 (12–1)

Remarks

NW, G, MP, FS, L, KZN. Roadsides and disturbed grasslands. Hardy perennial herb with strong taproots and runners. Flower heads round, yellow, without ray florets. Hot, moist conditions give best beeplant values. Pellets light orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. ulmifolia	Eared conyza	N P1?	1–12

Remarks

WC to KZN and northwards to East Africa, but not common. Straggling, glandular, aromatic herb found near streams and other damp places such as forest margins. Flower heads pale yellow, without ray florets, in loose inflorescences. Leaves irregularly toothed, with the typical two ‘ears’ at the base of the leaf blade.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Corchorus asplenifolius (Malvaceae)	Igusha spinach	N0–1? P1–2	9–5

Remarks

KZN, SZ, northern provinces, ZIM, BOT, NAM. Perennial prostrate herb with a woody rootstock. Linear leaves are coarsely toothed. The flower has five yellow rounded petals, and below them, five yellow pointed sepals. Bee visitation mostly during afternoons. Pollen dark yellow. One record of **C. confusus** from Swaziland, with a N2 P2 value.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Coreopsis lanceolata** (Asteraceae)	Calliopsis Tickseed	N0–2 P0–2	10–3 (10–12)

Remarks

North America. Naturalised from southern LIM to KZN on roadsides and in grasslands. Small, hardy, herbaceous perennial with large orange-yellow daisies. Pellets orange or deep yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Cotyledon orbiculata (Crassulaceae)	Pig's ear *Varkoorplakkie*	N0–2 P0–3?	1–12 (4–7)?

Remarks

S. Africa. Sandy or stony soils in scrub. Succulent shrublet with leaves that vary from paddle-shaped to finger-like. Flowers tubular, nodding, dull red. Bees can partly enter the corolla to reach a dense fringe of hairs that prevent the nectar from running out of the flower. Nectaries prominent: short tubular. Nectar: plentiful, water-white, non-bitter, and with 22% sugar or less. Nectar robbing at the base of wilted flowers. Pollen light yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Crassula columnaris (Crassulaceae)	Khaki button *Berg-koesnaatjie*	N2? P?	5–10 (6–8)?

Remarks

NAM, Bushmanland, Namaqualand, Little Karoo. Small perennial or biennial succulent on quartzite gravel. Leaves congested on a short stem. Flowers: small tubes, white to yellow, tinged with red, scented at night. Long-flowering.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. cultrata		N1? P2	12–3

Remarks

Little Karoo and SC to KZN in dry scrub. Succulent leaves are opposite and egg-shaped to shortly strap-shaped. Flower clusters on a short stem. Small, tubular, cream-coloured flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. flava	Yellow crassula	N2? P1?	12–2

Remarks

Lower mountain slopes, from Tulbagh to Bredasdorp. Small succulent with opposite leaves, which have rounded outgrowths on their margins. Yellow tubular flowers in loose clusters.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. multicava	Fairy crassula *Skadu plakkie*	N1–3? P0–1	4–11

Remarks

KZN and EC on rocky outcrops. Small succulent of semi-shade or full sun. Round shiny-green leaves. Flowers small, star-shaped, pink, in a loose panicle. Flowering time variable when used as a ground-cover ornamental.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. nudicaulis	Redleaf crassula	N1–3 P0–1	3–12

Remarks

Mainly southwestern Cape, to KZN and FS. Rock crevices; from coast to high altitude. Succulent leaves turn reddish in sunny, dry weather. Used as ornamental in gardens. Pollen light biscuit-coloured.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. ovata (= *C. portulacea*) (= *C. argentea*)	Karkay Pink joy *Kerkeibos* *Plakkie*	N0–3 P0–2	4–8

Remarks

Little Karoo, EC, KZN. Succulent, round shrub up to 2 m. Found in many gardens. Small, star-shaped, light pink flowers cover the shrub. Reports of a dark, slow-granulating winter honey from the EC. Apparently two pollen colour types – yellow and grey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. pellucida		N2? P1?	9–4

Remarks

WC to KZN and northwards to East Africa. Grassland and rocky slopes, often in moist areas. Succulent perennial herb with reclining stems – a variable species. Small white flowers, often tinged with pink, in a cluster on the tip of a flowering stem.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. perfoliata (= *C. falcata*)	Red treasure *Rooiplakkie*	N1–2 P	1–12

Remarks

EC to tropical Africa. Rocky outcrops of grassland. Elongated, greyish, succulent leaves. Flat-topped flower heads, whitish or red. Garden ornamental. Flowering time varies with location, and from region to region.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. sarmentosa		N0–1? P0–1?	6–8

Remarks

KZN, EC. Scrambling semi-succulent herb on rocky outcrops. Limited cultivation in gardens. Flowers in small, semi-globose heads; white, tinged with pink. Pollen dirty-white.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. spathulata		N2? P1?	3–5

Remarks

Knysna to EC. This plant is very similar to **C. sarmentosa**, of which the 'Remarks' also fit this species. It is planted in gardens as well, where considerable bee activity may be seen at times.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. vaginata	Yellow or white crassula	N0–2 P0–2	9–6 (2–4)

Remarks

EC, KZN, SZ, MP, LIM, ZIM. Perennial succulent of moist grassland. Large flat-topped cluster of white or yellow flowers: cup-shaped, fragrant.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Craterostigma plantagineum (Scrophulariaceae)		N2? P1?	11–3

Remarks

Northern provinces, ZIM, BOT, NAM. Rocky sites and grassland, usually where these are moist. A very small perennial plant with a basal rosette of broad, felty leaves. Flowers have a hooded upper lip with two stamens, and a large 3-lobed lower lip with two stamens. Pale blue petals, with prominent nectar guides on the lower lip: dark blue markings and two orange spots. Although S.J. Smithies in Leistner (2000) states that nectaries are absent, honeybees have been observed to collect nectar.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Crotalaria sphaerocarpa (FABACEAE) (PAPILIONACEAE)	Mealie crotalaria *Mielie crotalaria*	N0–3 P0	11–5

Remarks

NC, FS, northern provinces, ZIM, BOT, NAM. Disturbed sandy soils of the bushveld. Sometimes a weed of cultivation. Three narrow blunt-tipped leaflets per leaf. Light yellow, hairy pea-flowers. Bees collect nectar from the side of flowers, between sepals and petals. Otherwise they feed from the top of the flower in an upside-down position, prying apart alae and keel, and feeding through the exposed nectar hole in the upper side of the staminal column.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Cullen tomentosum (= *Psoralea obtusifolia*) (FABACEAE) (PAPILIONACEAE)	Blue clover *Blou klawer* *Rivierklawer*	N2? P?	12–5

Remarks

LIM, NW, FS, NC, NAM, BOT. Arid savanna in silty soils of depressions, pans and dry river beds. Perennial mat-forming herb. Greyish-green, trifoliolate leaves. Small purple pea flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Cuphea hyssopifolia** (LYTHRACEAE)	False heather Elfin bush	N1–3 P0–1	1–12 (10–1) (4–6)

Remarks

Mexico and Guatemala. Small, open, white or mauve flowers. Seldom without bees. Pellets light brown. ***Cuphea mexicana**, a very similar plant, has the same beeplant value.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***C. micropetala**	Cigarette bush *Sigaretblom*	N0–1 P?	1–5

Remarks

Mexico. Small, much-branched shrub with tubular flowers: orange-red, tipped with yellow. Nectar robbed through pierced, narrow corollas.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Cyanotis speciosa (= *C. nodiflora*) (COMMELINACEAE)	Doll's powderpuff *Pers poeierkwassie*	N? P0–2	1–12 (10–4)

Remarks

In grasslands of summer rainfall areas of southern Africa. Flowers in shades of purple, with prominent whitish anthers. Related **C. lanata** and **C. longifolia** are rare, but also visited for pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Cynanchum ellipticum (= *Cynotonum capense*) (Apocynaceae)	Common dog-wort *Gewone duine-klimop*	N1–2 P0	3–9

Remarks

EC, KZN. Thin, glossy-green twiner. Coastal dune thicket. Flowers are small, cuplike, white, scented.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Cytisus decumbens**	Prostrate broom	N1? P2–3	8–11 (9–10)
***C. × kewensis** (Fabaceae) (Papilionaceae)	Kew broom		

Remarks

Mediterranean. Hardy, deciduous ground covers with bright yellow and cream pea flowers respectively. They grow in alkaline as well as acidic soils. Pollen brownish-orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***C. × praecox**	Warminster broom	N2? P3?	9–11

Remarks

Hybrid of garden origin, with several cultivars. Strongly-fragrant cream and yellow flowers. Pollen orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Delosperma herbeum (Aizoaceae)	Highveld white vygie	N3 P1	11–1

Remarks

NW, G, MP, FS. Small, squat, spreading mesemb. Grassland, also where this is stony. Deeply grooved leaves with minute papillae. In hot, dry weather the nectar had a 55% sugar concentration and a light lemon colour. Pellets light biscuit-coloured. One of the *klipvygies*, **D. cooperi** of the eastern FS and Lesotho, is also a good source of nectar and some beige pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Desmodium repandum (Fabaceae) (Papilionaceae)	Orange desmodium	N2? P1?	4–6

Remarks

SC to KZN, SZ, MP, LIM. A slender, scrambling herb of forest margins. Small orange flowers known to be visited by honeybees, but no further information is at hand.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Deutzia** spp. (HYDRANGEACEAE)	Bridal wreath *Bruidsruiker*	N2–3 P1–2	9–12 (10–11)

Remarks

East Asia. Drought and frost hardy, deciduous shrubs that do well on the Highveld, but are not well known. Abundance of white and pink flowers; double cultivars not suitable for bees. Ten stamens form a small tube in the centre of the flower.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Deverra denudata (APIACEAE)	Broom celery *Wilde seldery*	N1? P0–1	11–2

Remarks

Karoo, northwards to BOT and NAM. Shrub of different habitats: dry river beds, grasslands, floodplains; 1.2 m high. Many upright, leafless stems with characteristic celery smell when bruised. Small, yellowish-green flowers in an umbel.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Dicliptera eenii (ACANTHACEAE)		N2 P?	3–6

Remarks

LIM, G, NW, NAM. Dwarf shrub with straggling branches. Shady, stony sites, or along streams, in bushveld. Flowers 2-lipped, pink, with only two stamens.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Didelta carnosa (ASTERACEAE)	*Seegousblom* *Duine-gousblom* *Kusslaaibos*	N3? P2?	7–12

Remarks

Common on Cape West Coast; also Namaqualand. Dune daisy bush with semi-succulent, slightly rolled-under leaves. Ground-cover habit. Large green bracts around the withered flower head look like petals.

Botanical Name	Common Name	Beeplant Value	Flowering Time
D. spinosa	Thorny salad bush *Perdebossie* *Doringslaaibos*	N? P2?	6–9

Remarks

Piketberg northwards to NAM. Shrub with large untidy yellow flowers. Semi-succulent leaves with or without spines on the margins. Used in salads and browsed by stock.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Dimorphotheca cuneata (ASTERACEAE)	Weather prophet *Groot witbietou*	N1? P0–2	5–12 (9–11)

Remarks

Karoo, FS. Bushy, rounded, sticky perennial. Petals shiny white above, coppery below. Flowers close during the afternoon. Pellets brownish-orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
D. ecklonis (= *Osteospermum ecklonis*)	Blue-and-white daisy bush *Van Staden madeliefie*	N1–2 P0–2	1–12 (7–10)

Remarks

EC: Humansdorp and Uitenhage. Lower rocky slopes and flats. Hardy, sprawling shrub, which is becoming a popular garden plant. Shiny white daisies with violet-blue centres. Long flowering in cultivation.

Botanical Name	Common Name	Beeplant Value	Flowering Time
D. fruticosa (= *O. fruticosum*)	White trailing daisy *Wit rankmagriet*	N0–1 P0–1	1–12 (6–10)

Remarks

Southwestern Cape to KZN. Coastal dunes and rocks. Ground cover and sand stabiliser. Bee visits rare.

Botanical Name	Common Name	Beeplant Value	Flowering Time
D. jucunda (= *O. jucundum*)	Mauve trailing daisy *Pers rankmagriet*	N1–2 P1	8–6

Remarks

Grassland and mountainous areas of eastern S. Africa. Hardy, long-flowering garden subject. Pollen orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Diosma spp. (Rutaceae)	False buchu *Wilde boegoe*	N0–3? P0–2?	1–12 (4–8)

Remarks

Southwestern Cape mainly, extending to EC. Genus with ericoid, aromatic shrublets in sandy areas (mountains and flats). No nectar secretion in dry sand. **Diosma ericoides**, 'breath-of-heaven', is best known. Some species are sold as 'Cape greens'.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Diospyros austro-africana (Ebenaceae)	Small bluebush Fire sticks *Klein bloubos* *Kritikom*	N1–4 P0–1?	8–11

Remarks

Southwestern Cape, Little Karoo, FS, NW, G, KZN. Small to sometimes large, much-branched shrub. Varied habitats, but usually stony grassland. Separate male and female plants. Bell-shaped, whitish flowers. Light-coloured honey in NW. The related blueberry bush, **D. glabra**, of the southwestern Cape and SC, has been reported to be visited for nectar and pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Dissotis canescens (Melastomataceae)	Pink wild tibouchina Wild lasiandra	N0? P1	11–5

Remarks

KZN, SZ, MP, LIM, ZIM. Soft-wooded shrub covered in grey velvety hairs. Moist or marshy sites. Showy flowers pink to purple to red. Long anthers open by a terminal pore and become twisted.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Drosanthemum floribundum (AIZOACEAE)	Dew flower Ice plant *Pers douvygie* *Porsleinvygie*	N1–2 P0–1	9–12

Remarks

Namaqualand to EC. Common garden subject. Brack soils tolerated. Leaves covered in glistening papillae. Pinkish-purple flowers with a white centre, the nectar guide. Pollen cream to beige. **Drosanthemum hispidum** has a similar flowering time and bee value.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Dyschoriste costata (= **Chaetacanthus costatus**) (ACANTHACEAE)		N1 P?	10–2

Remarks

Widespread in grasslands of the northern provinces. Tufted perennial from a woody rootstock, with numerous erect shoots. White flowers with pale purple nectar guides. Bees only reach the nectar that rises into the thin, relatively long (12 mm) corolla tube. The more widely distributed *D. setigera* (= **C. setiger**) has also been recorded as a nectar plant.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Echium fastuosum** (BORAGINACEAE)	Pride-of-Madeira	N1–4 P0–2?	8–1

Remarks

Canary Islands. Short-lived woolly ornamental perennial. Violet-blue flowers, with pinkish to crimson stamens, on dense upright inflorescences. Pollen slate-grey; also dark purple.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Elegia spp. (RESTIONACEAE)	Cape reed Restio	N0? P0–3?	1–12

E. capensis

E. cuspidata

E. filacea

E. fistulosa

Remarks

WC, with a few species extending to the EC. Dioecious, rush-like plants of sandy or gravelly soils, on limestone or often on sandstone slopes, frequently in moist sites. Dense clumps of upright, leafless stems, capped by the brown spathes that are typical of restios. Flowering of different species has been recorded in all months of the year. For about a third of the 34 species, the flowering times have not been documented yet. Restios are an ample source of light-coloured pollen. **Elegia capensis** differs from other species in this genus in that it has dense whorls of slender, sterile branches at the nodes – these resemble needle-like leaves.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Elytropappus rhinocerotis (= **Dicerothamnus rhinocerotis**) (Asteraceae)	*Renosterbos*	N? P? HD	2–9 (3–4)

Remarks

Namaqualand to WC to EC, Karoo. Different habitats and soil types. Scale-like leaves resemble certain cypress types. Small, narrow, brownish flower heads on branch tips, each with a few purple disc florets. Single, unconfirmed verbal report of honey. Sometimes scale insects secrete honeydew abundantly, which has been seen to be collected by bees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Epilobium hirsutum (Onagraceae)	Great willowherb Shepherd's salt	N2 P2	11–5

Remarks

Southwestern Cape to EC and northwards to Europe and western Asia. Moist grassland and streamsides. Nowhere abundant in S. Africa. Source of honey in Europe, but seldom visited locally. Pellets 'pale yellow' or 'light grey'.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Erica spp. (Ericaceae)	Erica Heath *Erika* *Heide*	N0–4 P0–4	1–12 (9–1)

Remarks

Ericas are perennial shrubs with small, narrow, folded leaves. There are some 770 species in southern Africa, with the greater majority occuring in the southwestern Cape. Most ericas have short, urn-shaped corollas, with nectar accessible to bees. In the long-tubular flowers, the bees may rob nectar through slits made by carpenter bees and possibly birds. Ericas are the main source of fynbos honeys. Ericaceae honeys, which are collected predominantly from species with monad pollens, are usually of low viscosity, granulating slowly, with a dark, reddish-brown colour, and a nutty to yeasty-caramel, and sometimes bitter, taste. Such honeys have been harvested in spring, summer and autumn in different localities. One honey sample from a tetrad pollen type **Erica** had a light golden colour. The main pollens trapped May–July at Jonkershoek, and those deposited as beebread at Cape Point from May to September, were from ericas. The pollen promoted excellent brood rearing, the crude protein content in one sample being 21.8%. The colours of trapped pollen pellets were light pinkish-purple, chalky pink, light greyish-yellow, and orange-pink. Both monad and tetrad pollen types were represented.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. agglutinans (= *Syndesmanthus schlechteri*)	*Heuningbossie*	N3? P2	3–6

Remarks

Sandy hills of Elim and Napier. Very small shrublet with pink, sticky flowers, which are said to be rich in nectar, hence the Afrikaans common name.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. alexandri		N3? P?	2–4

Remarks

Rediscovered at foot of Wemmershoek Mountains in 1992, having been thought to be extinct.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. arborea**	Tree heath *Boomheide*	N3–4 P2–3	2–4

Remarks

Mediterranean. Large ornamental shrub with campanulate, white, fragrant flowers. Dark golden honey overseas. Pellets off-white to pink.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. articularis	Jointed heath	N3? P3	1–12 (1–4)?

Remarks

Southwestern Cape to EC on sandy slopes and rocky outcrops. The flowers are closely packed on branch tips. The short, light pink corolla is almost entirely covered on its outside by light pink sepals.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. baccans	Berry heath *Bessieheide*	N3–4 P1–2	9–11

Remarks

Cape Peninsula. The dark pink, urn-shaped flowers have a berry-like appearance. Honey in New Zealand is medium-amber, with a marmalade flavour. Pollen grey. Flowers harvested commercially in September.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. baueri	Albertinia heath Bridal heath *Witheide*	N P?	1–12 (8–10) (3–5)

Remarks

SC. Flowers elongated, urn-shaped, pink or white. Honeybees steal nectar. Distinctive grey-green leaves. Widely grown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. caffra	Water heath *Waterheide*	N2? P1?	7–12

Remarks

Cederberg to EC interior. Large sturdy shrub of streamsides. Flowers white to cream-coloured, tubular, 6 mm long, with a constricted flower mouth. Bees are able to reach at least some of the nectar.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. canaliculata		N3 P3	1–12 (11–2)

Remarks

George to Humansdorp. Large shrub of kloofs and gullies. Very striking when in flower and covered with pink blossoms. Pellets waxy, shiny, sand-coloured.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. capensis × laeta		N2? P1?	12–4

Remarks

Cape Peninsula natural hybrid. Pink, urn-shaped flowers also visited by other bees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. carnea**	Winter heath Snow heath *Voorjaarsheide*	N3–4 P2–3	6–8

Remarks

Central and southern Europe, where dark yellow honey is produced. Pink, urn-shaped flowers with dark, protruding anthers. Pollen light pinkish-grey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. chamissonis	Grahamstown heath	N2? P3	8–5 (9–10)

Remarks

EC. Very floriferous, erect shrublet, from flats to middle slopes. The pink flowers are shallowly cup-shaped, with a dark centre – the anthers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. cinerea**	Scotch heath Grey heath	N3 P2?	11–3

Remarks

Western Europe. Low-growing ground cover. Many garden forms, from white to deep red flowers. Long-flowering. Pollen light grey. Honey in Europe has a port wine colour.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. curvirostris	Honey-scented heath *Heuningheide*	N P	2–5

Remarks

Southwestern Cape. Rare shrub with scented, pink, bell-shaped flowers; curved style.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. deliciosa (= **E. nutans**)		N3 P1?	6–12

Remarks

Damp flats or moist mountain slopes, SC to EC. Large showy shrub when covered in dark pink, urn-shaped flowers. Source of honey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. densifolia	Knysna heath	N P2	9–5

Remarks

SC mountains. Long tubular red and yellowish-green flowers. Nectar robbing from the side.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. discolor	Ever-flowering heath	N P2	1–12 (3–4)?

Remarks

Southwestern Cape to EC. Nectar stolen from tubular flowers. This and the previous species provide dirty-white pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. dispar (= *Simocheilus dispar*)	*Rooibossie*	N2? P2?	3–9

Remarks

Albertinia sandy flats. Shrublet with pink to purplish flowers. Beekeepers use it to build up colonies. One old record of a dark honey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. equisetifolia (= *Blaeria dumosa*)		N3? P3	(10–4)

Remarks

Mountain slopes of Worcester, Paarl, Stellenbosh, and Peninsula to Bredasdorp. Small leaves closely fit the stems. The light pink flowers have large, dark anthers that supply plentiful pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. ericoides (= *Blaeria ericoides*)	Honey blaeria *Heuning blaeria*	N3–4 P1–2?	1–4 (3–4)

Remarks

Cape Peninsula to Bredasdorp. Pink, scented flowers. Heavy nectar flows recorded. Honey dark. Flowers are also commercially harvested.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. formosa	White heath *Witheide*	N2? P2?	7–11

Remarks

Swellendam to Humansdorp coastal region, as well as inland to the Kammanassie Mountains. Damp habitats: sandy seepage flats or moist slopes. Small floriferous shrub with pendulous flowers. These are shiny white, slightly sticky, rounded urn-shaped. A note by a Miss Pullinger (1924-01-24) possibly refers to **E. formosa**: 'Over the valley at Albertinia the white heath gives a good honey'.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. glabella		N2? P1–2	11–7

Remarks

Cape Peninsula to Breede River mouth. Ericoid shrublet on sandy flats. Pellets amber-coloured.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. glandulosa	Sticky-leaved heath	N2? P?	1–12 (3–9)

Remarks

SC to EC. Somewhat untidy shrub covered with glandular hairs. Tubular light pink flowers, wide enough for bees to enter.

Botanical Name	Common name	Beeplant Value	Flowering Time
E. hirta (= *E. sphaeroidea*)		N? P2?	2–8 (3–5)

Remarks

Southwestern Cape mountain slopes. All parts of the plant are slightly sticky, including the pink to white, rounded flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. hirtiflora		N2–3 P?	1–12 (1–4)

Remarks

Southwestern Cape to SC. A floriferous plant with small, pink, hairy flowers. Surplus honey of mixed origin.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. intervallaris		N2? P2?	6–1

Remarks

Southwestern Cape mountain seepages. Flowers are urn-shaped, 4-angled and red. Different flowering times at different localities.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. lateralis	Button heath	N P?	12–6

Remarks

Mountain slopes, from Tulbagh to Bredasdorp; also Swartberg. Spreading shrub with pink, rounded urn-shaped flowers ('buttons') on very long stalks.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. lusitanica**	Portuguese heath	N2–3? P1?	6–9

Remarks

Southwestern Europe. Large, hardy shrub with masses of small, white, cylindrical flowers. Surplus honey in New Zealand: 'medium amber'.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. mediterranea**	Biscay heath	N2? P1?	8–10

Remarks

Western Europe. Fragrant, coral-pink, urn-shaped to round flowers. Many cultivars from white to deep red. Tolerates alkaline soils.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. multumbellifera		N3? P1?	11–5 (12–2)?

Remarks

Tulbagh to Riversdale. Small, bushy, floriferous plant. The reddish-purple flowers have a musky scent and look like a small pomegranate. On lower, moist, sandy slopes.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. nudiflora		N2–3 P2?	2–6 (3–4)

Remarks

Southwestern Cape. Coastal flats to mountains. Both pollen and small egg-shaped flowers are pink. Large, protruding, brown anthers. Pollen crude protein 17.0% (Köttner 1991).

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. perspicua	Prince-of-Wales heath *Veerheide*	N1 P2	9–6 (2–5)?

Remarks

Southwestern Cape and SC; mainly Caledon Division. Marshes and vleis. Tubular, hairy, white-lipped, pale to deep rose flowers. Commercially harvested.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. plumosa (= *Grisebachia ciliaris*)	*Wolheide*	N P?	6–9

Remarks

Bokkeveld to Langeberg Mountains. Compact shrub of sandy slopes and plateaus. Pink flowers appear woolly.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. quadrangularis	Baby heath	N2? P1?	8–12

Remarks

From Clanwilliam through the Boland to Knysna; also inland to the Swartberg and Kammanassie ranges. It grows in different moist habitats. Very floriferous and widely cultivated. The common name refers to the very small, cup-shaped flowers that range in colour from white to dark pink. Beeplant value unknown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. shannonii		N? P3?	12–2

Remarks

Bredasdorp area. A rare white-flowered species of which the long corolla tube ends in a constricted throat. Pollen white.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. sitiens		N2 P	1–12 (10–4)

Remarks

Mountain slopes between Paarl and Caledon. Mass display of flowers in summer. Asymmetrically inflated corolla tube white or pink.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. taxifolia		N P	1–12? (1–4)

Remarks

Groot Winterhoek to Riviersonderend mountains; middle to upper slopes. Not common. Pink, urn-shaped flowers; also large pink sepals.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. versicolor		N P	1–12 (4–6)?

Remarks

Worcester to Mossel Bay. Nectar stolen from tubular red and green flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. vestita	Trembling heath *Trilheide*	N P?	1–12 (8–5)

Remarks

Mountain slopes of Riviersonderend to Langeberg. The elongated leaves tremble in the slightest wind. Nectar stolen from tubular red to pink to white flowers. It is unknown whether bees can obtain nectar via the flared corolla mouth.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. viscosissima (= *Syndesmanthus viscosus*)	*Wasbossie*	N3? P2?	11–2

Remarks

Albertinia sandy flats. Waxy, sticky, pink flowers. Surplus dark honey, strongly-flavoured. Colonies build up. Not to be confused with *wasbessie*, **Morella** sp., which is also a honeyplant in this area.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Erigeron karvinskianus** (Asteraceae)	Tufty erigeron Fleabane	N0–2 P0–2	1–12 (8–12)

Remarks

Mexico to Chile. Many pink-and-white daisies in hot weather. Popular ground cover. Established in most provinces.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Eriocephalus africanus (Asteraceae)	Wild rosemary *Wilde roosmaryn* *Kapokbos*	N2? P	1–9 (3–6)?

Remarks

Southwestern Cape to EC. Aromatic 1 m shrub on clay slopes and flats. Flowers light rose, dark centres. Limited essential oil production; also used in landscaping. More information is required for **Eriocephalus** spp. – they are mostly without bees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. ericoides	Kapok bush *Gewone kapokbos*	N0–3? P	7–4? (9–11)

Remarks

Widespread in dry parts of southern and central S. Africa. Aromatic ericoid leaves. Small insignificant reddish flowers. Earlier flowering with winter rain. An 'excellent honey plant' of Fauresmith sandveld (Smith 1966). Another old 1924 record of it being 'the main honeyplant' on a farm near Glen, Bloemfontein.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Eriosema psoraleoides (Fabaceae) (Papilionaceae)	Shrubby yellow eriosema	N2? P	10–5

Remarks

LIM, G, MP, SZ, KZN. Grasslands, woodlands, floodplains. Medium-sized shrub with trifoliolate leaves typical of many legumes. Dense, upright inflorescence of yellow flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Erlangea misera (Asteraceae)	Erlangea	N1–3 P1–3	3–6

Remarks

NC, NW, LIM, BOT, NAM. Indigenous slender to bushy annual or perennial herb of sandy soils. Similar to **Vernonia** shrublets, with dark mauve to purple flowers. Pollen white.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Escallonia** spp. and hybrid cvs. (ESCALLONIACEAE)	Escallonia	N1–3? P0–1	11–4

Remarks

South America. Ornamental evergreens: dark, glossy foliage; small decorative flowers in shades of white, pink and red; five petals are separate (loose), but form a flower tube in which nectar is accessible to bees; petal tips recurving. Wind, frost and drought hardy; also suitable for seaside conditions. Pollen collection rarely observed; pellets yellowish to biscuit-coloured. **Escallonia rubra** is best known in S. Africa, and a parent of most hybrids.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Ethulia conyzoides (ASTERACEAE)	Carter's curse Blue weed	N2? P2?	1–12 (1–3)?

Remarks

EC, KZN, SZ, MP, LIM, BOT, NAM. Annual or short-lived perennial, weedy herb. Low-lying damp places and river fringes. Aggregation of flower heads into a rounded inflorescence. Flowers purplish, fading to white.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Eupatorium atrorubens* (= **Bartlettina sordida) (= *E. sordidum*) (= *E. ianthimum*) (ASTERACEAE)	Giant ageratum	N2 P0–2?	8–10

Remarks

Mexico. Medium to large, semi-woody shrub. Flower heads pinkish-violet, fragrant, pom-pom-like. Whitish pollen. The similar hemp agrimony, ***E. cannabinum**, is less commonly grown. It has the same beeplant value, but flowers in summer.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Euphorbia decussata (EUPHORBIACEAE)	*Soetmelkbos* *Moerwortel*	N2? P1?	7–9

Remarks

Hilly areas of Namaqualand, northwards to NAM. Densely branched, leafless shrub without thorns. Palatable to stock. Branch tips taper to a non-spiny point. One of the plants of which the roots were used by Khoikhoi as an ingredient when fermenting honey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. esculenta	*Soetvingerpol* *Noordpol*	N2? P1?	3–5?

Remarks

Vicinity of Jansenville, Uitenhage, Aberdeen and Graaff-Reinet. Tuberous root fed to stock during droughts. Above-ground branches look like upright sausages covered in small, rough tiles or tubercles. Flowers sweetly scented.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. rectirama	*Springbokmelkbos*	N2? P1?	10–2

Remarks

Dry central regions of S. Africa. Erect, branched, succulent, spineless perennial. Milky latex. Bee value uncertain.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. schinzii	*Klipmelkbossie*	N0–2 P0–2	6–9 (8–9)

Remarks

KZN, northern provinces, BOT. Thorny dwarf succulent. Forms clumps from a thickened main root. In rocky areas. Pollen brownish-yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. splendens* (= **E. milii)	Christ thorn *Christus-doring*	N0–2 P0–1	1–12 (7–9)

Remarks

Madagascar. Well-known, medium-sized, ornamental shrub with long thorns on grey upright branches. Red flowers in groups of four or eight. Pollen light brown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Euryops chrysanthemoides (= *Gamolepis chrysanthemoides*) (ASTERACEAE)	Weed daisy bush	N0–2 P0–2	1–9 (2–4)?

Remarks

EC. Hardy yellow daisy bush introduced into gardens, but not well known. Quick increase from natural seeding. Main flowering probably autumn. Pellets light yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. pectinatus	Grey-leaf euryops *Wolharpuisbos*	N2? P3	1–12 (9–12)

Remarks

Southwestern Cape. Hardy ornamental garden shrub with yellow daisies and greyish leaves. Several flower flushes during the year when in cultivation. Pollen light brown to yellow. Possibly a sterile hybrid. Note from Hopefield district, 1924-01-19: '*Harpuisbos* yields a poor quality honey; also large drops of resin'. (It is unknown whether the mentioning of resin implies that it is used as a source of propolis).

Botanical Name	Common Name	Beeplant Value	Flowering Time
E. virgineus	Honey euryops *Rivierharpuisbos*	N2 P3	7–11

Remarks

Swartberg Mountains; Mossel Bay to Alexandria. Damp slopes. Masses of small, honey-scented daisies. Does well inland; encourage planting. Pollen light brown. Of **E. annae**, **E. oligoglossus** and **E. speciosissimus** it is only known that they are beeplants.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Evolvulus alsinoides (CONVOLVULACEAE)	Blue haze Wild evolvulus	N? P1?	9–5 (12–4)

Remarks

KZN, SZ, northern provinces, ZIM, BOT, NAM. Small perennial herb with relatively long, non-twining (*evolvo*) stems, which are upright or decumbent. Sandy soils of grassland, woodlands and thornveld. Leaves and stems silky hairy. Flowers up to 10 mm diameter, blue to mauve, with a white nectar guide centre, which reminds one of forget-me-not flowers. Bees collect the light-coloured pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Felicia aethiopica (ASTERACEAE)	Blue aster *Wilde aster* *Bloublommetjie*	N2? P2?	1–12 (8–10)?

Remarks

Southwestern Cape to EC, on flats and hills. A dense, leafy shrublet that roots at the nodes. Single flower head on a leafless, rough flowering stem. Light blue ray florets surround the light yellow disc

Botanical Name	Common Name	Beeplant Value	Flowering Time
F. amelloides	Garden felicia *Bloumagriet*	N0–2 P0–2	1–12 (10–2)

Remarks

Coastal bush of SC to EC. Small, hardy, popular garden shrub. Typical felicia flowers with blue ray florets and a yellow disc. Pollen light yellowish-brown or orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
F. echinata	Dune daisy *Duine magriet* *Bloublommetjie*	N2? P2?	1–12 (4–10)

Remarks

Mossel Bay to Port Alfred. Common on fixed dunes of coastal disrtricts, as well as along roads. Much-branched shrub, with stems closely covered with rough, ± triangular leaves. Yellow disc florets. The ray florets (petals) are bluish-purple and can be slightly curved or twisted. Pollen in shades of yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
F. filifolia	Fine-leaved felicia *Pers draaibossie*	N0–1 P0–2	1–12 (10–12)

Remarks

Widespread in South Africa. Flats and stony slopes, spreading as a weed. Stems hairless, light-coloured, somewhat twisted. Fine needle-like leaves. Flowers pink to lilac to light mauve to purplish, i.e. not blue. Pollen yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
F. fruticosa	Wild mauve aster *Bos-astertjie*	N P	9–11

Remarks

Southwestern Cape. Much-branched shrub covered in mauve daisies. Frequent on lower dry slopes of Cape Peninsula.

Botanical Name	Common Name	Beeplant Value	Flowering Time
F. mossamedensis	Yellow felicia *Geelblom felicia*	N0–2 P0–2?	10–5

Remarks

KZN, northern provinces, BOT. Bushveld and dry grassland, often along roads. Annual or occasional perennial with yellow flowers. Pollen loads yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
F. muricata	Common felicia *Gewone/Taai/Skaap blou-blommetjie*	N0–2 P0–3	1–12 (11–2)

Remarks

Southern Africa. Small woody shrublet with stems sparsely hairy. Also needle-like leaves. Flowers mostly white, light mauve as well. Following good rains, highest bee visitation occurs during summer and less so during autumn and winter; seldom or not at all during spring, because of other competitive beeplants. Pellets yellow. Well grazed by stock.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Ficinia spp. (Cyperaceae)	*Knoppies biesie* *Gras biesie*	N0 P0–2?	1–12 (7–11)

Remarks

Mainly southwestern Cape, few species further north. Fifth most plentiful pollen during February–April near Wellington (Köttner 1991). Pellets yellowish. Crude protein of Cyperaceae pollen a low 9.4% in one sample.

Botanical Name	Common Name	Beeplant Value	Flowering Time
*__Fuchsia arborescens__	Fuchsia	N2? P0–1?	5–8
***F. × hybrida** (Onagraceae)		N0–1 P0–1	1–12 (11–1)

Remarks

Central and South America. Popular ornamentals with bicoloured flowers: lighter sepals and darker petals. Long-flowering. Pollen whitish or bluish. The × **hybrida** parents are **F. fulgens** and **F. magellanica**, the latter being a beeplant on its own. Although **F. arborescens** is a large shrub, it has been included here.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Gaillardia aristata** ***G. pulchella** (Asteraceae)	Indian blanket flower	N0–3? P0–2?	11–5

Remarks

North America. Popular garden ornamentals. Red ray florets with yellow tips, disc floret centre purplish and somewhat raised. Double cultivars with round flower heads are seldom visited by bees. **Gaillardia pulchella** is an annual or short-lived perennial, with a shorter flowering time during summer.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Garuleum bipinnatum (Asteraceae)	Snake root *Kowerbos*	N2? P2?	11–4?

Remarks

Little Karoo, Great Karoo, FS. A fairly scarce, woody shrub of stony and gravelly ground. Finely dissected leaves provide a high-quality stock feed. Crushed leaves have a very strong smell. Long, narrow petals in two overlapping rows, white or blue, slightly drooping. Flowering is best after abundant rain, e.g. April in the southern FS.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Gaura lindheimeri** (Onagraceae)	Gaura *Pragkers*	N2 P1	11–2

Remarks

Southern USA. Tall spikes of rosy-pink to red flowers; long flowering, i.e. no mass display. Flowers open evenings, and remain open into the next day. Pollen light brownish-yellow to light yellow. There can be minor flowering outside the given dates.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Gazania krebsiana and garden hybrids (Asteraceae)	Common gazania *Rooi/Oranje gazania* *Rooi botterblom*	N0–1 P0–4	1–12 (9–12)

Remarks

Widespread in southern Africa – mostly grassland. Popular, multi-coloured, clump-forming daisies used as ground covers. Variable flower colours: white to yellow to orange to red. Petals darker at their bases. Wild plants are mainly yellow. Pollen in shades of orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
G. rigens	Trailing gazania *Rank gazania* *Strand gazania*	N0–2 P0–3	1–12 (8–11)?

Remarks

SC to KZN coasts. Popular, hardy, mat-forming perennial. Silvery leaves and yellow flowers. Pollen deep orange. Attractiveness very variable; generally with little appeal to bees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Geigeria burkei (Asteraceae)	Burke's geigeria *Burke-se-vermeerbos*	N0–1 P0–2	1–12 (12–5)

Remarks

Northern provinces. Perennial shrublet with woody rootstock. Narrow leaves with inrolled margins. Very variable habit across its distribution in grassland, bushveld and hillsides. Geigerias have yellow, daisy-type flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
G. ornativa	Common geigeria *Gewone vermeerbos*	N0–2 P0–2	9–7 (2–5)

Remarks

Central region of S. Africa, BOT, NAM. Different habitats of the Karoo, Kalahari and grassy woodlands. Strap-shaped leaves. Causes vomiting in livestock. May flower several times per season. Generally not very attractive to bees. Mainly a pollen source in winter in the Kalahari. Pellets yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
G. pectidea	River geigeria *Rivier vermeerbos*	N0–2 P0–2	10–5

Remarks

NW, NC, BOT, NAM. Mainly in silty soils of dry river beds. Lance-shaped leaves end in a sharp tip. Most times not attractive to bees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Geranium incanum (Geraniaceae)	Carpet geranium *Bergtee* *Horlosie* *Vrouebossie*	N2–3 P0–2	8–3 (8–10)

Remarks

Southwestern Cape to EC. Sandy and stony soils along the coast. Finely cut, lacy foliage. Popular garden ground cover with pink to mauve flowers, which are rarely without bees. The dark veins on the petals and the white flower centre are nectar guides. Pollen dark greyish-green. The very similar **G. multisectum** occurs from KZN to the northern provinces. It is also visited for nectar and pollen by honeybees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***G. sanguineum**	Bloody crane's bill *Pers horlosie*	N2 P1	11–2?

Remarks

Europe. Useful carpeting ornamental. The five petals have a blood-red colour, with deep purple veins as nectar guides. Pellets in shades of blue. The exotic ***G. dissectum**, with purple flowers, has been recorded as an escape in the EC. It is a perennial weed in New Zealand, providing much nectar and dull orange pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Gerbera ambigua (Asteraceae)	Pink gerbera White gerbera	N2? P2?	1–12 (6–2)

Remarks

EC, KZN, L, SZ, MP, G, LIM, ZIM. Grasslands and woodlands, often in moist situations. Leaf rosette on a thickened rootstock. Leaves cream-felted beneath. Different flower colour variants: pink or pale yellow or white.

Botanical Name	Common Name	Beeplant Value	Flowering Time
G. jamesonii	Barberton daisy	N0–1 P0–2	7–4 (9–11)

Remarks

LIM, MP. Tufted perennial on rocky hillsides. Red flower heads, with long, narrow ray florets. General sport emblem for former Northern Transvaal. Many garden forms were developed with different colours; the double types are of no use to bees. Pellets dark yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
G. viridifolia	Blushing Barberton daisy	N2 P2?	1–12 (9–11)

Remarks

EC, KZN, FS, SZ, northern provinces, ZIM and further north. Open woodland and grassland, also mountainsides. Tufted stemless plant, arising from the crown of a rootstock. Ray florets white above and yellow, pink or mauve below. The disc colour is also variable, from white to yellow to pink and even dark. Light yellow pollen pellets recorded. Common name from Zimbabwe, which alludes to the deep pink underside of the ray florets.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Glycine javanica (= **Neonotonia wightii**) (Fabaceae) (Papilionaceae)	Wild glycine Pioneer creeper	N1–2 P0–1	9–5 (12–3)

Remarks

EC, KZN, SZ, northern provinces, ZIM, BOT, NAM. Slender, but tough, hairy, perennial climber in bushveld and thickets. Typical bean leaves with three leaflets. Small white pea flowers in erect inflorescences. Seldom without bees. Pellets light grey. Restricted use as stock forage with selected cultivars.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Gnidia polycephala (Thymelaeaceae)	*Januariebos*	N0–2? P0–1?	7–10

Remarks

Karoo, FS, NW, NC, BOT, NAM. Sub-shrub with many thin stems, growing in sandy and calcareous soils. Invader in overgrazed and trampled sandveld. Poisonous to stock, particularly during flowering. Small, hairy, yellow flowers with a 7 mm long, narrow tube. The anthers are attached to the mouth of the flower tube. Two reports that *Januariebos* is a beeplant, but the author has never observed bees on the flowers yet. This was perhaps due to the wrong time of the day or dry soil. Only once were pollen-collecting bees seen on the closely related **G. capitata** during late afternoon. Eggers

& Wurst-Henning (1944) noticed that the flowers issued a strong sweet scent towards evening that seemed to stupefy the bees, which landed on the ground before they returned to the hives. Note that the common name does not refer to the flowering time.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Gomphostigma virgatum (Scrophulariaceae)	River stars *Otterbos*	N2 P0–1	10–5 (12–3)

Remarks

Central and eastern S. Africa, ZIM, BOT, NAM. Erect evergreen shrublet along rivers and watercourses, also in flowing water. Flowers white, scented, with four petals. Pollen light yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Graderia scabra (Orobanchaceae)	Wild penstemon Pink ground bells	N2? P1?	8–3 (9–11)

Remarks

SC to MP. In grassland, from coast to mountain. Shrublet from a woody rootstock. Flowers pink to deep mauve, funnel-shaped, darker-coloured throat acts as nectar guide and the uneven two lower petals as landing platform.

Botanical Name	Common Name	Beeplant Value	Flowering Time
G. subintegra	Wild penstemon Ground bells	N1–2? P1–2	8–3

Remarks

NW, G, MP, SZ. Highveld grasslands. Small herb with erect to trailing shoots from a woody rootstock. Pink, funnel-shaped corolla with a swelling on one side, of which the function is unknown – possibly dorsal pollination. White lower part of throat acts as a nectar guide. Honeybees can enter the flower tube.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Hardenbergia comptoniana** (Fabaceae) (Papilionaceae)	Sarsaparilla vine Australian lilac vine	N2? P?	8–10?

Remarks

Western Australia. Profusion of violet pea-flowers in spring. Two white spots in the centre of the flower act as nectar guides. Used as ground cover or twiner in semi-shade to full sun.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Helianthemum nummularium** (Cistaceae)	Sun rose *Sonroos*	N0 P2–3	11–3

Remarks

Europe. Evergreen ground cover with grey-green foliage. Hybrids with multi-coloured flowers. Bees shun double cultivars. Closely related to **Cistus** species.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Helichrysum argyrophyllum (Asteraceae)	Yellow strawflower	N1? P2?	12–3

Remarks

EC. Montane grassland, becoming locally common in overgrazed veld. Small, mat-forming shrub with glossy, felted leaves. Showy, yellow flower heads are 20 mm in diameter, only one or a few per flowering stem. The yellow papery bracts that surround the flower head are nearly triangular.

Botanical Name	Common Name	Beeplant Value	Flowering Time
H. cooperi	Yellow everlasting *Geel sewejaartjie*	N2? P2	12–5

Remarks

KZN, L, FS, MP. Moist grassland and vleis. Stout upright stems with large leaves. Flower heads with many bright yellow bracts. Pollen light orange or light brown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
H. cymosum	Yellow-tipped everlasting	N2 P3	9–4

Remarks

Southwestern Cape to KZN. Spreading, straggling, small shrub of moist sandy slopes. Many slender upright stems, each ending in a small yellow inflorescence. Pollen loads yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
H. kraussii	Straw everlasting	N1–2 P2–3	3–9

Remarks

Northern provinces, FS, SZ, KZN. Dense, bushy, aromatic shrub, with many, small, felted leaves covering stems and branches. Sandy soils of grassland and open woodland, from the coast to Highveld. Flower heads small, cylindrical, dull yellow, together in dense or loose inflorescences. Nectar with strong smell of the plant. Pollen light yellowish-brown, with a slightly bitter and resiny taste.

Botanical Name	Common name	Beeplant Value	Flowering Time
H. nudifolium (= *H. coriaceum*)	Hottentot's tea *Hottentotstee*	N0–2 P0–3	10–5 (12–2)

Remarks

In grassland, from the Cape to tropical Africa. Pale yellow, flat-topped inflorescence on a long upright flower stalk. Pellets dark orange. Aromatic leaves traditionally used as a tea.

Botanical Name	Common Name	Beeplant Value	Flowering Time
H. odoratissimum	Cold-remedy everlasting	N P2?	8–12

Remarks

WC to KZN and further north. Straggling, aromatic, white-woolly shrublet on grassy or rocky slopes. Pale yellow flower heads without ray florets, together in half-rounded inflorescences. The leaves are pleasantly to strongly scented and used medicinally.

Botanical Name	Common Name	Beeplant Value	Flowering Time
H. patulum	Hottentot's bedding *Kooigoed*	N? P?	9–2 (12–1)

Remarks

Cape Peninsula to Mossel Bay. Woolly shrub of coastal bush and dry rocky sites. Small cream-coloured flowers, honey-scented. Beeplant value unknown. The very similar **H. petiolare** of the SC and EC has the same main flowering time and is also visited by honeybees. Both are non-showy everlastings.

Botanical Name	Common Name	Beeplant Value	Flowering Time
H. pilosellum	Large-leaved everlasting	N0–2 P0–1?	8–3 (10–11)

Remarks

EC, KZN, L, FS, SZ, MP, LIM, ZIM. Perennial herb, sprouting from a woody rootstock. High altitude grassland, but also near coast in KZN. A few large, broad leaves at ground level. Stout, upright, leafless flowering stalk. Infloresence a flat-topped cluster of light yellow flower heads without ray florets. Honeybees are not often seen on the flowers. Earlier flowering in burnt veld following rain.

Botanical Name	Common Name	Beeplant Value	Flowering Time
H. rugulosum	Felted everlasting *Vilt sewejaartjie*	N0–2? P0–2?	11–3

Remarks

SC to KZN to NW. Small perennial upright herb of stony or sandy grassland, particularly where this is disturbed. Leaves white-felted. Small compact yellow and pinkish flower heads. Pollen deep orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
H. splendidum	Cape gold everlasting	N1 P2	10–2

Remarks

Swartberg and Outeniqua mountains to tropical Africa. Slender, sprawling shrub. Rocky slopes and forest margins. Long stems are closely leaved towards their tips. Leaves long, narrow, felted. Inflorescence a loose or compact corymb of golden-yellow, sweetly-scented flower heads.

Botanical Name	Common Name	Beeplant Value	Flowering Time
H. umbraculigerum	Umbrella everlasting *Kerriekruie*	N2? P2?	1–4

Remarks

EC, KZN, L, FS, MP, LIM, ZIM. Tufted perennial to 1 m tall, in different habitats: grassland, scrub and forest margins. Unusual yellow inflorescence, consisting of many flower heads webbed together with woolly hairs, forming a flattened, umbrella-like cluster. Leaves are said to have a curry smell (Afrikaans name), but the plants are nevertheless eagerly grazed by stock.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Heliotropium amplexicaule** (Boraginaceae)	Blue heliotrope	N1–3 P0–1	10–3

Remarks

Brazil. Established in veld of LIM, G, KZN, EC. Grassland and disturbed places, particularly in and around Pretoria. Small blue to mauve florets with yellow centres on a curled inflorescence. Minor honey source in Queensland. Exotic ***H. indicum** and ***H. currasavicum** have also become established in S. Africa. They are well-visited by bees at times.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***H. arborescens** (= *H. peruvianum*)	Heliotrope Cherry pie	N0–3? P0–1	1–12 (12–2)

Remarks

Peru. Small, short-lived perennial garden shrub. Fragrant purple to white posies. Not frost hardy. Pollen shades of beige.

Botanical Name	Common Name	Beeplant Value	Flowering Time
H. nelsonii	String-of-stars Common veld heliotrope *Gewone hamelstertjie*	N2? P1?	9–5 (11–2)

Remarks

Southern Africa, except in the southwest. Perennial herb with woody rootstock. White flowers with yellow centres, on one side of the curled inflorescence.

Botanical Name	Common Name	Beeplant Value	Flowering Time
H. strigosum	Single-star heliotropium	N2? P0–1?	10–7

Remarks

NW, LIM, BOT, NAM. An infrequent annual or perennial of sandy soils in dry regions. No curled inflorescence as in other species. Small white single flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Hermannia spp. (Malvaceae) **H. cuneifolia** **H. disermifolia** **H. grandiflora** **H. linearifolia** **H. modesta** **H. multiflora** **H. pinnata** **H. pulchella** **H. saccifera** **H. stricta** **H. trifurca**	Hermannia Doll's rose *Poprosie* *Geneesbossie* *Pleister* *Broodkos*	N1–4? P0–3?	1–12 (7–10)

Remarks

NAM, NC, WC, FS, NW, with few species in the eastern summer rainfall areas. Perennial shrublets, with only a small number of annuals or biennials. Mostly on dry, sandy or stony flats and slopes. They have small, drooping, yellow to orange to red flowers. The five petals are characteristically twisted, giving rise to the common name 'doll's rose'. The Afrikaans name, *broodkos*, possibly refers to bee bread. The main flowering time, July–October, pertains to the winter rainfall region, where most species occur. There are two records of dark *komynheuning* from **H. saccifera**, the *komynbossie*. A nectar flow was observed in **H. modesta**, the common hermannia, after good rains and high relative humidity. A good honey flow from the desert rose, **H. stricta**, is on record from mountainous regions of southern Namibia. More information is needed on the plant/bee and plant/weather interactions of these potentially useful beeplants.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Hermbstaedtia glauca (= *Celosia glauca*) (Amaranthaceae)	*Bokhout*	N2? P2	7–10

Remarks

Namaqualand, Bushmanland, NAM. Shrub with many upright blue-green stems to 0.7 m high. Leaves few, small, narrow. Dense, globose flower heads on the tips of the stems; cream-coloured to light pink. Grows in sandy sites.

Botanical Name	Common Name	Beeplant Value	Flowering Time
H. odorata (= *C. odorata*)	Red cat's tail *Rooi-aar katstert*	N2 P2?	9–6 (3–4)

Remarks

NC, NW, LIM, ZIM, BOT, NAM. Sandy areas of grassland and open woodland. Slender, erect stems from a woody rootstock. Pink to reddish flowering spikes. Blooms well after adequate rain. Probably a good pollen source: information lacking.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Hertia pallens (Asteraceae)	*Springbokbos*	N1–3 P1–3	8–10

Remarks

EC, FS, NW, NC, NAM. Plains with sandy soil, particularly with underlying lime. Woody shrub with many stems. Flower head: green, urn-shaped bract base; few yellow ray florets, but long orange to yellow disc florets. Colonies build up well. A light-coloured, quick-granulating honey at times in NW.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Heterolepis aliena (Asteraceae)	Heterolepis *Rotsgousblom*	N2? P2?	9–1

Remarks

Cederberg to Witteberg and Hermanus. Sprawling shrub with crowded narrow leaves. Rocky slopes and in crevices. Flower head with many slender yellow ray florets, reminiscent of a mesemb flower. Pellets orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Hibiscus caesius (MALVACEAE)	Riverine hibiscus	N0–2 P0–2	9–5 (12–3)

Remarks

NW, LIM, ZIM, BOT, NAM. Perennial shrub along river courses. Flowers light yellow with dark purple centre. Nectar is only collected after rain or under humid conditions. Red pollen gathered during early morning or late afternoon.

Botanical Name	Common Name	Beeplant Value	Flowering Time
H. calyphyllus	Large yellow wild hibiscus	N2? P1?	1–12 (12–4)

Remarks

EC, KZN, SZ, northern provinces, ZIM, BOT, NAM. Different habitats, dry and moist. Like most wild **Hibiscus** species, the flowers are yellow with a dark reddish-brown centre. Flowers only after rain in more arid regions.

Botanical Name	Common Name	Beeplant Value	Flowering Time
H. engleri (= *H. irritans*)	Bushveld hibiscus Stinging hibiscus	N1? P? EN?	11–5

Remarks

KZN, SZ, northern provinces, ZIM, BOT, NAM. Small perennial shrub of bushveld and valley forests. Covered with sharply-pointed, star-shaped, irritating bristles. Flowers variable: mostly yellow with dark reddish centre. Active extra-floral nectaries, two per sepal, brown colour. Bee value unknown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
H. ludwigii	*Roostou*	N2? P1?	12–5

Remarks

SC, EC, KZN. Coastal forest and bush, often in damp localities. Yellow nodding flowers with dark red throat.

Botanical Name	Common Name	Beeplant Value	Flowering Time
H. pedunculatus	Forest pink hibiscus	N2? P?	11–5

Remarks

EC, KZN, MP, LIM. Slender shrub in semi-shade of forests and thickets. Leaves with three rounded lobes. Pale pink flower on a long thin stalk. Bees collect the nectar through the open spaces between the petal bases. Beeplant evaluation based on a single midday observation.

Botanical Name	Common Name	Beeplant Value	Flowering Time
H. surratensis	Prickly hibiscus creeper	N2? P?	9–5 (3–4)

Remarks

KZN. Scrambling herb, covered in small, hooked prickles. Weed in cultivated fields near the coast. Deep yellow flowers with a large, reddish-brown centre.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Hirpicium bechuanense (Asteraceae)	Bristle daisy Botswana marigold *Haarbossie* *Stekelmagriet*	N0–2? P0–2?	9–5 (1–3)

Remarks

Northern provinces, ZIM, BOT. Slender, erect, short-lived perennial herb with bristly stems. Sandy soils of open grassland, often alongside roads. Yellow daisy flowers with long, slender ray florets. Lower surface of leaves woolly. When broken, the plant exudes latex.

Botanical Name	Common Name	Beeplant Value	Flowering Time
H. gazanioides	Spiny daisy *Haarbossie*	N0–2 P0–2	1–5

Remarks

NC, NAM, BOT. Robust annual/perennial? herb with spiny leaves. Grows near pans and dry river beds. Daisy with yellow ray and disc florets. Flower heads are 'hairy' after flowering. More than one blooming period. Good rains promote nectar flow. Pollen yellow. **Hirpicium** pollen, called 'spineless dandelion' type for the sake of convenience, can possibly be used as an indicator type or standard for honeys from the arid and semi-arid regions of southern Africa.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Hoslundia opposita (Lamiaceae)	Orange bird berry	N2? P?	10–2

Remarks

KZN, SZ, MP, ZIM, BOT, NAM. Soft shrub or spreading herb in open woodland. Leaves have a strong, unpleasant scent. People in Mozambique apply crushed leaves to repel stinging bees. Orange-coloured, berry-like fruit, made up from the flower calyx – a most unusual occurrence in the mint family.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Hygrophila auriculata (Acanthaceae)		N3? P2	6–8

Remarks

KZN, SZ, MP, NAM. Moist grassland and forest margins; also on edges of water. Upright herb with long narrow leaves. Mauve flowers in whorls, only a few are open at a time. Leaf and flower whorls have long brown spines.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Hymenolepis crithmifolia (= **Athanasia crithmifolia**) (= *A. parviflora*) (Asteraceae)	Coulter bush *Klaaslouwbos* *Kouterbos*	N1–3 P2–3	10–1

Remarks

Namaqualand to Riviersonderend Mountains. Sandy slopes and flats. Sometimes a weed of fallow lands. Woody shrub with leaves divided into needle-like segments. Yellow flower heads are close together in a flat-topped inflorescence. The nectar is coloured, with a strong unpleasant smell. 'Very bitter, unpalatable honey' reported from Tulbagh in November.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Hypericum calycinum** (HYPERICACEAE)	Gold flower Rose-of-Sharon	N0 P2	11–3

Remarks

Asia Minor. Vigorous ground cover for use under trees. Rose-sized yellow flowers. One of the best **Hypericum** ornamentals.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Hypoestes aristata (ACANTHACEAE)	Purple ribbon bush *Pers lintbos* *Seeroogblommetjie*	N1–3 P0–2	1–8 (4–6)

Remarks

SC, EC, KZN, SZ, MP, LIM. Thickets and forests. Popular 1 m high shrub for semi-shade. Flowers have two pink lips with purple nectar guides. Pollen purple. Long-flowering. Hardy: loses leaves in drought.

Botanical Name	Common Name	Beeplant Value	Flowering Time
H. forskaolii	White ribbon bush *Wit lintbos*	N0–3 P0–2	1–12 (2–5)

Remarks

EC, KZN, northern provinces, ZIM, BOT, NAM. Straggling perennial herb of rocky grassland, thickets and forests; coast to mountains. Leaves covered in short hairs. White, 2-lipped flowers with purple nectar guides. Pollen dark purple.

Botanical Name	Common Name	Beeplant Value	Flowering Time
H. triflora	Pink ribbon bush *Pienk lintbos*	N2 P2	2–7

Remarks

Eastern S. Africa to tropical Africa. Slender straggling shrublet of forest floors. Two flower lips in shades of pink, with prominent dark nectar guides.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Hypoxis hemerocallidea (= *H. rooperi*) **H. obtusa** (HYPOXIDACEAE)	Yellow star flower *Geel sterblom*	N0? P1–3	8–4 (9–10)

Remarks

EC, KZN, FS, northern provinces, ZIM. Grassland and open woodland. Perennial with a large corm. Leaves lily-like; sparsely to densely hairy. Clusters of yellow flowers on erect to sprawling stems. Pollen yellow to orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Iberis sempervirens** (Brassicaceae)	Evergreen candytuft *Skeweblom*	N2? P2?	7–10?

Remarks

Mediterranean. Evergreen, frost-hardy shrublet with white, rounded flower heads. Florets have two small and two large petals, the latter on which bees land. One record of olive pollen. The annual candytuft, ***I. umbellata**, has flowers in shades of pink and mauve. It may flower in spring and summer. The bee value seems to be the same as that of the evergreen candytuft.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Impatiens hochstetteri (= *I. capensis*) (Balsaminaceae)	Common wild impatiens Wild balsam	N3? P1?	1–12 (11–4)

Remarks

SC to KZN, SZ, MP, LIM and northwards to tropical Africa. Annual or perennial herb of moist forest patches and forest margins. Flowers pinkish-mauve, with pale yellow and darker pink blotches in the centre that act as nectar guides. The two enlarged lower petals are deeply 2-lobed. Bees are able to obtain nectar from the thin, curved flower spur. Inter alia a record of honeybees collecting 'abundant nectar'.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Indigofera spp. (Fabaceae) (Papilionaceae) *I. costata* (= **Indigastrum costatum**) **I. daleoides** **I. spicata** **I. langebergensis**	Indigo *Rooi-ertjie*	N0–3? P0–1?	1–12 (9–1)

Remarks

Southern Africa. Different habitats, from Fynbos to Karoo mountain slopes to Highveld grasslands. Erect or trailing shrubs; some with a woody rootstock. Compound leaves with three or more leaflets. The colour of the showy pea flowers varies from pink to deep red. Pollen of *I. costata* is yellowish-brown. Honeybee visits to flowers have rarely been recorded, probably because only strong solitary bees are able to forcefully open the flowers to reach the nectar. Flowering times variable and for periods that can span several months. In semi-arid regions more than one flowering is possible, depending on rainfall.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Ipomoea ficifolia (Convolvulaceae)	Fig-leaf morning glory	N? P2	9–6

Remarks

EC, KZN, from coast to Midlands. A twiner of grassland, scrub and forest margins. Magenta-pink morning glory flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
I. pes-caprae	Dune morning glory *Strandpatat*	N1–3? P2	12–3

Remarks

EC, KZN. Trailing herb on sandy beaches. Woody rootstock. Flowers pink with magenta centre. Pollen white.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***I. tricolor**	Blue morning glory	N? P0–1	12–3

Remarks

Tropical America. Ornamental creeper with large leaves. Flowers in shades of blue. Dark lines and white throat are nectar guides.

Botanical Name	Common Name	Beeplant Value	Flowering Time
I. wightii	Small morning glory	N2? P2?	4–1

Remarks

EC, KZN, SZ, MP, LIM, ZIM. Low-lying, moist places. Perennial twiner with stout, firm stems. Flowers small, in clusters, with very hairy calyx; blue, pink or purple.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Isoglossa ciliata (ACANTHACEAE)	Hairy buckweed	N3? P1?	1–12? (2–4)?

Remarks

SC, EC, KZN. Softly hairy shrub of streambanks and forest margins. Flower bracts very hairy. Two-lipped flowers white to pink; lower lip with prominent maroon nectar guides.

Botanical Name	Common Name	Beeplant Value	Flowering Time
I. eckloniana	Honey buckweed Hlalwane *Kiesieblaar* *Sewejaarbossie*	N0–3 P0–1?	12–5 (2–4)

Remarks

EC, KZN, SZ, MP. Sprawling to upright herb in thornveld, particularly along the major river valleys of KZN. Excellent nectar flows only every 7–10 years. No flowering in between. This phenomenon is known as 'masting' in plants. White 2-lipped flowers, the lower lip with a prominent nectar guide that is raised and has a purple fishbone pattern. Short intense flow, after which all plants die, leaving plentiful seeds for the next generation of plants. Honey: very light colour, slow granulation, distinctive mild flavour. Moonlight foraging is on record. Large-scale migration of wild swarms into river valleys during flowering. This plant is confused with **I. woodii** (see next entry).

Botanical Name	Common Name	Beeplant Value	Flowering Time
I. woodii	Forest buckweed	N1–3? P1?	3–7

Remarks

EC, KZN. A large dense shrub in forest understorey, particularly near the coast. Leaves larger than in other species. White, 2-lipped flowers. The lower lip also has a raised, reddish fishbone nectar guide. Unlike **I. eckloniana**, it flowers every season, but never *en masse* as to provide a reliable honey flow. The flowering time is also later.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Justicia spp. (Acanthaceae)	Justicia	N1–2 P0–2?	1–12 (11–3)
J. anagalloides			
J. flava			
J. heterocarpa			
J. protracta			

Remarks

Southern Africa, except moist winter rainfall region. Small shrubs or herbs. Grassland and woodland, from coast to bushveld, mostly in sandy soil or rocky outcrops. Flowers clustered on an upright stem, or singly in axils of leaves. Two-lipped flowers white, blue or yellow. Upper lip a shallow hood containing the style and two stamens. Lower lip wide, 3-lobed, and with conspicuous nectar guides.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***J. brandegeana** (= *Beloperone guttata*) (Acanthaceae)	Shrimp plant *Garnaalplant*	N0–1 P0–1	1–12 (1–4)?

Remarks

Mexico. Soft, evergreen shrub to 1 m high. Flowers on drooping spikes, hidden inside showy bracts coloured bronze, pink or brick-red. Bracts expose only a few flowers at a time when these are ready to be pollinated. Nectar collection has also been observed through carpenter bee slits in the relatively long corolla tube.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Kochia tricophylla (Chenopodiaceae)	Flame bush *Vuurbos*	N0 P2?	3–5

Remarks

FS, EC. Perennial, round to conical dwarf shrub to 0.75 m high, with cypress-like foliage. Flowering branch tips discolour to reddish, hence the common name. Limited use of other **Kochia** spp. as stock fodder in S. Africa and Australia. Restricted cultivation of the ornamental mock cypress, ***K. scoparia** from Eurasia, from which bees collect a brownish pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Lactuca inermis (= *L. capensis*) (Asteraceae)	Wild lettuce	N1 P2	1–12 (9–12)?

Remarks

Southern Africa, from coast to Highveld. Herb of previously disturbed areas; sometimes in colonies. Not common. Small, star-shaped, white to light mauve flowers on long smooth stems. Pollen cream-coloured.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Lagenaria sphaerica (Cucurbitaceae)	Wild melon *Wilde kalbas*	N2? P1?	8–6 (12–4)

Remarks

Knysna to tropical Africa. Perennial herbaceous climber belonging to the pumpkin family. Low-lying riverine forests. Large white open flowers. Five petals separate, crinkly, with green nectar guides. Three large orange stigmas in female flowers. Round green fruit mottled white.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Lamium galeobdolon** (Lamiaceae)	Yellow deadnettle *Geel dowe-netel*	N1–2 P0–1	9–12

Remarks

Eurasia. Ground cover with trailing stems. Flowers small, hooded, yellow. They are carried in a succession of leafy, terminal whorls. Deadnettles: nettle-like plants that are non-stinging.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***L. maculatum**	Spotted deadnettle *Gevlekte dowe-netel*	N1–2 P0–2	9–3

Remarks

Europe. Semi-shade ground cover with variegated leaves. Flowers mauve, pink or white. Nectar is collected from the front of the flower, or in the calyx cup after the corolla has dropped. Pollen pellets reportedly red. In **Lamium** species the flowers are 2-lipped, the upper lip forming a hood, the lower broadly 2-lobed and serrated. Generally long-flowering.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Lampranthus spp. (Aizoaceae)	Common mesemb *Gewone rooi en oranje vygies* *Kruipvygies*	N0–3 P0–3	1–12 (8–10)

Remarks

Broad band (coast to interior) along the western and southern coasts of NC, WC, EC. Perennial erect subshrubs or ground covers. Familiar showy garden vygies with shiny flowers. A large genus with 227 described species. Pollen pellets light lemon, matt white or light yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Lannea edulis (Anacardiaceae)	Wild grape *Grond druif*	N2? P2?	9–10

Remarks

KZN, SZ, northern provinces, ZIM, BOT, NAM. Grassland and open bushveld. Large underground stem from which short branches develop annually. Small, insignificant, yellowish flowers. Better known for the edible red to blackish small fruit near the ground.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Lantana montevidensis** (= *L. sellowiana*) (Verbenaceae)	Creeping lantana	N0–2 P0?	1–12 (10–4)

Remarks

South America. A spreading shrub that produces mauve flowers with white centres, which act as nectar guides. Carries flowers most of the year in warm areas. Does not attract bees often.

Botanical Name	Common Name	Beeplant Value	Flowering Time
L. rugosa	Grassland lantana	N2? P0?	9–6

Remarks

Southern Africa, except winter rainfall areas. Erect, much-branched, aromatic shrub; on koppies and in grassland and open woodland. Flowers pink to purplish, clustered on axillary stalks. Small purple 'berries' are edible. There is one record of **L. mearnsii** being well-attended by honeybees. In is also an indigenous shrub somewhat similar to the above one.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***L. trifolia**		N0–1 P0	10–5?

Remarks

South America. Established to a limited extent in LIM, MP, SZ, KZN. Various wooded habitats. Medium to large shrub with leaves in whorls of three. Pink flower clusters on long stalks.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Lathyrus latifolius** (Fabaceae) (Papilionaceae)	Everlasting pea	N1–2 P0–1	10–1

Remarks

Europe. Perennial twiner useful for covering banks. Flowers pink to mauve. The two keel petals have bulbous swellings – the function of which is unknown to the author.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Lavandula pterostoechas** (Lamiaceae)	Fernleaf lavender	N0–3 P0?	1–12

Remarks

Canary Islands, Mediterranean. Cold-, heat- and drought-tolerant subshrub with short fern-like leaves. Many, long, upright and branched flowering stems with small flowers of light blue, mauve and purplish-blue colours. Although flowers may be present throughout the year, they are fewer during hot summers or cold winters. The plants have no scent or taste of lavender. The cultivars 'Blue Canary' and 'Sidonie' are available in South Africa. The fernleaf lavenders **L. canariensis**, **L. multifida** and **L. pinnata** are either regarded as subspecies of **L. pterostoechas**, or as distinct species and parents of a hybrid **L. pterostoechas**.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Lebeckia linearifolia (Fabaceae) (Papilionaceae)	Blue pea bush *Blou ertjiebos*	N0–2 P?	9–11

Remarks

NC, NAM. Shrub up to 1.5 m. Greyish-blue leaves and yellow pea flowers. Sand dunes, river beds. Light-coloured honey in Kgalagadi Transfrontier Park.

Botanical Name	Common Name	Beeplant Value	Flowering Time
L. multiflora	*Kusfluitjiesbos*	N2? P?	3–10 (7–9)

Remarks

WC, NC, NAM. Sprawling ground cover to 1.5 m high shrub, depending on location. Sandy and stony habitats, from Namibia to Velddrif. Silvery trifoliolate leaves and yellow pea flowers, which may cover the shrub.

Botanical Name	Common Name	Beeplant Value	Flowering Time
L. sericea	*Blou fluitjiesbos*	N3? P1?	7–4 (8–10)?

Remarks

Rocky places of Richtersveld, Namaqualand, to Clanwilliam. Grey, densely-branched shrub up to 1.5 m. Young stems, leaves and pods are covered in minute silvery hairs. Pea flowers mostly yellow; also cream-coloured. The very similar, but hairless **L. cytisoides**, is also a beeplant of unknown value.

Botanical Name	Common Name	Beeplant Value	Flowering Time
L. spinescens	*Sandganna*	N0–2? P?	1–12? (3–5)? WR (10–3)? SR

Remarks

NAM to Clanwilliam to greater Karoo. Variable shrub to 1 m, rigid, thorny, preferring sandveld in the Karoo, mainly in association with bushman grass. Pale to mid-yellow pea flowers in clusters, or only a few together. Valuable grazing.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Leipoldtia schultzei (= *L. constricta*) (AIZOACEAE)		N2? P0–1?	4–9 (8–9)

Remarks

Namaqualand to Humansdorp. Sprawling mesemb shrublet with reddish branches. Rocky or sandy slopes and flats. Succulent leaves triangular in cross-section. Newly-opened flowers have a central cone of staminodes. Petals pink to light purple.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Leonotis leonurus (LAMIACEAE)	Common leonotis Minaret flower *Wilde dagga*	N0–2 P0–2	2–9 (4–6)

Remarks

Southwestern Cape to eastern S. Africa. Dune scrub, grassland and forest margins. Long narrow leaves. Nectar through sunbird-pierced holes, or inside the calyx from which corolla has fallen, or via flower front. Pellets light lemon to pale orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
L. ocymifolia	Broadleaf leonotis Forest leonotis	N1? P1?	1–7 (3–5)

Remarks

Southern and eastern S. Africa to tropical Africa. In and around forests, grassland and rocky slopes. Only two records of nectar and pollen foraging, both from outside S. Africa. The plant and its flowers are superficially similar to the common leonotis, but its leaves are oval, with a long petiole. The *klipdagga*, **L. intermedia**, has dull orange flowers with much nectar, which is also collected by bees. **Leonotis nepetifolia**, the annual wild dagga, has been recorded as a beeplant in East Africa.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Leptocarpus spp. (= **Restio** spp.) (RESTIONACEAE)	Cape reed Restio	N0 P1	2–4

Remarks

Species near Wellington not identified. Pellets yellowish; crude protein 9.9% (Köttner 1991). [**Leptocarpus** spp. now classified under **Restio** spp.].

Botanical Name	Common Name	Beeplant Value	Flowering Time
Lessertia capensis (FABACEAE) (PAPILIONACEAE)	*Harslagbossie*	N P?	8–10

Remarks

Southwestern Cape. Scrambling herb of mountain fynbos. Red pea flowers congested on a leafless stem. No other information besides nectar bees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
L. frutescens (= **Sutherlandia frutescens**)	Cancer bush *Kankerbossie*	N2 P2	5–12 (7–8)

Remarks

NAM, BOT, NC, WC, FS. Flats, ridges and disturbed gravelly areas. Soft-wooded 1 m high perennial shrub, but short-lived. Long-flowering. Nectar secretion only starts at around 15°C. Pollen is collected from the front of the flower, but nectar between the petals and the calyx cup. Pellets light brown. Good grazing for stock. Also a minor pharmaceutical crop.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Leucospermum prostratum (Proteaceae)	Creeping pincushion Yellow trailing pincushion	N2? P?	7–12

Remarks

Southwestern Cape sandy flats. Mat-forming shrublet. Many small, scented, round, apricot-coloured flower heads. High bee activity recorded.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Leucosphaera bainesii (Amaranthaceae)	Wool bush *Silwerbossie*	N1? P?	2–5

Remarks

NC, NAM, BOT, LIM. A silvery dwarf shrub on calcareous outcrops along dry river beds. Hairy flower heads. Beeplant value not known, but some nectar bees were observed.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Liatris** spp. (Asteraceae)	Gayfeather	N2? P2?	2–5
L. elegans			
L. pycnostachya			
L. spicata			

Remarks

North America. Herbaceous perennials with a woody rootstock. Dense spikes of fluffy-looking flowers in shades of pink and purple; long-flowering. Pollen pellets light yellow to biscuit-coloured. It is interesting that the flowers open from the top of the spike downwards. Not widely grown in S. Africa.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Limonium dufourii**	Giant statice *Papierblom*	N1–3 P0–3	1–12 (4–12)?
***L. perezii** (Plumbaginaceae)			

Remarks

Canary Islands, Spain. Most commonly encountered species in gardens. Purple and white flowers. Pellet colours recorded as whitish, lemon-coloured, light yellow and beige.

Botanical Name	Common name	Beeplant Value	Flowering Time
L. peregrinum	Sea lavender *Papierblom* *Strandroos*	N2 P	8–1

Remarks

Southwestern Cape coast. Leafy sandveld shrublet. Flowers rose or mauve, on wiry stems, congested in flattened flower heads.

Botanical Name	Common Name	Beeplant Value	Flowering Time
L. scabrum	Dune lavender *Papierblom* *Brakblommetjie*	N2? P3?	7–5 (10–1)?

Remarks

Cape Peninsula to EC. Coastal dunes, rocks, estuaries. Flowers lavender-coloured. Pellets light lemon to light yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***L. sinuatum**	Statice *Papierblom*	N3? P1?	6–3

Remarks

Mediterranean. Annual or biennial in cultivation. Escapes are apparently perennial. Found along roadsides from Vanrhynsdorp to Cape Peninsula. Late flowering, December–March, in cultivation.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Limosella longiflora (Scrophulariaceae)	Mudwort *Modder-rankie*	N0? P0–3	1–12 (12–4)?

Remarks

NC, NW, G, MP, FS, L, EC. Small creeper in mud of dams, pools and marshes. May flower under frost conditions. Pollen greyish-green. **Limosella** made up 18% of pollen trapped in April, and 82% collected in July in the southern FS.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Liparia splendens (Fabaceae) (Papilionaceae)	Mountain dahlia *Skaamblom* *Klipblom*	N? P?	1–12

Remarks

Southwestern Cape to SC. Shrub of mountain slopes. Orange pea flowers in dense, nodding heads. Bee-visited, but no further information.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Lippia scaberrima (Verbenaceae)	Mint lippia *Mentbossie*	N1–3 P0–1	10–4

Remarks

NC, BOT, NW, G, FS, MP. Small, 0.5 m high shrub of grassland. Leaves have a minty smell. Small pellets olive-coloured. Another small shrub, **L. rehmannii** or lemon lippia, has the same flowering time and beeplant value as the mint lippia. It is much-favoured by honeybees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Lobelia tomentosa (= *L. coronopifolia* in part) (Lobeliaceae)	Buck's horn lobelia *Kussing lobelia*	N2? P1?	1–12 (10–4)

Remarks

Southwestern Cape to coastal grasslands of KZN. The narrow leaves with strongly-toothed margins are clustered at ground level. Flowers usually purplish-blue, also pink or white. Not known how much nectar the bees obtain from the 15–30 mm long flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
L. pinifolia	Pine-leaved lobelia *Naaldblaar lobelia*	N1? P?	1–12 (12–4)

Remarks

Southwestern Cape to SC. Erect blue-flowered shrublet of rocky lower slopes. Needle-like leaves. It is not known whether the longer-tubed, pink flower form of this species in the SC is visited by honeybees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Lobostemon fruticosus (Boraginaceae)	*Douwurmbos* *Luibos*	N3 P3?	5–12 (8–10)

Remarks

WC to SC. Ornamental, rounded, hairy shrub of sandy flats. Flowers blue, pink or white. Two other beeplant species are **L. belliformis** and **L. montanus**. More information is needed on plant/bee interactions of this potentially profitable genus. **Lobostemon** spp. of the Cape flora have their counterpart bee flowers in **Echium** spp. of the Mediterranean flora.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Lotononis laxa (Fabaceae) (Papilionaceae)	Lax lotononis *Slap lotononis*	N? P2?	9–11

Remarks

Northern provinces, NC, FS, L, EC. Perennial herb of sandy grasslands. Prostrate or partly raised stems that are closely covered in silvery hairs. Pea flowers yellow, changing to orange, in groups of 3–5 along stems. Nico Uys (1991-10-11): 'Grains of sand stick to the light yellow pollen loads when bees walk from one runner to the next. These grains are later thrown out in front of the hive.' The indigenous **L. bainesii** has been planted as a pasture crop in Australia, where it is said to provide nectar and pollen for bees during spring and autumn flowering.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Lotus discolor (Fabaceae) (Papilionaceae)	Coral flowers	N3? P1?	1–12

Remarks

EC, KZN, SZ, MP, G, LIM to tropical Africa. Bushy shrub up to 0.6 m high, in moist grassland, from coast to Highveld. Inflorescence is a long flower stem with a bunch of small flowers: cream-coloured, tinged with pink; two large side petals. The compound leaves of **Lotus** are typical: three leaflets on the tip of the leaf stalk, plus two smaller ones at the base of the stalk, next to the plant stem. In Ethiopia this species is an important source of honey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Macrotyloma axillare (Fabaceae) (Papilionaceae)	Lime-yellow pea	N0–2 P?	8–6 (12–3)?

Remarks

EC to tropical Africa. Dense trailing or creeping herb from a woody rootstock. Woodland and grassland. Pale greenish-yellow pea flowers, with large standard or top petals, and much reduced wing petals and keel. Foraging observed all day. Carpenter bees also visit the flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Malephora crocea (Aizoaceae)	Copper vygie *Kopervygie*	N0–1 P0–2	5–9

Remarks

Saldanha Bay to Namaqualand. Tough, sprawling succulent. Recent garden introduction as ground cover. Flowers bronze to red. In cultivation flowering may extend beyond the time given. Pollen in shades of yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Melanthera scandens (Asteraceae)	Melanthera	N2? P2?	9–5

Remarks

EC, KZN, SZ, MP. Erect or scrambling herb in various moist sites: in swamps, along streams, on forest margins. Superficially the plant resembles the Singapore daisy or wedelia. Notched ray florets in shades of yellow. Disc florets green, changing to yellow on opening. Flower head about 30 mm in diameter.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Melhania prostrata (Malvaceae)		N1 P?	12–3

Remarks

EC, KZN, SZ, FS, northern provinces. Open bushveld and grassland, often in shady sites. Somewhat woody shrublet with spreading or prostrate branches. Unicoloured yellow flowers without nectar guides; night-flowering, when they are scented; start opening afternoons.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Melianthus comosus **M. major** (Melianthaceae)	Touch-me-not Honey flower *Heuningblom* *Kruidjie-roer-my-nie*	N0–3 P1–2	3–11 (8–10)

Remarks

Karoo, FS, southwestern to EC. Stony slopes and stream banks. Widespread in dry as well as humid areas, but nowhere abundant. Bruised leaves are bad-smelling. Reddish flowers with copious dark nectar, which is often ignored, probably due to the low 11% sugar. Confirmed honey reports from Gamkaskloof, the Middelburg district and the area south of the Orange River between Hopetown and Colesberg. Honey: black, good density, smell somewhat medicinal, taste raisin- and toffee-like. Pollen light brownish-yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Melolobium candicans	*Heuningbossie*	N1–4?	1–12
	Stroopbossie	P0–1?	(5–9)
M. canescens	*Duikerbos*		
	Voëltjie-kan-nie-sit-nie		
M. microphyllum			
(Fabaceae)			
(Papilionaceae)			

Remarks

EC, Karoo, FS, NW, NC, NAM. Different habitats, but mostly on stony slopes and ridges. Small bushes with long spines and tiny leaves, short-lived perennials. Small yellowish pea flowers. Copious nectar, particularly after good autumn rains; nectar may actually 'drip out of the flowers' on rare occasions. Honey: light lemon colour, mild taste, slow granulation.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Mentha aquatica	Water mint	N2	1–5
(Lamiaceae)	*Waterment*	P0–1	(2–3)

Remarks

Southwestern Cape to KZN to northern provinces and ZIM; also tropical Africa and Europe. Swamps and moist sites. Trailing, mint-scented perennial. Flowers: in roundish clusters on an upright stem, pink to mauve, long protruding stamens. Honey from northern Europe is amber-coloured, with an unpleasant rancid aroma and relatively high vitamin C content.

Botanical Name	Common Name	Beeplant Value	Flowering Time
M. longifolia	Horse mint	N1–2	11–4
	Wild spearmint	P0–1	(12–2)
	Cape velvet mint		
	Ballerjan		
	Kaapse kruisement		

Remarks

Eurasia and Africa; greater S. Africa. River banks and damp places. Large perennial herb, up to 1.5 m high. Leaves long and narrow, unlike other mints; strongly scented. Whorls of white to lilac flowers close together in a spike-like inflorescence.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***M. pulegium**	Pennyroyal	N1–3	12–4
	Polei	P0–1	(1–2)

Remarks

Eurasia. Ground cover. Lavender-coloured flowers. Nectar has an unpleasant smell, resulting in honey with an objectionable flavour (overseas): New Zealand, Australia, Europe. Light-coloured pollen is rarely collected.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Merremia tridentata	Sword-leaf merremia	N0–2	9–5
(= *Xenostegia tridentata*)	*Swaard-blaar merremia*	P0–2?	
(Convolvulaceae)			

Remarks

KZN, SZ, northern provinces, FS, NC, NAM, BOT, ZIM. Perennial herb with thin, prostrate, twining stems. Different soils of grassland and bushveld. Leaves variable: mostly narrow, with two small wings or lobes near the base. Flowers light yellow to cream, with or without a reddish centre. Nectar collected inside the flower, or between petals and calyx cup. Pollen whitish.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Metalasia muricata (Asteraceae)	White bristle bush *Wit steekbos* *Blombos*	N0–2 P0–3	1–12 (2–4)

Remarks

Southwestern Cape to EC. Shrub with twisted needle-like leaves. In habit it is somewhat similar to non-showy everlastings. The inflorescence is a dense cluster of small, greyish-white flower heads. Major pollen source near Grahamstown, as well as during a dry March–April period near Wellington. Pellets greyish-orange; crude protein a low 13.5% (Köttner 1991). A very similar species, **M. densa**, extends further north to LIM.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Microloma tenuifolium (Apocynaceae)	Wax creeper Wax twiner *Kannetjies*	N2? P0	6–11

Remarks

Southwestern to southeastern Cape. Rare slender climber. Bright red flowers. Sunbird-hole feeding reported. The small slits in the top of the closed flower tube would naturally only allow entry to a butterfly proboscis. Afrikaans name: nectar-filled flowers, sucked by children.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Momordica balsamina (Cucurbitaceae)	African cucumber *Laloentjie*	N1? P2?	1–12 (11–4)

Remarks

EC, KZN, SZ, northern provinces, FS, NC, NAM, BOT, ZIM. Slender climber from a perennial rootstock in sandy soils of woodlands. Flowers: white or pale yellow crinkly petals, with grey veins; monoecious. In KZN it was noticed that flowers opened early morning and wilted early afternoon. Orange pollen was collected in another species. Fruit: roundish, with short blunt spines, orange-red, edible.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Monechma divaricatum (Acanthaceae)	Wild lucerne *Wilde lusern* *Tongetjie*	N2–3 P0–2	3–6 (4–5)

Remarks

NC, NW, LIM, MP, ZIM, BOT, NAM. Sandy soils of savannas. Not in significant numbers in the northern provinces. The general habit of this plant is somewhat similar to that of lucerne. Drought and frost resistant perennial shrublet. Very light-coloured, mild-tasting honey in the Kalahari.

Botanical Name	Common Name	Beeplant Value	Flowering Time
M. genistifolium (= *M. australe*)	*Perdebos* *Tongetjie*	N2–3 P0–2	1–4

Remarks

NC, NAM, BOT. Loamy soils of pans, river beds and dune valleys. Shrublet with many whitish stems. Small snapdragon-like whitish flowers. Honey from the Weissrand of Namibia: mild flavour, light straw colour, quick granulation with a creamy texture. The name *tongetjie* for flowers of this genus refers to the large, 3-lobed lower lip of flowers, all of which have prominent nectar guides.

Botanical Name	Common Name	Beeplant Value	Flowering Time
M. incanum	*Blouganna*	N2–4 P0–2	2–6

Remarks

NC, NAM, BOT. Frost resistant, perennial, densely woody shrublet with a distinctly greyish-blue appearance. Predominantly in calcareous sandy soils. Good honey producer in most years south of the Molopo River. Light, mild honey. For **Monechma** species in general, good rains in March or April precede a nectar flow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Monopsis unidentata (LOBELIACEAE)	Brown monopsis	N2? P?	10–5

Remarks

Southwestern Cape to KZN. Moist sandy flats, rocky slopes and grassland at low elevations. Erect or sprawling perennial herb. Upper lip of a flower consists of three pointed lobes, lower lip with two pointed lobes. Flowers are golden-yellow with a brown centre, but light or dark purple forms are also found. The yellow monopsis, **M. lutea**, has been observed with attending honeybees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Monsonia crassicaulis (= **Sarcocaulon crassicaule**) (GERANIACEAE)	Candle bush *Boesmanskers* *Grootkersbos* *Noerap*	N? P2	1–12 (9–11)?

Remarks

Southern Namibia to Cederberg to Little Karoo. Gravelly flats and stony slopes. Thorny shrublet with succulent stem, containing flammable resin. Flowers large, yellowish-white. Pellets pale yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Moquiniella rubra (= *Loranthus elegans*) (LORANTHACEAE)	Matches mistletoe *Vuurhoutjie voëlent*	N? P0–1?	4–7

Remarks

Namaqualand, Karoo, EC. Colourful hemi-parasite on various trees and shrubs, usually **Acacia karroo**. Flowers resemble an orange matchstick with a dark tip. A sudden movement of the plant causes the petals to abruptly curl up and to eject the pollen. Bees collect the remaining pollen from the anthers on the twisted petals.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Muraltia spinosa (= *Nylandtia spinosa*) (POLYGALACEAE)	Tortoise berry *Skilpadbessie*	N? P1?	4–10 (6–8)

Remarks

Namaqualand to EC. Sandy localities, often coasts. Prickly 1 m high shrub. Ornamental flowers and fruit. Bees are rarely observed on the flowers, and yet there is one old record of *skilpadbessie* as a source of honey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Murdannia simplex (COMMELINACEAE)	Murdannia	N1? P1?	9–5 (11–1)?

Remarks

KZN to tropical Africa. Herb in grassland and moist areas, where it forms clumps. Flowers with three mauve petals and dark blue feathery stamens; opening mid-afternoon and closing at sunset.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Nasturtium officinale** (= *Rorippa nasturtium-aquaticum*) (BRASSICACEAE)	Water cress *Bronkors* *Bronslaai*	N1–2 P2?	9–3 (12–2)

Remarks

Europe, now cosmopolitan. Naturalised in high-lying, eastern areas of S. Africa. Perennial herb in water or moist grassland. Compound leaves. Small white flowers. Salad plant which is harvested before flowering.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Nepeta cataria**	Catnip *Kattekrui*	N1–3 P0–1	11–3
***N. racemosa** (= *N. mussinii*) (LAMIACEAE)	Catmint *Kruipende kattekrui*		

Remarks

Eurasia and Caucasia respectively. Popular, long-flowering ground covers. Attractive to bees and cats. Small white or lavender flowers in whorls on upright, branched flowering stalks. Major nectar activity most of the time, despite low sugar content. Rarely utilised as a pollen source. Pellets small, light grey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Nidorella hottentotica (ASTERACEAE)	Grassland nidorella *Grasveld nidorella*	N0–2 P0–2	11–2

Remarks

NC, FS, northern provinces. Erect greyish perennial, mostly in grassland. Yellow flowers without obvious ray florets. Well-attended by bees at times, then again not at all. Nectar: very unpleasant smell, taste of overripe fruit. Pellets in shades of orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
N. podocephala (= *Conyza podocephala*)	Button nidorella *Knoop nidorella*	N0–2 P0–2	11–3 (12–1)

Remarks

NW, G, MP, FS, L, KZN. Roadsides and disturbed grasslands. Hardy perennial herb with strong taproots and runners. Flower heads round, yellow; no ray florets. Hot, moist conditions give best beeplant values. Pellets light orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Nierembergia linariifolia** (= *N. coerulea*) (SOLANACEAE)	Blue cup flower	N0 P0–2	10–3

Remarks

Argentina. Popular, widely-grown perennial shrublet. Blue to violet cup-shaped flowers with bright yellow centres. Only occasionally do bees show an interest in the pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Nymphaea lotus (NYMPHAEACEAE)	Yellow water lily Lotus water lily *Geel waterlelie*	N0 P2?	1–7

Remarks

KZN, SZ, MP, G, LIM, BOT. Less common than blue water lily. Flowers open evenings, closing next forenoon – they are possibly pollinated at night. Visited by honeybees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
N. nouchali (= *N. caerulea*) (= *N. capensis*)	Blue water lily *Blou waterlelie*	N0 P1–3	1–12 (10–2)

Remarks

Southwestern Cape to KZN coasts, SZ, northern provinces, ZIM, BOT, NAM. Rivers, lakes and pools; also widely-used ornamental. Large floating flowers pale blue to pink to white. Nectar with 3–5% sugar is not collected by honeybees. Pollen orange or dark yellow. Pollen crude protein 30% (Kleinschmidt & Kondos 1976). In an Australian species, a stigmatic fluid collects pollen grains from bees' bodies on the first day of flowering.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Ocimum americanum (= *O. canum*) (LAMIACEAE)	Wild basil Woodland basil *Wilde balsem*	N3? P2?	12–6 (2–4)

Remarks

Southern Africa except winter rainfall region, SC, Karoo, FS and Highveld. Perennial woody herb. In undergrowth of mixed woodland. Light mauve flowers in well-spaced whorls of six. May flower several times. Pollen reddish-brown. Beeplant value not tested, but probably high.

Botanical Name	Common Name	Beeplant Value	Flowering Time
O. angustifolium (= *Becium angustifolium*)	Narrowleaf becium	N2 P1–2	10–5 (11–1)?
O. filamentosum (= *B. filamentosum*)	Mauve becium		

Remarks

Northern provinces, ZIM, BOT, NAM. Perennial, aromatic, freely branching herbs with opposite leaves. Open woodland, often on stony sites. Upright inflorescence of regularly spaced flower whorls. The white or mauve flowers are 2-lipped, with long exserted stamens and style. Best nectar secretion on dewy mornings. Reddish-brown pellets in narrowleaf becium.

Botanical Name	Common Name	Beeplant Value	Flowering Time
O. gratissimum	Wild basil	N3?	11–4
(= *O. urticifolium*)	Zulu basil	P2?	(12–2)

Remarks

KZN, SZ, northern provinces, ZIM, BOT, NAM. Soft, medium to large shrub of deciduous and evergreen bushland; also disturbed areas. Branched inflorescence with flowers in dense spikes. Flowers small, white, sweetly scented.

Botanical Name	Common Name	Beeplant Value	Flowering Time
O. obovatum	Cat's whiskers	N1–3?	9–2
(= *Becium obovatum*)	*Katsnor becium*	P1	(9–11)

Remarks

EC, KZN, SZ, northern provinces, ZIM. Low growing herb of open grassland. Flowers can appear in spring, before rain, from a perennial rootstock. Long protruding stamens or 'whiskers'. Pollen orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Orphium frutescens	Sea rose	N?	11–2
(Gentianaceae)	*Blink blommetjie*	P1?	

Remarks

Southwestern and southern Cape. Seashore shrub with large, shiny, deep-pink flowers. Large twisted anthers provide much pollen for carpenter bees. One honeybee record.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Orthosiphon labiatum	Shell flower	N1?	11–5
(= *Nautochilus labiatus*)		P2?	(12–2)
(Lamiaceae)			

Remarks

KZN, SZ, MP, LIM. A soft, much branched, aromatic herb of rocky, wooded hillsides. Clusters of 6–8 flowers on an upright flowering stem. Pink to mauve flowers with two upper and two lower extended stamens. Upper lip of flower recurved, with a purplish nectar guide. Long-flowering.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Osteospermum moniliferum	Tick berry	N0–2	1–12
(= **Chrysanthemoides monilifera**)	*Sand bietou*	P0–2	(5–9)
(Asteraceae)			

Remarks

Common along the seaboard of southern Africa, but also in higher-lying eastern regions; also ZIM. A medium-sized daisy bush with white-felted young branches. Yellow ray and disc florets. Edible blackish berries borne on the flower head, which is very unusual for a daisy-type flower. Variably bee-attractive: reason not known. Orange pollen loads. The *grys bietou*, **C. incana**, has a similar appearance to the *sand bietou*, but does not produce berries. It occurs from NAM to the West Coast, and is a beeplant of unknown value.

Botanical Name	Common Name	Beeplant Value	Flowering Time
O. sinuatum (= **Tripteris sinuata**)	*Skaapbos* *Geel bietou*	N0–1 P0–1	2–10

Remarks

Uniondale into Karoo, Namaqualand, NAM. Woody shrub, but very palatable grazing for stock. Semi-succulent, greyish-green leaves. Quickly grows and flowers after heavy rains, any time from autumn to spring. Yellow ray and disc florets, the latter with long extended styles. The fruit or 'seed' is conspicuously 3-winged, which is unusual in the composite family.

Botanical Name	Common Name	Beeplant Value	Flowering Time
O. spinescens	*Geel draaibos*	N2? P2?	3–5?

Remarks

Central regions of S. Africa. Seasonal streams and floodplains. Woody shrub with spiny shoots. Pale yellow, widely spaced ray florets. Well-grazed by stock.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Otholobium spp. (Fabaceae) (Papilionaceae)	*Skaap-ertjie* *Keurtjie*	N1–3? P0–1	7–3 (9–11)
O. fruticans			
O. hirtum			
O. virgatum			

Remarks

Southwestern Cape mainly. Shrubs of different fynbos habitats, but mostly mountains. Some species are good grazing for sheep. Small white to mauve to purple pea flowers. The small size of the flowers is possibly the reason why honeybees can reach the nectar. The majority of flowers in the pea family are too tight for honeybees to open.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Othonna arbuscula (Asteraceae)	*Traap*	N P2?	6–8

Remarks

Namaqualand to Worcester Karoo. Shrub to 1 m high. Semi-succulent stems and leaves. Resin from stems is called *traap*. Flower heads single on long stalks; no ray florets.

Botanical Name	Common Name	Beeplant Value	Flowering Time
O. carnosa (= *Crassothonna discoidea*)	Othonna Mesemb daisy	N1 P2–3	1–12 (4–6)

Remarks

EC to KZN. Quick-growing succulent. Popular ground cover inland. Without flowers it strongly resembles a sprawling mesemb. Yellow daisies. Pollen light brown to light brownish-orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
O. quinquedentata		N2? P2?	1–12

Remarks

Southwestern Cape to Langkloof. On lower damp mountain slopes and flats. Semi-succulent leaves are red-spotted, clustered at base of plant. Long, leafless, branched flower stems. Good flowering once in five years. Bee visits at noon.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Parinari capensis (Chrysobalanaceae)	Dwarf mobola plum *Grysappeltjie*	N2–3? P1?	7–9

Remarks

KZN, SZ, northern provinces, ZIM, BOT, NAM. Sandy grassland and rocky ridges. Deciduous shrublet from underground stem, forming carpet-like colonies. Leaves and flowers very similar to mobola tree (**P. curatellifolia**). Foraging observed midday to late afternoon. Pellets dirty-yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Passerina spp. (Thymelaeaceae)	Gonna bush *Gonnabos* *Bakkersbos*	N? P	8–12 (10–11)

Remarks

Cape Fynbos, with few exceptions. Small to large ericoid-like shrubs with small calyx-tube flowers. Honeybee reports from the western sandveld. Shaken shrubs may release a cloud of pollen. More information is needed.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Pearsonia cajanifolia (Fabaceae) (Papilionaceae)	*Harige ertjie*	N1 P0–1	11–6

Remarks

Northern provinces. Rocky slopes of grassland with scattered bush. Shrub with several erect annual stems on a perennial woody rootstock. Hairy stems and leaves. Yellow pea flowers bunched together. Pollen biscuit-coloured.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Pelargonium betulinum (Geraniaceae)	*Kanferblaar*	N2? P0–2	8–1

Remarks

Southwestern and southern Cape coastal areas. Aromatic leaves. Five pink petals: two large upper ones with dark purple nectar guides and three narrow lower ones. Pellets dark red and shiny. A sprawling form is used in gardens.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. capitatum	Rose-scented pelargonium *Geurmalva* *Kusmalva*	N1–3 P1–3	1–12 (9–10)?

Remarks

Southwestern Cape to KZN. Straggling shrub on coastal sand. Leaves sweetly scented. Flowers in shades of pink, with distinct nectar guides. Pollen dark brown or brick red.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. cordifolium	Heart-leaved pelargonium	N2? P2?	6–1

Remarks

Bredasdorp to Port Elizabeth. Moist places on forest margins and riverbanks. Purple petals: three lower ones narrow, two upper ones large and dark-veined.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. crithmifolium	*Jakobregopbos* *Dikbasmalva*	N2 P	3–11

Remarks

Western Karoo to Cederberg to southern NAM. Shrub of stony areas, with knobbly succulent stems. Different flowering times under winter and summer rain conditions. Five narrow white petals, the upper two with pink bases as nectar guides. Palatable to stock.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. cucullatum	*Wilde malva*	N1? P2	9–2

Remarks

Southwestern Cape. Large shrub of coastal flats. Pellets shiny dark red. Also carpenter bee visits. Important parent for garden hybrids.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. dolomiticum	Rock pelargonium	N1–3? P1?	9–4

Remarks

NW, FS, MP. Sprawling shrub of rocky grassland. Pink flowers, two upper petals with dark nectar guides. Bees land on these and obtain nectar in an upside-down position.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. fruticosum (= *P. divaricatum*)		N1–2 P0–2	1–12 (10–1)

Remarks

Ladismith to Willowmore. Mountain slopes. Deeply divided leaves. Pink or white flowers with magenta markings (nectar guides) on two upper petals. Pollen dark reddish-brown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. fulgidum	Scarlet pelargonium *Skarlaken malva*	N P?	6–11

Remarks

Southwestern Cape to Namaqualand. Exposed, windswept rocky areas. Semi-succulent herb covered in silvery-silky hairs. Deep red flowers. Very long flower tube, but nectar foraging nevertheless recorded.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. graveolens	Rose-scented pelargonium *Geurmalva* *Roosmalva*	N1 P1	8–1 (10–11)

Remarks

SC to EC and further north to ZIM. Moist and semi-shaded places. Flowers mostly pink; also white to light purple. Pollen red. Grown in different provinces for its essential oils.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. scabrum	Sticky-leaf pelargonium *Hoenderbos*	N P	(8–1)

Remarks

Namaqualand to Grahamstown. Woody, lemon-scented shrub with roughly hairy leaves, which resemble the feet of chicken in the Namaqua form. White to purplish flowers have dark spots or lines on upper petals as nectar guides. Palatable to stock.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. tricolor	Tricolour pelargonium	N0? P1?	8–5 (10)

Remarks

Dry mountain fynbos of the Little Karoo and further east. Corolla tube is only 1–2 mm long, but it is not known if bees collect nectar. Flowers have dark, warty, fake nectaries on the two upper red petals. The other three petals are white.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. zonale	Common pelargonium	N0–1? P0–1	1–12 (9–1)

Remarks

Piketberg to EC. Stony slopes and forest margins. Common garden subject. The species name refers to the horse-shoe markings on the leaves, which are present in most cultivars. Pollen reddish-orange. Seldom bee-visited.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. candicans **P. coronopifolium** **P. glutinosum** **P. grossularioides** **P. papilionaceum**	Geranium Pelargonium *Malva*	N P	1–12 (10–1)

Remarks

The listed five species (plus **P. cucculatum**, **P. fruticosum** and **P. scabrum**, which have already been discussed above) were observed to be visited by honeybees in different localities of the southwestern Cape (Struck 1997). Being 'bee-type' pelargoniums with nectar and pollen available to honeybees, it is asumed that the bees collected both commodities from them.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Pentas lanceolata** (RUBIACEAE)	Pentas Star cluster	N0–1 P0–1?	9–4

Remarks

Tropical Africa. Ornamental shrub that may grow higher than 1 m. Tiny starry flowers together in semi-globose heads; white, or shades of mauve to red, with or without white nectar guides. Bees collect nectar from the front of flowers following copious secretion. Else it is obtained between corolla and calyx tube, or from the flower base after the corolla has dropped. The top part of the flower tube is dilated, containing the short stamens, from which the pollen is only deposited on the proboscis of a nectar-seeking bee.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Pentzia spp. (ASTERACEAE)	True karoo *Egte karoo bossies*	N0–2 P0–2	1–12 (10–1) west (3–6) east

Remarks

Small woody perennial shrubs of mostly dry regions of the central interior. This genus contains most of the important Karoo grazing plants, despite their very small leaves. Yellow globose flower heads without ray florets. One report from Middelburg, Cape, of **P. incana** being a honeyplant. This species flowers opportunistically following effective rainfall, i.e. about 10 mm or more.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Pergularia daemia (= *Daemia extensa*) (APOCYNACEAE)	Trellis vine	N0–2 P0	10–5

Remarks

KZN, SZ, northern provinces, ZIM, BOT, NAM. Perennial climber of thornveld and woodland. Small star-shaped flowers (white, green or yellow) opening towards evening. Petals with long white hairs that glimmer in moonlight (moth pollination).

Botanical Name	Common Name	Beeplant Value	Flowering Time
Peristrophe cernua (ACANTHACEAE)	False buckweed *Hlalwane oluncane* *Vals kiesieblaar*	N1–2 P0–3	1–12 (3–9)

Remarks

EC, KZN. Valley Bushveld and dry woodland. Hardy, sprawling shrub with thin stems. It loses its leaves under drought conditions. The pink flowers are 2-lipped. The nectar guide is on the upper lip: purple speckles on a white background. Suspected source of occasional surplus honey. Despite only two anthers per flower, the pollen yield is comparatively high. Pollen whitish, with a light purple tinge, collected during the forenoon.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Perovskia atriplicifolia** (LAMIACEAE)	Russian sage	N3 P0?	(11–2)?

Remarks

Afghanistan, Pakistan. Perennial hardy shrub to 1 m high. Small lavender-blue flowers on long, upright flowering stems. Ornamental herb not yet well known in S. Africa. Considered a 'top bee plant' in one USA evaluation.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Persicaria attenuata (= *Polygonum pulchrum*) (POLYGONACEAE)	Bristly polygonum	N2? P3?	1–12 (12–4)

Remarks

Summer rainfall regions of S. Africa, also NAM, BOT, ZIM. Robust, hairy perennial of marshes and near streams. Small pink florets on a long spike. Pollen loads pure white.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***P. capitata** (= *P. capitatum*)	Ground polygonum	N1–2 P0–1	1–12 (9–4)

Remarks

Himalayas. Vigorous ground cover for sun and semi-shade. Masses of pink flower heads. Long-flowering. Pollen ivory or dirty white.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***P. lapathifolia** (= *P. lapathifolium*)	Spotted polygonum Pale polygonum	N1 P2?	10–6 (12–3)

Remarks

Europe? Established in eastern S. Africa, ZIM, BOT, NAM. Annual to perennial robust herb of damp spots and swampy areas. Leaves with dark blotches. Branched inflorescence with drooping spikes of pale pink florets. Another exotic that also has become established in eastern provinces is ***P. nepalensis**, on which bees have been observed to collect nectar and pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Peucedanum magalismontanum (APIACEAE)	Wild parsley *Wilde pietersielie*	N3 P1	11–2

Remarks

G, FS, MP, SZ, KZN. Open grassy slopes. Slender, erect herb with a deep corky rootstock. Inflorescence is typical for the carrot family: different horizontal flower clusters. Nectar has a light yellow colour and a musty-sweet smell. The explorer Thunberg recorded that the Khoikhoi added the roots of *moerwortel*, **P. gummiferum** (= **Notobubon gummiferum**), to their fermenting honey drink. (See also **Trichodiadema**).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Phacelia tanacetifolia** (Boraginaceae)	Tansy phacelia	N3–4 P1–2	9–3

Remarks

California. Autumn and spring sowing. Flowers bluish-pink. Long stamens: bees collect pollen in flight. Pellets dark blue. Honey in native country. Excellent beeplant, one of a few which are grown solely for beekeeping purposes in Europe. Also limited use as green fodder and silage. Garden ornamental in S. Africa.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Phaulopsis imbricata (Acanthaceae)		N1? P1?	3–8

Remarks

EC to tropical Africa. Trailing herb of forest margins, woodland and open scrub. Flowers small, narrow-tubed, white. They are clustered together on a flowering stem, with bracts and leaves between them.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Phlox paniculata** (Polemoniaceae)	Perennial phlox	N0–2? P0–1	1–4

Remarks

North America. Upright, densely packed spikes of flowers in all shades of red, pink, purple and white; faintly fragrant. Pollen yellowish.

Botanical Name	Common name	Beeplant Value	Flowering Time
***Phyla nodiflora** (= *Lippia repens*) (Verbenaceae)	Lawn daisy	N0–3 P0–1	10–4?

Remarks

Southern North America. Widely grown, hardy ground cover for exposed places. Escape in eastern regions of S. Africa. Tiny flowers on daisy-like heads; mauve to white. Pellets greenish-khaki or olive. Pollen crude protein 25.1% (Kleinschmidt & Kondos 1976).

Botanical Name	Common Name	Beeplant Value	Flowering Time
Phylica spp. (Rhamnaceae) **P. ericoides** **P. pubescens** **P. purpurea**	Featherhead Hardleaf *Veerkoppie* *Hardeblaar*	N1–2? P2?	1–12 (8–11)

Remarks

Southwestern Cape mainly, to EC. Small to medium-sized, erica-like shrubs, some with woolly flower heads. Bee value probably higher than indicated – more information is needed. Several species sold as Cape greens. **Phylica ericoides** is a suspected source of honey, pollen crude protein 31.1% (Köttner 1991).

Botanical Name	Common Name	Beeplant Value	Flowering Time
Phyllobolus roseus (= *Amoebophyllum angustum*) (Aizoaceae)	*Wortelvygie*	N? P2?	9–10

Remarks

Southwestern to northwestern Cape. Erect succulent shrub with alternate leaves and glittering warts. Tuberous root. Flowers white or pinkish; open all day.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Phymaspermum acerosum (= *Athanasia acerosa*) (Asteraceae)		N2 P0–1	2–6 (3–5)

Remarks

MP, SZ, FS, L, KZN, EC. Robust, multistemmed shrub with a woody rootstock. Grasslands of Drakensberg escarpment, where it may be locally common. Unusual leaves: irregularly compound, with thin needle-like leaflets. Many, small, yellow disc florets, without ray petals, in dense terminal clusters. Beeplant value possibly higher.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. aciculare	*Wit heuningkaroo*	N3? P3?	8–1
P. parvifolium			

Remarks

Central dry regions of S. Africa, with winter and summer rainfall. Hardy, woody Karoo shrublets. Ten or less, white, separate, oval ray florets that tend to droop slightly. Yellow disc florets. Reports of high bee activity, and sources of light-coloured honey. Leaves small and narrow, but well grazed nevertheless.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Physostegia virginiana** (Lamiaceae)	Obedient plant *Skarnierblom*	N1–3 P0–1	2–5

Remarks

North America. Hardy vigorous shrublet. Tall spikes of foxglove-like, pink and mauve flowers that appear for long periods. Light olive-grey pollen loads are seldom collected. Common names: the flowers may be turned around on the stem without breaking, and they stay where placed.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Platycarpha carlinoides (Asteraceae)	River cabbage *Rivierkool*	N1? P1?	3–5

Remarks

FS, NC, BOT, NAM. Unbranched flat perennial with long, toothed, spreading leaves. Silty soils of river beds. Pink florets in the centre of the leaf rosette.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Plectranthus dolichopodes (Lamiaceae)		N3? P1	1–5

Remarks

KZN, MP, LIM. Straggling herb of cool moist forests. Small, deep blue flowers with short corolla and upper lip. Pollen pellets whitish.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. ecklonii	Large spur-flower *Muishondblaar*	N0 P1?	2–5

Remarks

EC, KZN. Medium to large shrub of forest understorey. A garden introduction. Flowers purplish, long and narrow. One record of pollen-collecting bees, probably while in flight because of long-exserted filaments.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. fruticosus	Forest spur-flower	N2? P1?	10–6 (2–5)

Remarks

Forest and scrub, from southwestern Cape to LIM. Dark mauve flowers with a ± 10 mm long tube in which bees can reach the nectar. The sac-like widening at the base of the flower tube, to which the name 'spur-flower' refers, is not easily seen. This structure possibly stores nectar.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. hereroensis	Herero spur-flower	N2 P1?	3–7

Remarks

G, LIM, ZIM, BOT, NAM. Annual or short-lived perennial with upright stem. Wooded, stony hillsides. Large ovate leaves coarsely toothed. Small flowers pale to deep blue, rarely white. Short flower tube.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. neochilus (= *Coleus neochilus*)	Blue lobster flower *Pers kreefblom*	N0–1 P0–1	1–12

Remarks

EC to northern provinces. Hardy, succulent, ornamental ground cover with unpleasant smell. Pellets light brown. Of minor attraction to bees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Plicosepalus kalachariensis (= *Loranthus kalachariensis*) (Loranthaceae)	Fiery mistletoe *Kalahari kersies*	N0? P2?	3–9

Remarks

KZN, SZ, MP, LIM, ZIM, BOT, NAM. Hemi-parasite on thorn trees. Red, C-shaped corolla, with long red style and curved filaments. Beeplant value unknown, but bee activity observed. The pollen is visibly exposed.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Podalyria calyptrata (FABACEAE) (PAPILIONACEAE)	Sweetpea bush *Keur* *Ertjiebos*	N2–3? P?	7–10

Remarks

Southwestern Cape. Sandy, marshy places. In gardens they can grow into large shrubs. Nectar is robbed from side of flowers. Many honeybees and carpenter bees attend the flowers. (**Podalyria microphylla** and **P. myrtillifolia** have been recorded as beeplants, but no further details are known.)

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. sericea	Satin bush *Keurtjie*	N3? P1?	5–8 (5–6)

Remarks

Saldanha to Cape Peninsula, where it is a common shrublet of flats and hillsides. Pink and white pea-type flowers. Pollen dull orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Pollichia campestris (CARYOPHYLLACEAE)	Barley sugar *Teesuiker*	N0–1? P0–1?	1–12 (11–4)

Remarks

Southern Africa. Much-branched, semi-erect shrublet of grassland and bushveld. Edible fruit is white to light brownish-yellow, sweet. Rarely bee-visited. Small, light-coloured pellets.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Polygala fruticosa (POLYGALACEAE)	Heart-leaf polygala	N2? P2	1–12 (8–10)?

Remarks

Southwestern Cape to KZN. Grassland or dry stony areas. Shrub to 1 m high. Pollen reddish-orange. In **Polygala** flowers, two sepals are enlarged and petal-like, looking like the wing petals of pea flowers. The lower keel-like petal ends in a white or reddish structure resembling a splayed brush – this is typical for the genus.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. hottentotta	Small purple broom	N P	8–5 (11–2)?

Remarks

Northeastern half of S. Africa and further north. Grassland and woodland. Perennial from a woody rootstock. Small pink to purple flowers. More information is needed.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. myrtifolia	Polygala *Septemberbos* *Langelier*	N0–2 P1?	1–12 (9–12)

Remarks

Southwestern Cape to EC. Very adaptable and widely cultivated. Can grow into a large shrub. Generally not very bee-attractive. One report of 'beautifully flavoured, dark honey' (*Farmer's Weekly*, 1923-07-25). Bees have been noticed trying to steal nectar from the side of the flower.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. sphenoptera		N1? P1?	11–4

Remarks

KZN, SZ, northern provinces, ZIM, BOT. Different habitats, not common. Annual or perennial shrublet with only a few flowers on the short inflorescence. One beeplant record fom outside S. Africa.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. virgata	Purple broom *Pers besem*	N0–2? P?	1–12 (9–11)?

Remarks

SC to KZN and northwards to tropical Africa. Ornamental pinkish-purple sweetpea-like flowers in dense terminal inflorescences – a handbroom-like arrangement. The plant can grow into a large shrub. One record of major nectar activity.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Polymita albiflora (AIZOACEAE)		N2? P1?	11

Remarks

Northern Namaqualand. Low-growing mesemb of quartzite and granite slopes. Petals white, thin, curled outwards. Flower centre with yellow-tipped cone of staminodes and stamens.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Pontederia cordata** (PONTEDERIACEAE)	Pickerel weed Pontederia	N1–2? P0–2?	9–6 (12–3)

Remarks

North to South America. Aquatic ornamental with upright spikes of blue flowers. Upper petal with a yellow blotch as nectar guide. Limited invasion on KZN coast.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Prenia sladeniana (AIZOACEAE)	*Rondeblaar kruipvygie*	N2–3? P1?	9–4

Remarks

Richtersveld and NAM. Creeping succulent with leaves unlike other mesembs, i.e. round and somewhat cupped. Petals narrow, white, with yellow bases, which together with the yellow stamens form a central nectar guide. **Prenia pallens**, which sometimes is a weed of roadsides in the WC, has also been recorded as a beeplant.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Printzia polifolia (ASTERACEAE)	Printzia	N3? P1?	7–12

Remarks

Bokkeveld escarpment to EC. Fynbos flats and low hills. Much-branched shrub with silvery leaves. Mauve flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
*__Prunella vulgaris__ (Lamiaceae)	Self-heal	N1–2 P0–1	11–3

Remarks

Europe. Vleis and moist forest margins. Established in midlands of KZN. Straggling herb with dense inflorescence of purplish flowers. These have a short flower tube in which the bees can reach the nectar.

Botanical Name	Common Name	Beeplant Value	Flowering Time
__Pseudobaeckea africana__ (Bruniaceae)	Streambush	N2 P?	9–11

Remarks

Southwestern Cape. Slender-branched, leafy shrub of sandstone slopes near water. Small white flowers in slim spikes.

Botanical Name	Common Name	Beeplant Value	Flowering Time
__Psiadia punctulata__ (Asteraceae)	Sticky psiadia *Blink stefaans*	N3 P2	11–4

Remarks

Northern provinces, NAM, BOT, ZIM. Bushveld along dry riverbeds or on hillsides, often under trees. Shrub with many, reddish, woody branches. Sticky, shiny leaves. One record of honey north of the Magaliesberg: light amber colour, herbal taste. Fresh combs are tinged yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
__Psilocaulon coriarium__ (= *P. absimile*) (Aizoaceae)	*Asbos* *Loogbos*	N1–3 P0–3	9–1 (10–11)

Remarks

EC, FS, WC, NC, NAM. Found in sandy soils of denuded plains and riverbanks; also bare brackish patches. Spreading to semi-erect shrub with jointed, usually leafless stems. Small white mesemb flowers. Staminodes form a cone in the centre of the flower. Honey: light colour, mild flavour, quick granulation. A flow seems to depend on good spring rains, i.e. it does not occur regularly. Honey crops reported from Kenhardt, Petrusville, Cradock, Graaff-Reinet, Willowmore and Oudtshoorn. **Psilocaulon junceum** has also been implicated as a source of honey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
__Pteronia__ spp. (Asteraceae)	Karoo buchu *Gombos*	N0–1? HD0–2 P0–2	8–2 (9–10)
P. cylindracea			
P. divaricata			
P. incana			
P. mucronata			
P. unguiculata			

Remarks

Primarily Karoo regions; also WC, NC, NAM, BOT. Woody shrublets growing in gravelly soils of plains and ridges. Characterised by long sticky flower heads, absence of ray florets, and elongated disc florets, which may prevent bees reaching the nectar. Pollen yellow. It is unknown whether the sticky flower heads are a source of propolis. **Tachardina** lac insects on **P. unguiculata** secreted much honeydew, which was heavily collected by honeybees in Namibia (W. Giess, pers. comm., May 1973).

Botanical Name	Common Name	Beeplant Value	Flowering Time
Pygmaeothamnus zeyheri (Rubiaceae)	Dwarf medlar *Sandappeltjie*	N0–1? P0–1?	10–12

Remarks

MP, G, NW, LIM, BOT, NAM. Sandy or stony bushveld and grassland. Shrublet with woody rootstock, often forming colonies. Small, insignificant, light green flowers. Rarely bee-visited.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Rabdosiella calycina (Lamiaceae)	Upland fly bush	N2 P?	11–6 (3–5)

Remarks

LIM, MP, SZ, FS, KZN, EC. Shrub up to 1.5 m high, in rocky grassland, from coast to Highveld. Upright annual stems from a woody rootstock. Unpleasantly scented. Semi-compact branched inflorescence with many small, cream-coloured flowers; each with two mauve to pink lips. Anthers in hollow lower lip.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Rafnia amplexicaulis (Fabaceae) (Papilionaceae)	Ink pea *Soethoutbos*	N1? P?	9–2

Remarks

Bokkeveld Mountains to Caledon, on mountain slopes. Much-branched, densely leafy shrub. The buds of the yellow pea flowers are concealed between two leaf-like bracts. Honeybees are too light and not strong enough to trip the flowers. The roots have a sweet taste and were sometimes used as a liquorice substitute.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Ranunculus multifidus (Ranunculaceae)	Common buttercup *Gewone botterblom*	N1? P1?	8–5

Remarks

Southern Africa. Damp sites in grassland, along streams and in vleis. Small, bright yellow flowers with numerous stamens. Pollens of European buttercups have 14–17% crude protein and come in all shades of yellow and ochre.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Raphiolepis × delacourii** (Rosaceae)	Pink Indian hawthorn Raphiolepis	N2? P0–2	8–9, 4–5

Remarks

Garden hybrid from Asian parents. Tough evergreen shrub for different growing conditions. Small, pink, rosaceous flowers. Large, light grey pollen pellets collected at times.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Restio spp.	Restio	N0	1–12?
(RESTIONACEAE)	Reed	P0–3?	
R. dispar			
R. multiflorus			
R. subverticillatus			

Remarks

The genus **Restio** has the most species in the family, namely 88. Almost all of them are found in the WC, with six extending to the EC and four to KZN. The majority occur at high altitudes on sandstone slopes, seepages and rocky sites. There are no easily identifiable characteristics to separate the genera of the Restionaceae, let alone to discriminate between species. Like other restionids, plants of the genus **Restio** are dioecious and have upright, tufted stems that are single or slightly branched and without leaves. The inflorescence on the tip of the stems consists of many brown florets in different arrangements. The flowering time for the bulk of the species is unknown, but it is more than likely to occur throughout the year. The male flowers provide the bees with light-coloured pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Rhododendron** species and hybrids	Azaleas	N0–2	8–11
(ERICACEAE)	*Alperoos*	P0–1	(9–10)

Remarks

Temperate regions of the northern hemisphere. Evergreen or deciduous shrubs that are cultivated for their magnificent showy flowers, coloured white, yellow, pink, orange, red or light purple. Some species have nectar guides on one of the five petals. There are a few double cultivars that are of no use to bees. Some autumn flowering may also occur. In South Africa the flowers are hardly ever attended by bees, partly because more profitable sources of nectar and pollen are available during spring. White pollen pellets have been recorded.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Roella spp.	Roella	N0–3?	10–4
(CAMPANULACEAE)		P0–3	(12–3)

Remarks

Southwestern Cape. Annual or perennial shrublets with white to light bluish-purple, open or bell-shaped flowers. Pollen whitish to light green. They contribute to honeys of mixed origin in different fynbos localities. Closely related to **Wahlenbergia** species.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Rosa** spp. and cvs.	Rose	N0	1–12
(ROSACEAE)	*Roos*	P0–2	(10–12)
			(3–5)

Remarks

Temperate regions of northern hemisphere. Minor crop plant of rose nurseries in or near large cities. Pollen light yellow to shades of orange-brown. Only single cultivars, or at best semi-doubles, are of any use to bees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Rotheca hirsuta (= *Clerodendrum triphyllum*) (LAMIACEAE)	Grassland clerodendrum	N2 P1	9–3

Remarks

Northern provinces, SZ, L, KZN. Small shrub on a woody rootstock. Pale blue to violet flowers. Prominent, arched stamens in the upper part of a flower. Two white nectar guides on lower petal. When a bee lands on a flower, the flower stalk suddenly bends down and pollen is deposited on the back of the bee. White pollen pellets.

Botanical Name	Common Name	Beeplant Value	Flowering Time
R. uncinata (= *C. spinescens*)	Cat's claw clerodendrum	N2? P	5–9

Remarks

NW, BOT, NAM. Hardy shrub with pairs of recurved spines. Long taproot in deep sandy soil. Flowers with five red petals and long yellow stamens. Source of winter food for honeybees and other insects in the Okavango Delta and along the Savute in Botswana. May flower at other times elsewhere.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Rumex sagittatus (POLYGONACEAE)	Climbing rumex *Rank suring*	N0 P2?	2–11 (3–5) SR (9–10) WR

Remarks

S. Africa, NAM. Low scrambler in bush and on forest margins, but also on sandy flats in the west, where the flowering time is in spring. Arrow-shaped leaves. Winged fruit pale green to coppery red. Leaves are eaten as spinach.

Botanical Name	Common name	Beeplant Value	Flowering Time
***R. usambarensis**	Red rumex	N0 P1–3	3–5

Remarks

Africa? A spreading ornamental shrub with masses of small red flowers without distinct petals. These are followed by reddish, winged fruit. Pellets light yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Ruschia spp. (AIZOACEAE) **R. elineata** **R. lineolata** **R. robusta**	*Beesvygie* *Doringvygie* *Muisvygie*	N1–4 P1–4	1–12 (8–11) (4–6)

Remarks

Dry western half of S. Africa. Low mound tuft to bushy habit. A few species are spiny. Usually with small, light purple flowers. Light-coloured pellets. **R. lineolata** has been implicated as a source of honey near Cradock.

Botanical Name	Common Name	Beeplant Value	Flowering Time
R. intricata	Spiny mesemb	N2–4	7–11
(= *Eberlanzia ferox*)	*Doringvygie*	P2–4	

Remarks

Central Karoo and southwestern FS. Woody, very thorny shrub with succulent leaves. Flowers: mesemb type; small, light reddish-purple. Abundant flowering 5–6 weeks after a strong shower of 30–50 mm during August–September. Honey: very light colour, dense, mild aroma and flavour, quick granulation. Very light-coloured pollen boosts brood production. Confirmed source of honey at Willowmore and Edenburg.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Ruttya ovata	Ruttya	N1–3	11–5
(Acanthaceae)	*Hlalwane lomfula*	P1?	(2–3)

Remarks

EC, KZN, SZ, MP, LIM. A dense shrub of bushveld undergrowth and forest margins. Calyx lobes extended into long threads, giving the inflorescence an untidy hairy appearance. Of the five white petals, the lower middle one shows off a purple-spotted nectar guide. R. Guy (pers. comm. 1971): 'Contributes to occasional honey flows during early autumn in the Tugela Valley.'

Botanical Name	Common Name	Beeplant Value	Flowering Time
Salsola spp.	*Ganna*	N0	9–4
(Chenopodiaceae)		P0–2	
S. etoshensis	*Pan-ganna*		
S. glabrescens	*Rivierganna*		
S. tuberculata	*Blomkoolganna*		

Remarks

FS, greater Karoo, NC, NAM, BOT. Hardy, woody Karoo shrubs that provide good sheep grazing with their small, succulent, hairy leaves. Flowers are small, papery, lemon-coloured, dish-shaped. Pollen foraging observed September–October and January. Of the pollen pellets trapped during January near Edenburg, 33% belonged to **Salsola**. Pellets light yellow to lemon-coloured. Anthers may be incorporated into the loads.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Salvia africana-lutea	Dune sage	N1–2	6–12
(= *S. aurea*)	*Bruinsalie*	P0–1	
(Lamiaceae)	*Strandsalie*		

Remarks

WC to EC. Coastal dunes and slopes. A sunbird flower with copious, very dilute nectar. Corolla golden to reddish-brown, a colour which for bees is hard to see. Whitish pollen, collected with difficulty from the flower hood.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. chamelaeagnea	False blue sage *Afrikaanse salie* *Basterblousalie*	N P	11–5

Remarks

Namaqualand to southwestern Cape. On sandy flats and slopes. Shrub to 1 m high, with white to pale blue flowers. Easily confused with similar **S. africana-caerulea**, of which the leaves are smooth and gland-dotted and the nectar is more concentrated and in smaller volumes. (Compare the closely related dune sage on the previous page).

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. disermas	Large blue sage *Groot blousalie*	N3 P1?	8–5 (11–4)

Remarks

WC, NC, NW. Aromatic hairy herb along temporary water courses; also colonises waste places. White to mauve flowers in whorls.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. dolomitica	Pilgrim's Rest pink sage	N2? P1?	1–12 (10–3)

Remarks

MP, LIM. On highlying dolomitic outcrops. Shrub with grey-haired leaves. Light pink to lilac flowers, with yellow markings on the lower lip. Wide-mouthed flowers allow honeybees access to the nectar.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***S. farinacea**	Blue lobster sage	N1 P1	11–4

Remarks

North America. Hardy perennial to 1 m high. Upright spikes of attractive violet-blue flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***S. leucantha**	Mexican sage bush *Wolblom salie*	N0–2 P0–1	11–5

Remarks

Mexico to Colombia. Woolly purple and white flowers. Corolla often nectar-filled, but access difficult. Pollen beige.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***S. involucrata**		N2? P0?	3–6

Remarks

Mexico. Ornamental perennial 1.2 m high shrub with pink to reddish and somewhat sticky flowers. High nectar-gathering activity observed throughout the day.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***S. reflexa**	Mintweed	N2 P1?	10–5 (2–4)?

Remarks

North America. Erect, multi-branched, aromatic herb. Each flowering stem with two light-bluish flowers at a time. Minor weed in moist waste places, from KZN northwards.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. repens	Creeping sage *Kruipsalie*	N2 P0?	9–5

Remarks

Grassland and woodland of southern and eastern S. Africa. Creeping rhizome. At times weedy in disturbed places. Small flowers pale blue to purple.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***S. splendens**	Scarlet sage *Rooisalie*	N2 P1	11–5

Remarks

Brazil. Mostly the dwarf cultivars are planted. Bees enter the flowers with difficulty, but may also obtain the dilute nectar from the exposed calyx after the flower has dropped. Can flower for several months. Pollen variably light grey. There are two other red-flowering species from which bees steal the nectar through carpenter bee slits, namely ***S. greggii** and ***S. microphylla.**

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. verbenaca (= *S. clandestina*)	Small sage *Kleinsalie*	N3 P1?	1–12 (11–5)

Remarks

Widespread in drier western half of S. Africa, but nowhere abundant. Annual, 400 mm high, with lobed hairy leaves. Small flowers white to mauve.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Scabiosa africana (Dipsacaceae)	Cape scabious	N1? P?	7–2 (8–11)

Remarks

Cape Peninsula. Perennial with large mauve flower heads. Sheltered sanstone slopes. **Scabiosa** spp. have many small florets on hemi-spherical flower heads. Long stamens earn them the name ‘pincushion flowers’ as well.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***S. atropurpurea**	Sweet scabious	N2 P0–2	10–4

Remarks

Southern Europe. Relatively hardy annual or short-lived perennial. Fragrant, round flower heads mostly in shades of pink; also lilac and crimson. Pellets pale yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. columbaria	Common scabious *Jonkmansknoop* *Skurfkruid*	N1–3 P1–2	8–3 (10–1)

Remarks

Southwestern Cape to EC and further north to Europe. Indigenous species, which is also a popular garden plant. Two markedly different hairy leaf types on the same plant. Flowers white to pink to lilac. Pollen whitish.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. incisa	Sand scabious	N2? P2?	9–12

Remarks

Piketberg to EC. Coastal sands, often on limestone. Finely divided leaves. Mauve flowers. Pollen whitish.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Scaevola plumieri (= *S. thunbergii*) (Goodeniaceae)	Scaevola *Seeplakkie*	N1–2 P?	10–5

Remarks

Agulhas to KZN. Sprawling succulent on coastal sand. Foraging bees observed early morning and late afternoon. Pollen is available to bees, but its collection has not been reported yet.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Schistostephium rotundifolium (Asteraceae)	Fan-leaved schisto	N0–1 P1–2	3–7

Remarks

EC, KZN, SZ, MP. Much-branched, slightly woody shrub of forest margins; from coast to escarpment. Fan-shaped leaves. Small, round, yellow flower heads without ray florets; in loose clusters at the end of branchlets. Pollen dark yellow. There is one record of honeybees on **S. umbellatum** in the WC.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Sedum** spp. (Crassulaceae) **S. acre** **S. spathulifolium** **S. spectabile** **S. spurium**	Stonecrop Jelly beans *Vetkruid*	N1–3 P0–2	9–4 (10–11)

Remarks

Northern temperate regions. Low-growing leaf succulents. A number of species have short sausage-shaped leaves, hence the name 'jelly beans'. Star-shaped yellow flowers keenly visited for nectar and sometimes for pollen. They are considered particularly good beeplants. Pellets light olive to brownish-olive to light orange-brown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Selago canescens (SCROPHULARIACEAE)	Selago	N2? P0–1?	7–9

Remarks

Bellville to Port Elizabeth. Densely leafy, finely hairy shrublet of dry, mostly clay slopes. Narrow leaflets in clusters. Small mauve flowers in round heads. A similar species of the Southern Cape, **S. villicaulis**, has been seen with bees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. corymbosa	Selago	N1? P2?	12–7? (2–4)

Remarks

Southwestern Cape to EC. Many small, white flowers clustered in heads on erect stems. Rating from a July observation.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. densiflora (= *Walafrida densiflora*)	Grassland selago *Grasveld aarbossie*	N0–1 P0–1	10–4

Remarks

Northern provinces, NC, FS, KZN. In grassland or among rocks in bushveld. Shrublet with many closely growing woody stems. Small white flower heads close together on semi-erect stems. May die back in winter, but sprouts again from a woody rootstock. Pollen light greyish-green.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. geniculata (= *W. geniculata*)	Purple waterfinder *Pers aarbossie*	N0–3 P0–1	1–7 (3–4)

Remarks

EC, Karoo, FS. Brackish veld and plains. Soft subshrub on old woody growth. Palatable grazing for stock. Upright spikes covered in small, mauve to purple flowers, with extended stamens and style. Extensive, 4-week long flowering with concomitant strong honey flow noted once in 9 years. Variable, minor flowering was nevertheless recorded in other years. Flowering is primarily rainfall-dependent. Honey: dark reddish-golden, without a strong aroma.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. wilmsii (= **Tetraselago wilmsii**)	Selago	N1? P2?	1–4

Remarks

LIM, MP, SZ. Perennial herb of grassland, particularly where this has been disturbed. Many small blue flowers in a dome-shaped head. Pollen light green. Information is based on two observations.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Senecio achilleifolius (ASTERACEAE)	Erosion stopper *Slootopdammer*	N1–3 P1–4	12–4

Remarks

NC, FS, NW, G. Perennial shrublet of streambeds. Prostrate stems root easily. Leaves usually deeply and finely divided. Nectar has a light yellow colour (which would result in a dark honey) and an unpleasant uric acid smell. Pollen brownish-yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. barbertonicus	Succulent bush senecio	N2 P2	6–9

Remarks

Northern provinces to northern KZN. Much-branched, woody semi-creeper. Leaves succulent and cylindrical. Green and yellow flower heads without ray florets. Bees obtain some nectar from long disc florets. Pollen yellow to light brown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. deltoideus		N2? P1?	4–9 (5–7)

Remarks

Eastern S. Africa, ZIM. Forest margins and open scrub; coast to escarpment. Herbaceous climber with zig-zag branching and triangular leaves. Yellow flower heads without or with a few ray florets, but long-extended styles.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. glastifolius	Water thistle *Waterdissel*	N1–2 P3–4	8–12

Remarks

George to Humansdorp. Rigid herbaceous shrub near water. Prickly leaves. Mauve flower with yellow centre. Nectar is water-white, with an unpleasant, sweaty smell. Pollen yellow to pale orange.

Botanical Name	Common name	Beeplant Value	Flowering Time
S. halimifolius	*Tabakbos*	N2? P2?	11–1

Remarks

Lambert's Bay to Hermanus. Damp places on coastal sands. Floriferous shrub to 1 m high. Broad leaves. Pollen yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. harveianus (= *S. vimineus*)	Slender senecio *Slanke senecio*	N2? P2?	(8–10) (2–5)

Remarks

NC, FS, northern provinces. Mostly in grassland. Slender, erect shrub with much-branched stems arising from a woody rootstock. Slender leaves have a few serrations near their bases.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. isatidioides	Vlei cabbage	N1 P4	10–2

Remarks

High-lying moist grassland or forest margins, from KZN to LIM. Tall, erect, unbranched herb. Large greyish-green leaves, hence 'cabbage'.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. juniperinus	Nkanga	N2–4 P2–3	9–1 (11)

Remarks

EC, from coast to mountains. Strong flows reported from Mthatha area. Medium-coloured honey that granulates quickly. Unpleasant aroma, but fair flavour.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. longiflorus (= *Kleinia longiflora*)	Sjambok shrub *Sambokbos*	N? P2	7–10

Remarks

Karoo, FS, G, NW, NC, BOT, NAM. Different habitats: stony Karoo, sandy Kalahari, and mixed bushveld. A leafless shrublet with erect succulent stems. Long, cream-coloured disc florets; no ray florets.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. macroglossus	Flowering ivy	N1? P2?	2–8

Remarks

EC, KZN, SZ, MP. Sandy to rocky places on forest margins. Slender semi-succulent climber. Leaves similar to that of the common ivy, which is not related botanically.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. rigidus	Poisonous ragwort Rough ragwort	N3? P3?	11–1

Remarks

Olifant's River of the WC to Uitenhage. On sandstone slopes and in gullies. Robust, rough-leaved shrub to 1.5 m high. Small, yellow, strong-smelling flowers in a branched, flat-topped inflorescence.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. scitus	Grass-leaf senecio	N2? P2?	10–12

Remarks

Higher-lying grasslands of EC, KZN, L, FS, SZ, northern provinces. Slender erect herb with perennial rootstock. Leaves: few, grass-like. Only one or two yellow, daisy-type flower heads per flowering stem.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. venosus	Broadleaf senecio *Bloublaar senecio* *Grootblaar senecio*	N0–2 P0–3	10–4 (12–1)

Remarks

KZN, SZ, northern provinces. Perennial, upright herb with a woody rootstock. Grassland or stony bushveld. Large, stalkless, bluish-green leaves. Pollen light orange, mild taste, collected forenoon and afternoon.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Serruria spp.	Spider head	N1–2	5–1
(PROTEACEAE)	*Spinnekopbos*	P0–3?	(8–10)
S. aemula			
S. aitonii			
S. fasciflora			
S. fucifolia			
S. glomerata			
S. rosea			
S. triternata			
S. villosa			

Remarks

Southwestern Cape. Sandy soils of mountainous localities; less often on flats. Leaves dissected into thin cylindrical segments. Florets together in pinkish-white heads; sweetly scented in some species. Dark yellow and orange pollen pellets noticed. Probably more valuable beeplants than the present, limited data would indicate. The listed species have been seen with foraging bees. Only one report of **S. fasciflora** being a honey plant. The common names refer to the cobweb appearance of the flower heads.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Sesamum indicum**	Sesame	N2–3	12–4
(= *S. orientale*)	*Sesam*	P1–3	
(PEDALIACEAE)			

Remarks

Old World Tropics. Has become established in LIM, G, MP, SZ, KZN, but nowhere in numbers to be of benefit to beekeepers. Beeplant value as for Asian countries, where honey is sometimes harvested. Also visited for extrafloral nectar. The plant looks similar to the indigenous species, but the flowers are white to pale yellow, with a reddish lower throat. Source of imported sesame seeds.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. triphyllum	Wild sesame	N2?	11–6
	Wilde sesam	P0–2	(1–4)

Remarks

Northern provinces, NC, NAM, BOT, ZIM. Tall upright annual, or longer-lived. Minor weed in cultivated fields or other disturbed soils. Occurs naturally in savannas. Common in Kalahari after good summer rains. Flowers pinkish-purple with dark throats. Active extrafloral nectaries at base of flower stalks, to which bee visits have not yet been observed. May flower again after browsing. Pollen violet.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Sisyndite spartea	Desert broom	N2?	3–10
(ZYGOPHYLLACEAE)	*T'kambos*	P2?	

Remarks

Richtersveld, Bushmanland, NAM. Gravelly and sandy soils, often in dry riverbeds. Smooth, bluish-green branches and branch-like leaves, i.e. broom-like. Flowers with five large, pale yellow petals and large light-orange anthers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Solanum delagoense **S. panduriforme** (SOLANACEAE)	Poison apple *Bitterappel*	N0 P0–1	10–5

Remarks

NAM, BOT, ZIM, northern provinces, KZN. Small perennial shrubs, smooth or spiny. Flowers white or mauve with prominent yellow anthers in the centre. Beige pollen collected in autumn. Flowering usually occurs more than once per season. May be locally common in disturbed areas. Flowers of **Solanum** species do not secrete nectar. No honeybee records for the many other poison apple species in S. Africa, which are only visited for pollen occasionally by carpenter bees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. nigrum	Black nightshade Sobosobo berry *Nastergal*	N0 P0–2	1–12 (2–5)

Remarks

Southern Africa. Annual or longer-living herb in disturbed places, usually under trees in bushveld, but elsewhere in cultivated fields, where it is both a weed and a source of berries for home industry products. Pellets light yellowish-brown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Solidago** spp. (ASTERACEAE)	Goldenrod *Goudroede*	N1–3 P1–3	1–4

Remarks

North America and Europe. Hardy rhizomatous perennials found in many gardens. Flowers usually have a characteristic penetrating smell. Pellets orange to yellowish-brown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Spilanthes mauritiana (ASTERACEAE)	Spilanthes	N2? P2?	1–12?

Remarks

EC to tropical Africa, from coast to high ground. Low-growing shrublet of moist sites in grassland, forest floor and streambanks, but not common. Marked flower heads: single on a long stalk; the yellowish centre is dome-shaped; few well-spaced, small, white ray florets.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Spiraea cantoniensis** (ROSACEAE)	May spiraea Chinese spiraea	N0–1 P0–2	9–11

Remarks

China and Japan. One of the best known shrubs grown in S. Africa. Clusters of small white flowers along arching branches. Double cultivars not bee-attractive. Because it flowers in spring when there are many other more appealing beeplants, May spiraea can be totally ignored by bees. Pellets light olive. Pollen-collecting bees run across or around each posy or cluster because differently aged florets are found next to each other.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***S. japonica**	Japanese spiraea	N0–1 P0–2	11–2

Remarks

India to Japan. Upright, deciduous, hardy shrub to 1.5 m high. Branches purplish-brown. Large clusters of small pink flowers on the end of branches. Different cultivars.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Stachys aethiopica (LAMIACEAE)	African stachys *Katbossie*	N1–3? P1?	1–12 (7–10)

Remarks

WC to EC to SZ. Straggling perennial in a variety of habitats. Upright inflorescence with whorls of 2–6 white, pink or mauve flowers. The nectar guide spots are darker coloured. Pollen light grey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. aurea	Yellow stachys *Geel teebossie*	N2? P?	9–2

Remarks

Western Karoo. In permanent and seasonal streams and kloofs. Much-branched, greyish-coloured shrub. Small, strongly scented leaves. Flowers yellow, in whorls. (Like other members of the sage family, **Stachys** flowers are 2-lipped, but the large lower lip, near its base, has two small lobes that project sideways.)

Botanical Name	Common Name	Beeplant Value	Flowering Time
***S. byzantina** (= *S. lanata*)	Lamb's ears *Eselsoor*	N2? P?	11–2

Remarks

Southwestern Asia. Ornamental ground cover or edging plant. Attractive silvery leaves, soft and woolly. Small spikes of 2-lipped lavender flowers. Probably flowers earlier in subtropical gardens.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. rugosa	Grey stachys *Dassiekruie* *Boesmankruie*	N2? P?	7–12 (9–11)

Remarks

From Namaqualand eastwards to Lesotho. Bushy, aromatic mountain shrub. Leaves narrow, hairy, grey. Flowers typically yellow, but also shades of pink and purple.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. sessilis	Grassland stachys	N2–3? P?	12–3

Remarks

Highlying grasslands of MP to EC. Slender, erect, perennial herb. Narrow, sessile leaves. Flowers widely spaced, in 6-flowered whorls. White flowers tinged with mauve. Long-flowering. Major bee activity observed.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Stylosanthes fruticosa (FABACEAE) (PAPILIONACEAE)	Yellow-flowered wild lucerne	N1? P1?	9–4

Remarks

KZN to NW to NAM. Widespread in Africa. Grassland and woodland. Much-branched shrublet from a woody rootstock. Trifoliolate hairy leaves. Yellow pea flowers facing upwards. The two large top petals are flushed with red, i.e. nectar guides.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Sutera spp. (in part) (= **Chaenostoma** or **Jamesbrittenia**) (SCROPHULARIACEAE)	*Stinkbossie* *Ruikbossie*	N1–2? P0–2?	12–5
S. caerulea (= **Chaenostoma caeruleum**)			
S. canescens (= **Jamesbrittenia canescens**)			
S. cordata (= **C. cordatum**)			
S. floribunda (= **C. floribundum**)			
S. halimifolia (= **C. halimifolium**)			
S. pauciflora (= **C. pauciflorum**)			

Remarks

EC, FS, NC, NAM, BOT. Perennial shrublets arising from woody rootstocks. Usually rocky habitats. Small 5-petal flowers in white or pink to blue. Nectar guide is a yellow throat. Prominent anthers provide yellow to light brownish-orange pollen. Flowers close evenings and open the following morning. More beeplant information is needed. The foliage of some species is unpleasantly scented. Many species of **Sutera** have recently been referred to the genera **Chaenostoma** and **Jamesbrittenia**.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Syncolostemon spp. (= *Hemizygia* spp.) (LAMIACEAE)	Pink plume	N0–2? P1–2?	1–12 (10–4)
S. latidens			
S. obermeyerae			
S. teucrifolius			
S. transvaalensis			

Remarks

EC, KZN, SZ, northern provinces, ZIM, BOT, NAM. Mainly in rocky grassland; also forest margins and open woodland. Perennial, soft to woody shrubs; mostly aromatic; some are used medicinally. Flowers white to pink to pale mauve, arranged in clusters on the flowering stem. Corolla tube with two lips, the lower one ± boat-shaped, the upper one erect. In species with long flower tubes, honeybees cannot or only partly reach the nectar. There are two stamens in the upper lip and two on the lower lip.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. canescens (= *H. canescens*)	*Los-my-uit*	N2 P2	11–4

Remarks

Northern provinces, ZIM. Rocky grassland and open woodland. Erect, herbaceous, aromatic, hairy shrublet. Resprouts from a woody rootstock after good rains and flowers 1.5–2 months later. May flower for two months if rains continue. The flowers usually are pale mauve, also white and light purple, in 4- to 6-flowered whorls. The flower tube of 10 mm or less allows bees to access the nectar. Pollen purple.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Talbotia elegans (= *Vellozia elegans*) (Velloziaceae)	Creeping vellozia	N0? P0–2	11–3 (1–2)

Remarks

KZN, MP. Tufted herb up to 300 mm. Creeping, mat-forming, fibrous stem. Damp, semi-shaded rock faces and boulders. Flowers white to mauve. Pollen light yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Talinum caffrum (Portulacaceae)	Porcupine root *Ystervarkwortel*	N1–2? P2?	11–3

Remarks

Widespread in grassland and woodland of southern Africa, often on rocky outcrops. Large underground root. Semi-succulent herb with trailing stems. From flower buds to green fruit on the same plant. Star-shaped yellow flowers. Bee value uncertain.

Botanical Name	Common Name	Beeplant Value	Flowering Time
T. crispatulum	Porcupine root *Bastervygie*	N1? P2	10–4

Remarks

NAM, BOT, NC, NW, LIM. Herb with trailing stems. Large underground root. Annual above ground; occasionally perennial. Sandy to loamy soils in riverbeds and pans of arid savannas. Leaves elongated, slightly curved and succulent. Small, bright yellow flowers. Foraging late afternoon. Pollen light orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Tapinanthus oleifolius (Loranthaceae)	Mistletoe *Voëlent*	N? P0–2	1–12 (3–8)

Remarks

NAM, BOT, ZIM, LIM, NW, FS, NC. Hemi-parasite on different trees in bushveld and savanna. May flower several times during the year. Pollen yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
T. zeyheri (= **Agelanthus natalitius**)	Natal mistletoe *Natal voëlent*	N0–1 P0–2	8–4

Remarks

KZN, SZ, northern provinces, BOT. Hemi-parasite of acacias and combretums. White, long-tubed flowers. Nectar taken through carpenter bee slits. Pollen light yellow. Flowers several times.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Tetragonia spp. (Aizoaceae) **T. calycina** **T. decumbens** **T. fruticosa** **T. spicata**	Spinach plant Dune weed *Kinkelbossie* *Klappiesbrak*	N0–3 P1–3	6–4

Remarks

NAM, BOT, NC, WC, EC. Sandy flats, mostly of coastal areas. Semi-succulent to succulent sprawling shrubs. Flowering: spring (winter rainfall region) to autumn (summer rainfall region). Small flowers in shades of yellow. Pollen beige-coloured. Fruit usually winged, but may have ridges or horns instead. **Tetragonia fruticosa** and **T. hirsuta** are used to improve grazing for small stock.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Teucrium trifidum (Lamiaceae)	Wild germander *Akkedispoot*	N1–2 P0–1	12–3

Remarks

S. Africa, BOT. Grassland, but also in bushveld under trees. Perennial, erect, much-branched shrublet. Small, 1-lipped, white flowers. Pellets white. Afrikaans name refers to the shape of the leaf.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Thamnochortis spp. (Restionaceae) **T. bachmannii** **T. cinereus** **T. fraternus** **T. lucens** **T. pluristachyus** **T. spicigerus**	Cape reed Restio *Dekriet*	N0 P0–3	1–12 (8–10) (3–5)

Remarks

The genus **Thamnochortus** has ca. 33 species, all of which are found in the WC, with only three extending to the EC. Most of them grow on dry sandstone slopes, but also on limestone and sandy flats, at low altitudes. Tufted dioecious perennials with erect, leafless stems. Sterile shoots may develop on these stems in the year after flowering. Brown to reddish-brown inflorescences at the tips of the stems. The female spikelets are stiffly erect, the male spikelets drooping. At times honeybees actively collect large, light yellow pollen loads from male spikelets.

Botanical Name	Common Name	Beeplant Value	Flowering Time
T. insignis	Cape reed Cape thatch *Mannetjiesriet* *Fynbos-dekriet*	N0 P2?	3–5

Remarks

Agulhas to Gouritsmond. Dioecious 'reed' forming large tussocks. Second most abundant pollen source during April near Wellington. Pellets light yellow; crude protein 11% (Köttner 1991). Commercial source of thatch, but also harvested for Cape greens.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Thelechitonia trilobata* (= **Sphagneticola trilobata) (= *Wedelia trilobata*) (Asteraceae)	Wedelia Singapore daisy	N0–2 P0–2	1–12 (10–2)

Remarks

Central America. Widely used ornamental ground cover in sun or semi-shade. Orange-yellow daisies variably attractive for honeybees. Declared weed, based on its occurrence in coastal areas of KZN.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Thesium aggregatum (Santalaceae)	*Groenbasbossie*	N1 P?	8–1

Remarks

Southwestern to southeastern Cape. Sandstone flats and slopes. Small, nearly leafless shrublet, i.e. a hemi-parasite on roots of other plants. Tiny white flowers said to contain 'little nectar'.

Botanical Name	Common Name	Beeplant Value	Flowering Time
T. utile	Thesium *Besembossie*	N1? P1?	9–1

Remarks

Northern provinces. Much-branched, upright shoots, with inconspicuous minute leaves, the plant resembling, or used as, a broom. Perennial root parasite, common in grassland. Small white flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Tradescantia zebrina** (= *Zebrina pendula*) (Commelinaceae)	Wandering Jew *Wandelende Jood*	N0 P0–2	1–12 (10–4)

Remarks

Brazil, Argentina. Semi-shade ground cover. Leaves green above, with stripes, and purple beneath. Small, pink, 3-petal flowers appear irregularly. Pollen whitish. Garden escape in MP and coastal KZN.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***T. pallida** (= *Setcreasia purpurea*)	Purple wandering Jew Purple heart	N0 P1–3	12–6

Remarks

Mexico. Robust perennial ground cover with purple stems and leaves. Pink flowers provide much light-yellow pollen in the morning, even before dawn in summer. Flowers of **Tradescantia** species all seem to last one day only.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***T. spathacea** (= *Rhoeo discolor*)	Boat lily	N0? P3?	3–8?

Remarks

Mexico to Guatemala. Rosettes of semi-succulent leaves, which are green above and purple below. A few small white flowers are carried in a purple, boat-shaped bract. These colourful bracts open successively. Grows best in the subtropics, in both sun and shade.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Trichodesma physaloides (Boraginaceae)	Chocolate bells *Sjokolade klokkies*	N0–2 P0–1?	6–11 (8–9)

Remarks

Grassland of northern provinces. Herb with woody rootstock and annual upright stems. Large, nodding, bell-shaped flowers: white petals in a prominent brown calyx. Honeybee foragers have also been observed on **T. africanum** and **T. zeylanicum**, which have smaller, light blue flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Trichodiadema spp. (Aizoaceae)	Mead mesemb *Moervygie*	N P	8–1

Remarks

NC, WC, FS, EC. Mesembs of which the succulent leaves are characterised by a cluster of bristles on their tips, forming the 'hairy diadem' to which the genus name refers. The tuberous roots were used by Khoikhoi as an ingredient when fermenting honey to make honey beer or mead. At least two species are known to have been put to use: **T. barbatum** and **T**. **intonsum**. The latter species is utilised in a commercial meadery in the EC.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Tridax procumbens** (Asteraceae)	Tridax daisy	N1–2 P1–3?	1–12 (11–3)

Remarks

Central America. Ornamental ground cover that has become established in sandy soils in the far eastern regions of S. Africa. Single flower heads on long, upright stems. White ray florets around a yellow disc. Pellets light grey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Trifolium burchellianum (Fabaceae) (Papilionaceae)	Burchell's clover Wild clover	N2? P2?	8–3

Remarks

SC to KZN. Creeping perennial of moist grassland and forest margins. From coastal to mountainous regions. Leaflets ± heart-shaped. Flowers pink to reddish-purple, in spherical heads.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Triumfetta spp. (Malvaceae) **T. annua** **T. pentandra** **T. pilosa** **T. rhomboidea** **T. sonderi**	Triumfetta Rope bark *Waaibossie*	N1–2? EN P1–3	12–5

Remarks

EC, KZN, SZ, northern provinces, ZIM, BOT, NAM. Erect, slender, branched shrubs of grassland, rocky ridges, thickets, forest margins and degraded woodland. Plants are usually noticed for their fruit: long hairs in globose form. The Afrikaans name alludes to the fruit blown about by wind. Small, yellow, star-shaped flowers. Only afternoon foraging observed yet. Extrafloral nectar taken from young leaves of **T. pentandra**. Pellets in shades of orange. The pollen of **T. sonderi** constituted 27% of the total trapped for January in bushveld north of Pretoria.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Tylosema esculentum (Fabaceae) (Caesalpiniaceae)	Marama bean *Gemsbokboontjie*	N0–2? P0?	10–1 (12–1)

Remarks

ZIM, NAM, BOT, LIM, NW, G. Robust, prostrate, trailing stems from a huge underground tuber. Sandy soils in western parts of southern African savannas. Edible nutritious seeds. From about 10:00 the yellow flowers release their sweet scent and are then visited by nectar-collecting bees. Only two of ten stamens are fertile. Together with the style they serve as a landing site for flower visitors. Flowering depends on adequate rainfall. The closely related **T. fassoglense** has an eastern distribution: from northern KZN to tropical Africa. One record from outside S. Africa of it being a source of nectar and pollen for honeybees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Typha capensis (Typhaceae)	Bulrush *Papkuil*	N0 P?	12–3

Remarks

Southern Africa. Widespread perennial aquatic. The top thin part of the flower spike is male. No first-hand reports of bee activity; confirmation is needed. One old record of pollen collection from a **Typha** species in Florida, USA. Pollen crude protein 17%, but also a 'toxic' high starch content of 14.5% (Europe). The wind-carried pollen is occasionally found in honey samples.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Ursinia abrotanifolia (ASTERACEAE)	*Fynkruie* *Lammetjies-kruie*	N? P2?	11–1

Remarks

Worcester to Caledon. Damp places in sandstone slopes. Shrublet with bright yellow flowers on long thin stalks. Pollen yellowish-orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
U. anethoides	Jewel-of-the-veld	N0–1 P1?	7–4

Remarks

Caledon to Grahamstown. Grassland and coastal dunes. Yellow ray florets, with petals notched at the tip. Dark flower centre.

Botanical Name	Common Name	Beeplant Value	Flowering Time
U. sericea	Lace-leaf ursinia	N0–1? P1–3?	9–2

Remarks

Cederberg to Swartberg on sandstone slopes. Silvery-grey, feathery foliage. Flower heads on long stalks. Yellow ray and disc florets. Pollen yellow. Used as a garden ornamental.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Vahlia capensis (VAHLIACEAE)	*Toiing bossie* *Verkleurmannetjie-kruid*	N1? P2?	8–4

Remarks

Widespread in drier parts of S. Africa. Perennial shrublet from a woody rootstock. Yellow flowers, turning reddish-brown. Pollen loads yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Verbascum** spp. (SCROPHULARIACEAE) **V. chaixii** **V. nigrum** **V. phoeniceum** **V. thapsus**	Flannel plant Mullein *Lamstert*	N0–1 P1–3	11–3

Remarks

Eurasia. Mostly biennials. Rosette of velvety leaves. Erect inflorescence with predominantly yellow flowers. Pellets deep yellow to orange-brown. **Verbascum thapsus** has the highest pollen value. At times a little nectar is secreted on the inner sides of the petals.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Vernonia spp. (Asteraceae)	Vernonia	(see below)	(see below)

Remarks

The genus **Vernonia** has been revised in recent years and the species are now classified under several new genera. In this book the genus name **Vernonia** has been retained on purpose, because this is the name under which beekeepers will find the different species in the various recommended identification guides. The new names have nevertheless been included in brackets. (See also other species under LARGE SHRUBS).

Botanical Name	Common Name	Beeplant Value	Flowering Time
V. glabra (= **Linzia glabra**)	Smooth vernonia Cornflower vernonia	N3? P3?	3–6

Remarks

NAM, BOT, LIM, MP, SZ, KZN. Perennial shrub that is little-known in S. Africa, but common in the Okavango floodplains, where it is an important source of nectar for bees and butterflies. Mauve-blue florets. Pollen pellets white.

Botanical Name	Common Name	Beeplant Value	Flowering Time
V. natalensis (= **Hilliardiella aristata**)	Silver vernonia	N2 P2	8–12

Remarks

EC, KZN, SZ, northern provinces, ZIM. Erect herb covered in silvery hairs. Annual upright stems on a perennial rootstock. Widespread in rocky grassland. Purple florets.

Botanical Name	Common Name	Beeplant Value	Flowering Time
V. oligocephala (= **H. oligocephala**)	Bicolour-leaf vernonia Bitter vernonia	N3 P2	8–12 (10–11)

Remarks

Southern Africa, except NC, WC, Karoo. Widespread in grassland. Erect stems are annual, woody rootstock is perennial. Leaves dark green above, silky white beneath. Flowers reddish to purple. Pollen whitish. Used as a bitter medicinal tea.

Botanical Name	Common Name	Beeplant Value	Flowering Time
V. poskeana (= **Polydora poskeana**)	*Sandveld vernonia* *Kalahari vernonia*	N1–4 P0–3	12–7 (3–6)

Remarks

Northern provinces, FS, NC, NAM, BOT, ZIM. Annual or short-lived perennial of disturbed sandy areas. Much-branched herb with thin leaves and stems. Single or paired flower heads on a long stalk. Pollen white. Most important autumn honey source in the Central Kalahari of Botswana. Good rains in January are a prerequisite for nectar flows. The yellowish nectar gives rise to honey with a strong nutty aroma and brownish colour.

Botanical Name	Common Name	Beeplant Value	Flowering Time
V. staehelinoides	Slender vernonia *Bloutee vernonia*	N0–2 P1?	3–5

Remarks

Northern provinces, FS. Rocky ridges in summit grassland. Perennial, much-branched, erect herb. Narrow leaves with curled margins. Base of flower head longish and coloured brownish-purple. Only a few, long, separate disc florets on a flower head. Cream to white pollen, bitter taste.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Veronica** spp. (SCROPHULARIACEAE)	Speedwell *Ereprys*	N1–3 P0–1	9–6

Remarks

Taxonomic issues of **Veronica** and the closely related **Hebe** species have not been resolved yet. The beeplants in these two groups have therefore been treated under a single entry in this chapter. They are ornamental perennials from Eurasia and New Zealand. Attractive spikes of small flowers appear in shades of purple, mauve, pink or white. They are mostly well-attended by bees. Pollen pellets are white to light grey. There are only two stamens per flower, which consequently are of minor pollen value. Long stamens give flowering spikes the appearance of small bottle brushes.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Viola odorata** (VIOLACEAE)	Sweet violet Common violet *Viooltjie*	N0–1 P?	6–9

Remarks

Eurasia. Well-known, fragrant, spreading perennial. Needs semi-shade. Rarely bee-visited – the length of the nectar-containing spur is variable, and warm weather is required for nectar secretion. Source of perfume.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Viscum combreticola (VISCACEAE)	Mistletoe *Voëlent*	N0–2? P?	(2–5)

Remarks

Northern provinces. Hemi-parasite on species of **Combretum** and **Acacia**. Green leafless branches, roundish to flattened. Flowers are small, pale lemon, with male and female separate. Well-visited occasionally, but usually not, for unknown reasons.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Wahlenbergia spp. (CAMPANULACEAE)	African bluebell *Blouklokkie*	N0–3 P0–3	1–12 (9–12) WR
W. denticulata			
W. procumbens			(12–4) SR
W. prostrata			
W. rivularis			
W. undulata			

Remarks

S. Africa. Slender annuals and perennials with open, bell-shaped flowers: white to mauve to blue. One honey sample from fynbos was dark golden, ropy, and with a mild yeasty-caramel taste. Whitish, light blue and mauve pollen pellets have been recorded. Surplus pollen in brood chambers, with accompanying brood production, has been reported from the FS. More information is needed on **Wahlenbergia** species as beeplants.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Waltheria indica (= *W. americana*) (Malvaceae)	Fertility herb *Meidebossie*	N2 P2	11–6 (1–3)

Remarks

KZN, SZ, northern provinces, NC, NAM, BOT. Tough, upright and bushy, perennial, hairy herb. Grassland and bushveld, often in disturbed sites. Small yellow flowers in leaf axils turn orange at maturity. More information is needed.

Botanical Name	Common Name	Beeplant Value	Flowering Time
*__Westringia rosmarinifolia__ (Lamiaceae)	Australian rosemary	N1–3? P0–2?	7–4 (8–10)

Remarks

Eastern Australia. Small, very ornamental shrub for coast and interior. Leaves similar to those of rosemary. Flowers mauve to white. Pollen light yellowish-brown or cream-coloured.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Wiborgia monoptera (Fabaceae) (Papilionaceae)	*Ertjiebos* *Bleek korrel-ertjie* *Wolfdoring*	N2? P?	7–9

Remarks

From Clanwilliam throughout Namaqualand. In karooid and Renosterbos scrub on rocky hillsides. 'Particularly bee-attractive; morning to afternoon.' Pale yellow pea flowers. More information is needed on **Wiborgia** species.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Xerophyta retinervis (= *Vellozia retinervis*) (Velloziaceae)	Black-stick lily *Bobbejaanstert*	N0? P0–2?	8–4 (9–11)

Remarks

KZN, northern provinces, ZIM, BOT. Rocky outcrops of dry areas. Stems thick, upright, fibrous, black. Grass-like leaves on top. Flowers lily-like, mauve, scented, with yellow centre.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Xyris capensis (Xyridaceae)	Common xyris Yellow-eyed grass	N0 P2?	11–4

Remarks

Southwestern Cape, EC, KZN, SZ, northern provinces, ZIM, BOT. Grass-like perennial herb in marshes and seepages. The flowers, on stiff erect stems, have three yellow petals that last only a few hours; also three yellow stamens and three yellow staminodes.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Zehneria scabra (CUCURBITACEAE)	Zehneria *Dawedjie*	N0–2 P?	8–4 (11–2)

Remarks

Cape Peninsula to EC and northwards. Coast to mountains. Perennial, slender climber of forest margins. Small white to light yellow flowers; male and female on separate plants; male in clusters, female solitary. 'Considerable bee activity' near Gansbaai.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Zygophyllum spp. (ZYGOPHYLLACEAE)	Twinleaf *Spekbossie* *Skilpadbossie*	N1–3 P1–3	1–12 (5–11) WR
Z. flexuosum (= *Roepera flexuosa*)			(12–4) SR
Z. foetidum (= *R. foetida*)			
Z. fulvum (= *R. fulva*)			
Z. lichtensteinianum (= *R. lichtensteiniana*)			
Z. morgsana (= *R. morgsana*)			
Z. prismatocarpum (= *Tetraena prismatocarpa)*			
Z. simplex (= *T. simplex*)			

Remarks

Although **Zygophyllum** species have more recently been re-classified under different genera, the old genus name has been retained here for the sake of beekeepers. The new names have nonetheless been incorporated as 'synonyms'. Zygophyllums are mainly found in drier parts of S. Africa, especially the WC, often in brackish areas. Shrubs with jointed stems. Two leaflets per leaf, semi-succulent. Flowers in shades of yellow. All five petals have dark markings at their bases as nectar guides. Most species have 4–5 wings or ridges on the fruit. Honey records from NC, WC and EC. Honey: light-coloured and mild. Exceptional rain in winter in the summer rainfall regions may result in spring flowering with surplus honey. Some species are palatable to stock and of medium grazing value.





Abelia × grandiflora. The glossy abelia is found in many gardens.



Aloe cryptopoda. The yellow aloe is a representative of the medium-sized, stemless group of aloes.



Agathosma ovata. Buchus are an integral component of fynbos flora. They are utilised by man and bees.



Aloe greatheadii var. **davyana**. The davyana aloe is utilised by more beekeepers than any other indigenous beeplant.



Aloe greatheadii var. **greatheadii**. This aloe is a typical example of the large group of the smaller, spotted-leaf aloes.



Anisodontea scabrosa. The wild mallows get much attention from honeybees.



Arctotis sp. The perennial spring arctotis plants are well-liked for their multi-coloured flowers and greyish-green foliage.



Aptenia cordifolia. This atypical mesemb is often used as a ground cover.



Artemisia afra. The inconspicuous flowers of *wilde als* have abundant pollen for honeybees.



Berkheya sp. The indigenous yellow thistles, like their purple-flowered exotic counterparts, furnish honeybees with nectar and much pollen.



Brunia stokoei. Brunias constitute but one group of the many fynbos beauties.



Campanula persicifolia. European bellflower species remain favourites in S. African gardens.



Carpobrotus edulis. The flowers of sourfig mesembs have a changeable attractiveness to honeybees.



Cotyledon orbiculata. The succulent leaves of the pig's ear vary in shape from finger-like to paddle-shaped.



Didelta sp. The semi-succulent, sprawling salad bushes are found in the western regions of the Northern and Western Cape provinces.



Dimorphotheca fruticosa. Besides the annual **Dimorphotheca** species like Namaqualand daisies, the genus also includes perennials like this white trailing daisy.



Crassula ovata. The karkay is a member of a large genus of succulent shrubs and herbs. Little is known about their beeplant value.



Drosanthemum floribundum and **Lampranthus** sp. Both are mesembs that honeybees freely visit.



Erica baccans. The berry heath is one of the so-called bee-type heaths from which bees can readily extract the nectar.



Euphorbia schinzii. This is a representative of the dwarf euphorbias that are succulent and have a milky latex. Most of them are thorny as well.



Erica densifolia. The Knysna heath has so-called bird-type flowers: red colour and long, thin flower tube that cannot be entered by honeybees.



Euryops pectinatus. The more than 80 **Euryops** species in S. Africa vary much in appearance, particularly with regard to the shape of the leaves. Almost nothing is known about the plant/bee relationships.



Felicia muricata. The common felicia is the most widely distributed species of its kind in southern Africa. It can flower any time of the year, depending on rainfall.



Gazania rigens. The indigenous trailing gazania is often used as a ground cover.



Geigeria ornativa. The common geigeria or *vermeerbos* causes vomiting in livestock. It grows in different habitats in the central region of S. Africa.



Gaillardia sp. With their intense colours, Indian blanket flowers remain sought-after garden ornamentals.



Geranium incanum. The showy carpet geranium is put to good use by gardeners as a ground cover.



Veronica sp. Almost without exception the species and cultivars of **Veronica** and the related **Hebe** lure bees with their abundant nectar.



Helichrysum foetidum. This strong-smelling, 1 m high biennial represents the many showy everlastings, of which the flower/bee relationships are little known.



Helichrysum polycladum. This plant is but one example of the many species of non-showy everlastings in the S. African flora.



Heliotropium amplexicaule. The curled inflorescence is typical for heliotrope species.



Hermannia sp. The five twisted petals give rise to the name doll's rose.



Hibiscus sp. **Hibiscus** species are frequently encountered in the S. African veld, mostly as pioneers in disturbed places.



Hirpicium gazanioides. Spiny or bristle daisies are found in arid to semi-arid regions of southern Africa.



Hypoestes aristata. The purple ribbon bush of forests and thickets in eastern S. Africa is grown as an ornamental in many gardens.



Indigofera spicata. Different indigo or *rooi-ertjie* species can be found over the entire southern Africa. They seem to be of minor importance to honeybees.



Isoglossa woodii. Species of buckweed have prominent nectar guides on the lower lip of flowers.



Justicia protracta. Justicia flowers have a hooded upper lip and a 3-lobed lower lip.



Lampranthus aureus. The mesemb genus **Lampranthus** contains countless species, of which some have gained horticultural favour.



Lebeckia sericea. Lebeckias have yellow, pea-type flowers. In some species honeybees are able to access the nectar.



Lessertia frutescens. The cancer bush grows in stony and gravelly soils of semi-arid regions of S. Africa.



Limonium sp. Sea lavender or statice species are either garden types from the Mediterranean, or wild forms on the western coasts of the Cape.



Lobostemon montanus. Lobostemons are valuable beeplants in the Cape. They are closely related to the echiums of the Mediterranean.



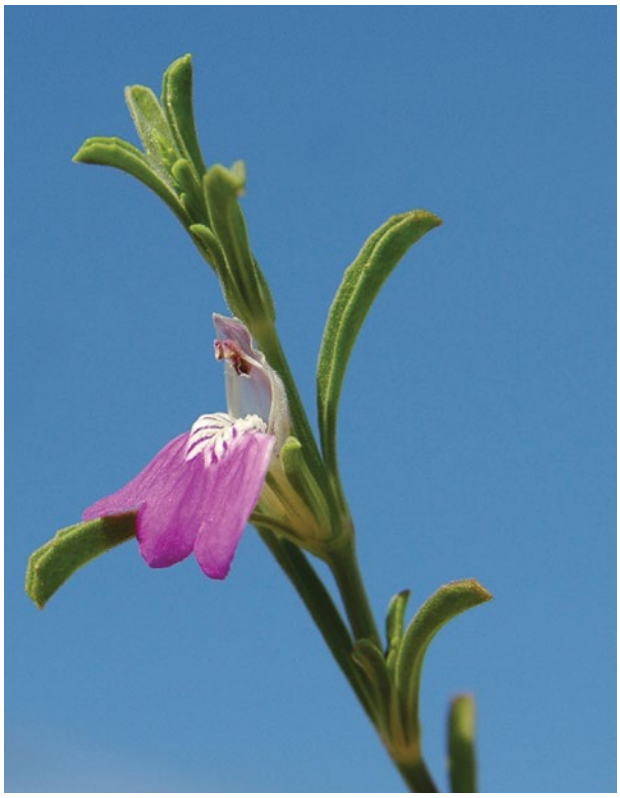
Melianthus comosus. Despite occasional honey crops from touch-me-not flowers, the plentiful nectar is often disregarded by bees.



Mentha longifolia. The horse mint is an atypical mint because of its elongated inflorescence and the narrow, long leaves.



Metalasia muricata. Although honeybees gather much pollen from the bristle bush, the greyish-orange pellets are a poor source of protein.



Monechma divaricatum. Wild lucerne is a Kalahari honey plant. It is not related to common lucerne.



Osteospermum moniliferum. The tick berry is an enigma in the plant world: berry-like fruit are borne on the daisy-type flower head.



Othonna carnosa. The mesemb daisy may easily be confused with a *vygie* when not in flower.



Pelargonium cucculatum. Many pelargonium species are visited by honeybees. Their flowers have nectar guides on the upper two petals.



Phyla nodiflora. The exotic lawn daisy has become established in the eastern regions of S. Africa.



Podalyria calyptrata. Sweetpea bush. As a rule only a small number of species of the family Papilionaceae, which have pea-type flowers, are good beeplants.



Polygala myrtifolia. Polygala flowers can be identified by the brush-like appendage of the lower petal.



Psilocaulon coriarium. The *asbos* is an atypical mesemb with jointed, mostly leafless stems.



Ruttya ovata. Ruttya can be recognised by the unkempt, hairy appearance of the inflorescence, as well as by the nectar guide spots on the lower petal.



Salvia leucantha. Mexican sage bush is one of several exotic sages that are grown in S. African gardens.



Salvia africana-lutea. The dune sage is an indigenous sunbird flower that is also made use of by honeybees.



Senecio glastifolius. The genus **Senecio** has some 300 species in southern Africa. With few exceptions, as shown here, the flower heads are yellow.



Stachys aethiopica. Stachys flowers, like other members of the family Lamiaceae, are 2-lipped, with or without nectar guides.



Tetragonia calycina. Several species of these semi-succulent, coastal 'dune weeds' are eaten as spinach.



Triumfetta sonderi. The globose, hairy fruit or 'seeds' are typical for **Triumfetta** species.



Vernonia natalensis is a typical representative of a group of plants with purplish to reddish flower heads without ray florets. All of them seem to attract honeybees with their pollen and nectar.



Wahlenbergia undulata. African bluebells appear to have plenty of nectar and pollen, but more information is needed on their value as beeplants.



Zygophyllum morgsana. Twinleaf species can be recognised by the two semi-succulent leaflets per leaf and the five yellowish petals.

6. Weeds

Weeds are unwanted plants that invade or grow in gardens, cultivated fields, orchards, grazing veld and indigenous vegetation. They compete for moisture, nutrients and space. Some are poisonous, interfere with harvesting of crops or entangle wool. With few exceptions South Africa's weeds are exotics that are mostly associated with disturbed soils or with watercourses.

Generally weeds have little value as nectar or pollen sources, for example pines, hakeas, wattles and solanaceous herbs. Some weeds, however, are useful for the beekeeper, such as the herbs: cosmos, false dandelion, echium, *ramnas* and different senecios. They are valuable for stimulating brood production and maintaining colonies, sometimes for several months. Under favourable conditions they may even produce surplus honey.

In Government Gazette No. 37885 and 37886 of 1 August 2014, the Department of Environmental Affairs published a register of invasive animal and plant species. The plants were placed in one of three defined categories, depending on how they were to be treated, for example allowing planting in demarcated areas only, or obligatory removal from circumscribed sites. The full designation of this law is: Notice 598 and Notice 599 of 2014: Alien and Invasive Species list of the National Environmental Management: Biodiversity Act No. 10 of 2004. In short, it is called the NEMBA list. In this beeplant book a number of species in the NEMBA list were not placed in the WEEDS chapter, purely on a subjective basis, for example honey locust, jacaranda and weeping willow. However, in the 'Remarks' columns of the different chapters, each of these species is identified as a declared weed or invader.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Acacia spp. (Fabaceae) (Mimosaceae)	Wattles	N0 P0–3	7–12 (8–10)

Remarks

See species discussion under OTHER TREES (pg. 71).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Acanthospermum** spp. (Asteraceae)	Starburr *Sterklits*	N2 P1	10–6 (12–3)
A. australe	Prostrate starburr		
A. hispidum	Upright starburr		

Remarks

South America. Found in KZN, SZ, MP, LIM, NW, with **A. hispidum** also in ZIM, BOT, NAM. Annual sub-herbaceous weeds of disturbed soils, particularly cultivated fields. Burrs contaminate sheep's wool and cotton lint. Pollen pellets light yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Achyranthes aspera (Amaranthaceae)	Rough chaff flower *Lang kafklits* *Haak-en-steek bossie*	N0–2 P0–1	12–6

Remarks

Southern Africa. Savanna and riverine forests, i.e. mostly in shaded sites. Long spikes with many seeds that are armed with sharp barbs. Not often visited by bees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Ageratina adenophora** (Asteraceae)	Crofton weed	N3? P2?	8–12

Remarks

Central America. Established near Stellenbosch, in the Magaliesberg and in the KZN Midlands, particularly around Pietermaritzburg. Perennial herb up to 1 m high. White flower heads, in terminal clusters, without ray florets.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Ageratum conyzoides**	Invading ageratum	N0–1? P0–2?	1–12 (7–11)
***A. houstonianum** (Asteraceae)	Garden ageratum Floss flower		

Remarks

South America. Escaped garden plants in disturbed moist places. Northern provinces to EC. Soft, annual herbs. Inflorescence: a few compact flower heads without petals, fluffy, blue to mauve. Pellets whitish. Pollen crude protein 21.1% (Kleinschmidt & Kondos 1976). Invasive in low-lying regions of eastern S. Africa.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Agrimonia procera** (= *A. odorata*) (= *A. eupatoria*) (Rosaceae)	Agrimony *Geelklits*	N1 P1–2?	10–3

Remarks

Europe. Perennial herb of which the aerial parts die off in winter. Established in temperate eastern regions of S. Africa. Invades roadsides, pastures and grasslands. Yellow flowers on long upright inflorescences. Pellets greenish-yellow. The fruit or seed has hooked bristles that stick to clothing and wool.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Alternanthera pungens** (Amaranthaceae)	Paper thorn weed *Papierdubbeltjie*	N0–2 P0–1	12–6

Remarks

South America. Central and eastern S. Africa, NAM, BOT, ZIM. Annual prostrate runners from a thickened perennial root. Weed of soils that were previously disturbed: roadsides, fields, gardens. Flattened, papery, yellowish to light brown thorns. Rarely visited by bees in hot, moist conditions.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Amaranthus deflexus** (Amaranthaceae)	Perennial pigweed *Meerjarige misbredie*	N0–1 P?	12–4

Remarks

Tropical America. Found in WC to KZN, FS, G. Prostrate herb with fleshy stout taproot. Female florets much more numerous than males on spikes. Older inflorescence reddish-brown, i.e. seeds.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***A. hybridus**	Common pigweed *Gewone misbredie* *Boomspinasie*	N0 P0–2	12–6

Remarks

North to South America. Widespread in southern Africa. Large annual herb of cultivated and waste ground. Leaves used as wild spinach and seeds as grain. Pollen light brownish-yellow; crude protein 13.1% (Köttner 1991).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***A. spinosus**	Thorny pigweed *Doringmisbredie*	N0 P0–3?	11–5

Remarks

Central America. From KZN to northern provinces, BOT, NAM. Annual weed of cultivated and waste lands, particularly in the subtropics. Pair of spines at the base of leaves. Pellets ochre-yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. thunbergii	Red pigweed *Rooi-misbredie*	N0 P0–2	11–4

Remarks

Indigenous to southern Africa. Small annual with prostrate growth habit. Mostly in cultivated fields. Plants turn red as they mature.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Ammi majus** (Apiaceae)	Queen Anne's lace Lace flower *Kantblom* *Wilde wortel*	N0–2 P0–1	10–4

Remarks

Eurasia. Much-valued ornamental that has only properly established itself from the southwestern Cape to the EC. Variably bee-attractive. Weed in seed-carrot fields and vineyards.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Amsinckia menziesii** (= *A. retrorsa*) (Boraginaceae)	Fiddle neck *Neukbos* *Vioolnek*	N1–3? P0–1	7–11

Remarks

USA. Winter rainfall area of the WC. Hairy, yellow-flowered annual, particularly of Sandveld wheat fields. Small flowers on one side of the curled inflorescence.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Anagallis arvensis** (Primulaceae)	Scarlet/Blue pimpernel *Blouselblommetjie*	N1? P1?	7–2 (8–11)

Remarks

Europe. From southwestern Cape to EC and northwards to LIM. Common in Cape cereal fields. Low, branching annual of roadsides and gardens. Tender plant of moist localities. In S. Africa the flowers are usually blue.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Anredera cordifolia** (Basellaceae)	Madeira vine Tuber vine *Madeira ranker*	N0–1 P1?	2–5

Remarks

Subtropical South America. Ornamental sub-succulent creeper with aerial tubers. It drapes itself over other plants, smothering them, particularly in urban gardens and sugarcane fields. Mainly a problem in the southwestern Cape and eastern coastal areas. Pollen crude protein 23.5% (Kleinschmidt & Kondos 1976).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Anthemis cotula** (Asteraceae)	Stinking chamomile Dog fennel *Stink-kamille*	N0–2? P0–2?	11–3?

Remarks

Europe. Established in SC, EC, KZN, MP, G, LIM. Much-branched herbaceous annual, with finely divided leaves. White daisies with prominent yellow centres. The corn or false chamomile, **A. arvensis**, has become naturalised in KZN. It is assumed to have the same beeplant value as the stinking chamomile.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Araujia sericifera** (Apocynaceae)	Moth catcher *Motvanger*	N1–3 P0	11–4

Remarks

Brazil. A weed of gardens and waste places, particularly in suburban areas. G, FS, KZN, EC. Semi-woody perennial creeper. The pollinia of the flower attach themselves to the probosces of moths and bees, but sometimes the insects cannot extract the pollinia; they remain caught and eventually die. Free honeybee foragers were collected and investigated for the presence of pollinia: in 10 out of 12 a pollinium was attached to the proboscis.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Arctotheca calendula (Asteraceae)	Cape marigold Cape weed *Soet gousblom*	N0–3 P0–4	7–12 (9–10)

Remarks

WC to southeastern Cape and Karoo, particularly coastal areas or disturbed soils of vineyards and wheat fields. This annual has two growth forms: tufted or sprawling. Small contributions to surplus honey, which has been described as bright golden and quick-granulating. Pollen deep orange, crude protein 21% (Australia). The flowers are sometimes ignored for more attractive sources.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Argemone ochroleuca**	Mexican poppy	N0	8–4
	Bloudissel	P0–3	(9–11)
***A. subfusiformis** (Papaveraceae)			

Remarks

From Central America. Widespread in southern Africa in disturbed areas and dry riverbeds. Erect, spiny, bluish-green annual with pale cream to white flowers. Pollen is rarely collected and only if there is a simultaneous source of stimulative nectar, as was the case at the end of the davyana aloe flow at Pienaars River: an average of 47% **Argemone** pollen was trapped on three colonies during the first week of September. Pellets light orange. The yellow-flowered ***A. mexicana** is far less common and probably has the same beeplant value.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Asclepias fruticosa	Shrubby milkweed	N2–4	9–4
(= **Gomphocarpus fruticosus** subsp. **fruticosus**)	*Gewone melkbos*	P0	(10–11)
(Apocynaceae)	*Tontelbos*		

Remarks

Annual or semi-perennial shrub of disturbed sites throughout southern Africa. The inflated, 'hairy' fruit is pointed. Bees forage throughout warm days. Contributes a light-coloured honey to the mixed spring flow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. physocarpa	Balloon milkweed	N3?	1–12
(= **G. physocarpus**)	*Balbossie*	P0	(10–3)
	Wilde kapok		

Remarks

Southwestern Cape, EC, KZN, MP, G, LIM. Occurs naturally in grassland. Not a serious weed. Grown as an ornamental for its spherical inflated fruits. In the milkweed family the pollen is not released from anthers, but transferred in a structure called a pollinium. Honeybees foraging on the above milkweeds were found to have pollinia attached to any of their six legs, with up to five pollinia per leg, but not to their proboscis. (Compare this with **Araujia**.)

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Bidens bipinnata**	Blackjack	N1–2	10–5
	Knapse kêrel	P1–3	(2–4)
***B. pilosa** (Asteraceae)			

Remarks

Eurasia and South America respectively. Widespread in southern Africa, except for arid regions in the northwest. Common weeds of crops and disturbed soils. Erect annual herbs in different habitats. Seeds with clinging burrs. Highest bee activity around midday. Pollen yellow to light brown to orange. One old record of light, mild honey from the Pietermaritzburg area.

Botanical Name	Common Name	Beeplant Value	Flowering Time
B. formosa* (= **Cosmos bipinnatus)	Cosmos *Kosmos*	N2–3 P2–3	11–6 (3–4)

Remarks

Central America. Large annual of disturbed soils, mainly roadsides, on the Highveld of KZN, FS, northern provinces. Ray florets white, pink or red. Honey: light golden colour, mild flavour. Pollen yellow to orange. Good colony build-up. Reddish-orange dwarf cultivars are grown as ornamentals.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Boerhavia diffusa**	Sprawling spiderling *Kruip-kleefbossie*	N0–2 P0–1	9–5 (12–3)
***B. erecta** (Nyctaginaceae)	Erect spiderling *Regop-kleefbossie*		

Remarks

South America. In S. Africa found in WC, EC, KZN, FS, northern provinces, ZIM, BOT, NAM. Annuals to short-lived perennials with a thickened root. Weed of disturbed soils in different situations. Fruit and thin stems are sticky. Very small flowers in shades of pink, with only a few open at any given time. Pollen light yellow (Zambia). During afternoons bees have difficulty distinguishing between the now green flowers (petals wilted?) and the very similar-looking flower buds.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Borreria scabra (= **Spermacoce ruelliae**)	Borreria	N0–2 P0–3	11–4 (2–3)
B. senensis (= **S. senensis**) (Rubiaceae)			

Remarks

Northern provinces, ZIM, BOT, NAM. Small, annual, hairy herb. Minor weed of disturbed soils of different habitats. Upright stems with spaced whorls of leaves and white flowers, which have light purple, streaked nectar guides. Only few flowers are open at any time. Pollen in shades of white. During a fortnight's pollen trapping in March at a bushveld site north of Pretoria, the 25% **Spermacoce** pellets were the second most abundant after the 51% **Vernonia.**

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Brassica tournefortii** (Brassicaceae)	Long-fruited wild turnip Mediterranean wild mustard	N2 P3	8–1 (8–9)

Remarks

Mediterranean. Minor weed of cultivation in the Cape provinces. Fruit 'pods' are long and thin, ending in a thin, long beak. Pellets cream-coloured to light yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Brayulinea densa* (= **Guilleminea densa) (AMARANTHACEAE)	Soft weed Weed lawn *Vals papierdubbeltjie*	N0–2 P0–1	1–4

Remarks

Tropical America. Weed of sports turf, golf courses and garden lawns. EC, KZN, FS, northern provinces, ZIM, BOT, NAM. The prostrate, spreading, soft-hairy stems are annual. Very thick perennial taproot. Small straw-coloured flowers crowded together in bundles. Moist soil and warm weather promote nectar secretion. Nectar yellow, with a caramel taste. Pollen rarely collected.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Caesalpinia decapetala** (FABACEAE) (CAESALPINIACEAE)	Mauritius thorn *Kraaldoring*	N0–2 P0–2	5–9

Remarks

Asia. Vigorous invader in the subtropics. Impenetrable thorny scrambler that smothers any other vegetation. Light yellow upright inflorescences. Nectar is collected inside the flower, as well as outside from its base after it has wilted. Pellets orange-brown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Campuloclinium macrocephalum** (= *Eupatorium macrocephalum*) (ASTERACEAE)	Pom-pom weed *Pompombossie*	N0–2 P0–1	11–3 (12–1)

Remarks

Argentina, Brazil. Well-established in some localities of KZN, MP, G, LIM. Declared weed: it is a very serious invader of grasslands. Leaves and stems die annually, but the root crown is perennial. Erect bristly stem to 1.3 m high with pink, fluffy flower heads. Pollen whitish to light grey. Honeybees are major pollinators. Biological control agents were recently released.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Cannabis sativa** (CANNABACEAE)	Marijuana Hemp *Dagga*	N0 P0–3	12–4

Remarks

Central Asia. Naturalised worldwide in warmer regions. Widely cultivated in S. Africa, though illegally. Dioecious, i.e. separate male and female plants. EC project for production of hemp fibre.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Cardiospermum grandiflorum** ***C. halicacabum** (SAPINDACEAE)	Balloon vine *Blaasklimop*	N0–2 P0?	1–12 (11–4)

Remarks

Tropical America. Ornamentals that are invading different habitats in subtropical areas. Slightly woody climbers with tendrils and membranous, inflated fruit capsules. Flowers: small, white or yellow, fragrant, together in clusters, long-blooming.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Cassia mimosoides (= **Chamaecrista mimosoides**) (FABACEAE) (CAESALPINIACEAE)	Fishbone cassia *Visgraat cassia*	N? P0–1	1–12 (1–4)

Remarks

EC, KZN, northern provinces, ZIM, BOT, NAM. Annual or short-lived perennial herb in grassland. Also a non-aggressive weed of disturbed areas, particularly road verges and old fields. Compound leaf with about 35 or more pairs of opposite narrow leaflets, the 'fishbones'. Yellow petals; reddish-brown sepals. Pollen light yellow. Henderson (2001) lists eight exotic ***Cassia** shrubs that have become invasive in the eastern regions of S. Africa.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Catharanthus roseus** (= *Vinca rosea*) (APOCYNACEAE)	Madagascar periwinkle *Begraafplaasblom*	N0–1 P0	1–12 (12–4)

Remarks

Madagascar. Naturalised and semi-invasive from LIM to KZN in various habitats. Erect perennial herb with pink or white flowers. Nectar taken from the front of the flower (rising nectar?), or between calyx and ovary after the wilted flower has dropped, or at the base of young 'pods'. It is used medicinally, but is poisonous.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Centaurea** spp. (ASTERACEAE)	Star thistle Centaurea	N1–3 P1–3	12–4
C. calcitrapa	Purple star thistle		
C. melitensis	Yellow centaurea		
C. repens	Pink centaurea		
C. solstitialis	Yellow star thistle		

Remarks

Eurasia. Weeds in southern and central regions of S. Africa. The star thistles have spiny flower heads, but no spines on leaves or stems as in other true thistles. Weeds of cultivated fields and vineyards. All are annuals, except for **C. repens**, a perennial with rhizomes. Some light-coloured honey is obtained in Australia, North America and Eurasia in regions where plants are plentiful. Pollen colours variable, from light olive to shades of lavender to light shades of grey. In pollen of **C. solstitialis** the crude protein level is 21.2% (Maurizio & Grafl 1980).

Botanical Name	Common Name	Beeplant Value	Flowering Time
Ceratotheca triloba (PEDALIACEAE)	Wild foxglove *Vingerhoedblom*	N1? P0–3	10–5 (1–4)

Remarks

EC, KZN, SZ, northern provinces, ZIM, BOT, NAM. Upright annual, at times perennial, of cultivated fields or disturbed grassland. Bees collect white pollen during mornings. On a bushveld farm north of Pretoria, pollen was trapped during summer months for five consecutive years. **Ceratotheca** pollen appeared in any one of the months of February, March or April in the following percentages of the monthly total: 9.3%; 0.0%; 1.2%; 0.4%; 94.5%.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Cereus jamacaru** (Cactaceae)	Queen-of-the-night *Bobbejaanpaal*	N2–3 P1–3	10–4 (11–1)

Remarks

Brazil. Large upright spiny cactus, an escaped ornamental. Widespread, with minor infestations from the southwestern Cape to KZN and FS. Serious invasions in northern KZN, SZ and northern provinces in bushveld and savanna. Night-flowering: pollen is collected at dusk and nectar at dawn. Bees can reach the plentiful nectar with 30% sugar at the base of the long flower tube. Pellets light yellow. One report of a mild, light golden, slow-granulating honey from the Magaliesberg.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Chenopodium album** (Chenopodiaceae)	White goosefoot *Wit hondebossie*	N0 P0–1	1–12 (12–3)?

Remarks

Eurasia; now a cosmopolitan weed. Widely distributed in S. Africa, except in the northwest. Found in gardens, as well as wheat and vegetable fields. Annual or sometimes a short-lived perennial, frost tolerant, erect herb. Stems and leaves light greyish-green, emitting an unpleasant smell when bruised. Pollen pellets yellow. Only one observation of bee activity made in many years, during January when other weeds that provided nectar, were flowering nearby.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Chromolaena odorata** (= *Eupatorium odoratum*) (Asteraceae)	Triffid weed *Paraffienbos*	N0–3? P0–2	6–12 (7–8)

Remarks

From South to North America. Coastal and escarpment regions of EC, KZN, SZ, MP, LIM. A scrambling plant that often forms dense thickets that cover plantations and indigenous bush – a serious invader. Crushed leaves have a paraffin- or turpentine-like smell. Small white to mauve flowers without petals, sweetly scented. Nectar: water-white colour, no smell, non-specific taste. Pellet colour ivory to cream. Important honey plant in Thailand.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Cirsium arvense** (Asteraceae)	Canada thistle Creeping thistle	N2–3 P0–3	10–4

Remarks

Eurasia. Established in MP and EC. Spreading slowly, probably because it is dioecious, with separate female and male plants. Perennial with tough rhizomes. Pink to purplish flowers. Only the leaves have many spines, plus some short spines on the flower head. Pellets light olive-grey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***C. vulgare**	Scotch thistle Spear thistle *Skotse dissel* *Doringdissel*	N2–3 P2–3	11–4 (1–3)

Remarks

Eurasia. From coast to Highveld of WC, EC, KZN, FS, northern provinces. Leaves and flower heads are very spiny. A biennial of pastures and roadsides. Produces pink to mauve flowers in its second year. Pellets white to light olive to light olive-grey; crude protein 31.7% (Australia). Occasional **Cirsium** honeys in North America, Australia and Eurasia.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Cleome gynandra (Capparaceae)	Spider wisp *Spinnekop cleome*	N0–1 P0–3	11–5

Remarks

NC, FS, northern provinces, ZIM, BOT, NAM. Well-known spinach herb of disturbed sites. White flowers with long stamens. The orange pollen is collected in flight. Availability of flowers and of a nectar flow depend mainly on rainfall: when and how much. The yellow-flowered **C. angustifolia** and **C. kalachariensis** occur in the northern parts of southern Africa. They are bee-visited, but their value is unknown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. maculata	Yellow-spotted cleome *Geelkol cleome*	N2 P2?	12–4

Remarks

Northern provinces, BOT. Minor weed of disturbed sandy soils. Two of the four mauve petals have a yellow spot (macula). The spots are nectar guides and are held upwards until the flower is pollinated, after which the petals droop, obscuring the spots. One report of honey in northern Gauteng.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. monophylla	Single-leaf cleome *Rusperbossie* *Enkelblaar cleome*	N0–2 P0–3	9–4 (12–3)

Remarks

KZN, northern provinces, NC, NAM, BOT, ZIM. Small erect herb with pale pinkish-mauve flowers. Yellow and purple nectar guide bands. At times in dense stands in disturbed sandy soils. Bee activity during mornings only, after dew has evaporated. Pollen light brown to yellowish-brown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Commelina benghalensis (Commelinaceae)	Benghal wandering Jew *Gewone blouselblommetjie*	N0 P0–2	10–4 (12–3)

Remarks

From the EC northwards to ZIM, BOT, NAM. Widespread annual weed of fields and gardens in the summer rainfall region. Prostrate or semi-climbing herb with runners, both above and below ground. Flowers usually pale blue. Pollen colour given as whitish, light orange and khaki-green.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Convolvulus arvensis** (Convolvulaceae)	Field bindweed *Akkerwinde*	N1–3? P1–3?	10–5 (12–2)

Remarks

Eurasia. Locally in WC, EC, FS, G. Cultivated fields, particularly grain lands of the Cape, and Karoo lucerne fields. Deep underground runners withstand frosts and herbicides. The white flowers have light-coloured nectar guides and close after midday. The nectar has a very slight perfumed smell. Pollen is whitish to light brownish-grey, with a mild non-specific taste.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. sagittatus var. **ulosepalus** (= *C. ulosepalus*)	Wild bindweed *Rankbossie* *Wilde akkerwinde*	N1–2 P0–2	10–5

Remarks

Southern Africa. Widespread indigenous weed. Serious in wheat fields and vineyards along the Orange River. The relatively small white or pinkish flowers close circa 11:00.

Botanical Name	Common Name	Beeplant Value	Flowering Time
*****Conyza albida* (= **Erigeron sumatrensis**)	Tall fleabane *Groot skraalhans*	N0–2 P?	12–3
*****C. bonariensis* (= **E. bonariensis**) (Asteraceae)	Flax-leaf fleabane *Klein skraalhans*		

Remarks

Americas. Now in most parts of southern Africa. Half-woody, upright, hairy annuals of cultivated fields, gardens, roadsides and waste places. Small urn-shaped flower heads without ray florets. The fleabanes seldom attract bees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Cotula nigellifolia (Asteraceae)	Staggers weed *Stootsiekte bossie*	N1 P2	10–4

Remarks

SC to KZN. Straggling annual or perennial with double-divided leaves. Flower head with yellow, domed centre and small, white, round ray florets. Weed in damp places. Poisonous to stock.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. turbinata (= *Cenia turbinata*)	Yellow buttons Goose daisy *Ganskos*	N0–1? P0–2	6–12 (7–10)

Remarks

Southwestern Cape. Small annual weed of disturbed soils. Fine, dissected foliage. Semi-globose yellow flower head with or without small white ray florets. Pollen deep yellow. The similar-looking **C. heterocarpa** has been recorded as a beeplant in the EC.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Cuscuta campestris** (Convolvulaceae)	Dodder *Dodder*	N0–1 P?	11–4

Remarks

North America. Generally a nuisance weed in the WC, EC, KZN, FS, northern provinces, ZIM, BOT. Small, yellowish, parasitic twiner without leaves. Found on a wide range of herbs and small shrubs. Can be a serious weed on such crops as carrots and lucerne. Only a few of the small cream-coloured flowers are open at any time. Therefore the attractivity of this weed is low.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Cyathula uncinulata (Amaranthaceae)		N2? P?	1–3

Remarks

WC to KZN, FS, northern provinces, ZIM. Minor weed of forest margins. Robust scrambling herb. Inflorescence: terminal, spherical, with many small hooked bracts and lemon-coloured florets. Beeplant value based on a single record.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Cyperus spp. (Cyperaceae)	Sedge Nutsedge *Uintjie* *Biesie* *Matjiesgoed*	N0 P0–1	9–4 (12–3)

Remarks

Southern Africa. Mostly indigenous, with few exotics. Tufted, grass-like herbs. The *geeluintjie*, **C. esculentus**, is a serious weed. Little information on beeplant value: trapped pollen usually below 1% of total. Pellets cream to light yellow. Only two species have been specifically identified, both from outside S. Africa: **C. esculentus** and **C. maculatus**.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Datura ferox**	Large thornapple *Groot stinkblaar*	N0 P0–1	10–3
***D. stramonium** (Solanaceae)	Common thornapple *Gewone stinkblaar*		

Remarks

Tropical America. Widespread in southern Africa. Annual herbs of cultivated fields and disturbed places. Foul-smelling leaves. Thorny fruit. White pollen is seldom collected. Only one record of high bee activity.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Dicerocaryum eriocarpum (Pedaliaceae)	Devil's thorn Boot protector *Beesdubbeltjie*	N0–2 P0?	10–4 (1–3)

Remarks

NC, NW, G, LIM, ZIM, BOT, NAM. Perennial prostrate herb with trailing stems from a woody rootstock. Sandy soils of disturbed areas: grassland and old fields. Pink to mauve, trumpet-shaped flowers have streaked, dark red nectar guides. Long-flowering. Nectar: water-white colour; no specific smell or taste. Fruit is a hard, oval disk with two sharp, upward-pointing spines.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Dittrichia graveolens** (= *Inula graveolens*) (Asteraceae)	Cape khakiweed *Kaapse kakiebos*	N0–1? P0–3?	2–4?

Remarks

Mediterranean. Perennial herb of wheat fields, roadsides and waste places in the WC. The plant has a strong smell and is covered in glandular hairs that make it sticky to the touch. It is difficult to control on account of its strong root system. Small flower heads with only a few yellow disc florets.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Dolichandra unguis-cati** (= *Macfadyena unguis-cati*) (= *Doxantha unguis-cati*) (BIGNONIACEAE)	Cat's claw creeper *Katteklou-ranker*	N0–2 P0–1	9–2 (9–10)

Remarks

Central and South America. Declared weed of town gardens and forests of northern provinces. Tough three-clawed tendrils. Yellow trumpet-shaped flowers. Nectar water-white. Biscuit-coloured pollen is sometimes gathered from older flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Echinopsis spachiana** (= *Trichocereus spachianus*) (CACTACEAE)	Torch cactus *Orrelkaktus*	N? P2?	10–3 (12–1)

Remarks

Argentina. Very spiny cactus with columnar stems up to 1.5 m high. Declared weed that invades Karoo and dry savanna of the interior. Showy, white, nocturnal flowers. It is unknown whether bees can enter the narrow flower tube to reach the nectar. Light-coloured pollen is collected at dusk.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Echium plantagineum** (= *E. lycopsis*) (BORAGINACEAE)	Purple echium Salvation Jane Paterson's curse *Pers echium*	N1–3 P1–3	8–4 (10–12)

Remarks

Eurasia. Declared weed found in WC, EC, KZN, MP. Appears in vineyards, orchards, pastures and roadsides in the WC; also in fields and pastures in the EC and KZN. On the increase in the southwestern Cape, where, for some beekeepers, it has become an important source of pollen and a light-coloured, mild honey. Inflorescence loosely branched, with 2 stamens per flower. Pollen very nutritious: 31% crude protein in S. Africa, or 35.2–37.8% in Australia. Pellets purple. Important Australian beeplant for colony build-up and honey production.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. vulgare**	Blue echium Bugloss *Blou echium*	N1–3 P1–2	10–4 (12–2)

Remarks

Eurasia. Less common than purple echium and established in G, FS, L, EC and southwestern Cape. Deep-rooted biennial. Also a declared weed. Upright, dense inflorescence, with 4–5 stamens per flower. Pollen pellets in shades of blue. Light-coloured honey in Mediterranean countries and Australia.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Eclipta prostrata** (ASTERACEAE)	Eclipta	N1? P1?	1–3

Remarks

Eurasia. Cosmopolitan weed of damp places. Annual herb with reddish stems and opposite leaves. Small flower heads are white. Very small ray florets. Beeplant value based on one published record outside S. Africa.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Eichhornia crassipes** (PONTEDERIACEAE)	Water hyacinth *Water hiasint*	N? P0–3	11–5

Remarks

Tropical South America. Invades dams and slow-flowing rivers of WC, EC, KZN, MP, G, NW. Floating aquatic with pale violet flowers. Pollen collected from three long stamens and three short stamens inside the narrow flower tube (3.2 mm wide and 19.6 mm deep). There is very little nectar in the base of the tube, with 20–25% sugar. Unless the flow of nectar is very copious, honeybees cannot reach it. Pollen pellets light grey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Eremocarpus setigerus** (EUPHORBIACEAE)	Dove weed *Vaalbossie* *Goewerneursbossie*	N0–2 P0–1	1–4

Remarks

North America. Small hairy annual or biennial of Piketberg and Malmesbury. Bee visits from 15:00 onwards. 'Amber, astringent, biting honey' in California.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Erodium cicutarium** (GERANIACEAE)	Filaree *Horlosiewyster* *Muskuskruid*	N1–2 P1–2	8–10

Remarks

Europe. Minor weed in WC, EC, L, FS. Annual or biennial of mostly moist, disturbed sites. Hairy, deeply double-lobed leaves with musk-like odour. Small pink to purplish flowers with 5 spoon-like petals, well separated from each other. Pollen dark red to reddish-brown. The twisted, dry style, which is attached to the seed, turns under changing moisture conditions (Afrikaans name).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. moschatum**	Musk heron's bill *Horlosie*	N2 P2	6–11

Remarks

Europe. Annual or occasional perennial of the WC, where it is a pasture component in the southern coastal districts. Light purple flowers, which are said to already open at night, i.e. early morning has highest bee activity. Pollen dark red. The elongated fused styles of young fruit give rise to the name 'heron's bill'.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Euphorbia helioscopia** (EUPHORBIACEAE)	Umbrella spurge Sun euphorbia	N1 P1	11–1

Remarks

Europe. A relatively rare, annual weed of gardens and irrigated vegetable fields in the WC, EC, KZN, SZ, MP, G. Upright stems with alternate leaves, which are more-or-less egg-shaped and finely toothed in the upper half. Light yellowish-green flowers in a terminal, somewhat flattened inflorescence, the 'umbrella'. Pollen yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. heterophylla** (= *E. geniculata*)	Painted euphorbia *Gekleurde euphorbia*	N0–1 P0–2	12–5

Remarks

North America. Exotic, annual, leafy, erect herb in KZN and northern provinces. Weed in fields and other disturbed locations. Dull yellow pollen is seldom collected. Bees mostly collect orange fungal spores (**Melampsora** sp.) from the underside of leaves. Different unidentified fungal spores collected by bees near Wellington were found to contain 10.7% crude protein (Köttner 1991).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***E. hirta** (= *Chamaesyce hirta*)	Red spurge *Rooi melkkruid*	N0–2 P0–1	11–4

Remarks

Tropical Africa. From KZN through SZ to northern provinces, ZIM, BOT, NAM. Creeping annual with hairy, reddish stems that contain white latex. Small florets in dense flower heads, which are green, turning pink. A weed of gardens, lawns and cultivated fields. Optimal nectar secretion in hot weather, starting near 27°C. Small pollen pellets are light brown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Fallopia convolvulus** (= *Polygonum convolvulus*) (Polygonaceae)	Climbing knotweed *Slinger-duisendknoop*	N2? P1	11–2

Remarks

Europe. A cosmopolitan weed now found in EC, KZN, FS, northern provinces. Twining annual with triangular leaf blades and small white flowers. Mostly in wheat and vegetable fields.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Flaveria bidentis** (Asteraceae)	Smelter's weed *Smeltersbossie*	N0–2 P0–2	10–6 (1–4)

Remarks

Tropical America. Found in KZN, FS, NC, northern provinces, ZIM, BOT, NAM. Semi-herbaceous annual or biennial with a yellowish stem. Weed of crops and waste places, often along roads. Yellow disc florets open from the middle of the flower head outwards. No ray florets. Pollen light brownish-orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Foeniculum vulgare** (Apiaceae)	Fennel *Vinkel*	N1–3 P1–2	11–4

Remarks

Mediterranean, Asia Minor. Biennial to perennial. Naturalised in southwestern Cape to KZN, G. Found on roadsides and in croplands, particularly Swartland wheat. Pollen brownish-yellow or golden yellow. (See also under CROP PLANTS).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Fumaria muralis** (= *F. officinalis*) (FUMARIACEAE)	Fumitory Pink weed *Duiwekerwel*	N0–1 P0–2	1–12 (9–11)

Remarks

Europe. Annual weed of sown crops in the WC. Less common in EC, KZN, FS, G, MP. Superficially flowering plants resemble vetches. Pellets dull yellow or yellowish-brown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Galinsoga parviflora** (ASTERACEAE)	Quick weed Gallant soldier *Knopkruid*	N0–1 P0–1	11–3

Remarks

South America. Established in the EC, KZN, FS, northern provinces, ZIM, BOT, NAM. Slender, soft, annual herb with opposite leaves. A nuisance in cultivated fields and gardens. Small yellow flower heads. The small white ray florets are inconspicuous. Pollen yellow. Mostly without bees. One report of high bee activity 'for a few days' only.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Gomphrena celosioides** (AMARANTHACEAE)	Prostrate globe amaranth Ant seed *Miersaad*	N0–1 P?	10–6

Remarks

Tropical South America. In southern Africa from the EC northwards. Roadsides, crops and lawns. Herbaceous perennial with woody rootstock, producing many hairy prostrate shoots. Flower heads whitish and slightly woolly. Seldom bee-visited. Seeds harvested by ants.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Hakea drupacea**	Sweet needlebush	N1–2	5–10
***H. gibbosa**	Rock needlebush	P0–2	
***H. sericea** (PROTEACEAE)	Silky needlebush		

Remarks

Australia. Serious invaders of mountain fynbos. Needle-like leaves and hard woody fruit. All three species are visited by bees for nectar and pollen. Small surplus of **Hakea** honey occasionally obtained in Australia and New Zealand. Pollen light yellow. Biological control agents released against **H**. **sericea**.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Hibiscus cannabinus** (MALVACEAE)	Hemp-leaf hibiscus Kenaf *Wilde stokroos*	N0–3 EN P0–1?	11–5

Remarks

Old World Tropics? Weed of KZN, SZ, northern provinces, ZIM, BOT, NAM. Tall erect annual herb. Short sharp prickles on stems and leaves. In disturbed soils like roadsides and crops. Light yellow to whitish flowers with purple centre. Flowers open at daybreak and close mid-afternoon. Floral and extrafloral nectar is collected by bees. One record of honey from Florida, USA. It is also a developing fibre crop, 'kenaf' or 'deccan hemp', particularly in KZN.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***H. trionum**	Bladder hibiscus *Terblansbossie*	N0–2 P0–1	9–6

Remarks

Old World Tropics? Widespread in southern Africa, except West Coast, Karoo and NC. Straggly herb of disturbed areas and cultivated fields. Ornamental fruit is inflated and red-striped. Flowers are whitish to pale yellow, with a dark purple centre. They close around midday.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Hypericum perforatum** (Clusiaceae) (Hypericaceae)	St. John's wort *Johanneskruid*	N0–1 P0–2	10–1

Remarks

Eurasia. Established in some fynbos areas and old lands of the southwestern Cape. Weed with underground stems; also several upright flowering stems that die in winter. Orange or light brown pollen is collected during the forenoon. Crude protein 26.9% (Maurizio & Grafl 1980).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Hypochaeris radicata** (Asteraceae)	Flatweed False dandelion *Skaapslaai*	N1–2 P0–3	1–12 (11–1) (3–4)

Remarks

Europe. Perennial weed of roadsides, lawns and waste places. WC to KZN, L, FS, SZ, MP, G, LIM. Light yellow flowers on long thin stalks. They 'close' at 10:00 on a sunny summer's day. There are two main flowering periods in summer rainfall regions. Occasional small flows in the Midlands of KZN, when fresh cappings are stained yellow. Pollen in shades of orange and with 16.6% crude protein (Köttner 1991) or 18.4% (Rayner & Langridge 1985). Honey in Australia is yellow and somewhat bitter. Nectar and pollen can sustain brood rearing at an average level. The flatweed is a competitor for pollinating bees on the Highveld where blackberries and raspberries are grown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Ipomoea carnea** (Convolvulaceae)	Bush morning glory	N3? EN P2?	1–12 (7–10)?

Remarks

Tropical America. Escaped ornamental that is invasive in KZN and LIM. Large shrub with woody stem base. Flowers deep pink. Extrafloral nectar is collected, from flower buds? High beeplant values reported from tropical America.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***I. purpurea**	Common morning glory	N? P1?	12–5

Remarks

Tropical America. Well-known ornamental or escaped weed, particularly in urban areas. A problem plant in maize and sugar cane fields. Annual where winters are cold, but perennial in the subtropics. Flowers white, mauve, reddish, purple. Bee visits are very rare.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Kyllinga erecta (Cyperaceae)	Golden button sedge	N0 P0–1	12–4

Remarks

SC to KZN, L, FS, northern provinces, BOT. Small, erect, perennial sedge with underground rhizomes. Troublesome in lawns and other greens. Ovoid flower head with golden-brown spikelets. Beeplant value based on a single report outside S. Africa.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Lactuca serriola** (Asteraceae)	Wild lettuce *Wilde slaai*	N0–1 P0–2	10–3

Remarks

Europe. Weed of gardens, roadsides and waste places, from the WC to KZN, L, FS, G, MP. Semi-herbaceous, upright-growing, short-lived perennial that exudes a milky sap when broken. Pale yellow daisy-type flowers are seldom visited by bees. Pollen pellets yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Lamium amplexicaule** (Lamiaceae)	Henbit deadnettle *Turknael*	N2? P0–1	11–3?

Remarks

Eurasia. Widespread but not abundant in central and western South Africa. It does not occur in the northern provinces and KZN. Small annual weed that has become a nuisance in gardens of high-altitude Karoo. Flowering stem leafless except for whorls near the tip, where the pinkish to red flowers appear as well. Long-flowering. Nectar also secreted in cold weather.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Lantana camara** (Verbenaceae)	Lantana	N0–1 P0–2	1–12 (9–4)

Remarks

Central and South America. Serious invader in southern and eastern S. Africa, including Gauteng. Large untidy shrub that can scrabble over other vegetation. Covered in recurved prickles. Seldom attended by bees, and if so, during autumn dearth. Pollen very light yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Leptospermum laevigatum** (Myrtaceae)	Australian myrtle Coastal tea tree *Australiese mirt*	N0–2? P0–2?	7–10

Remarks

Southeast Australia, Tasmania. Large shrub of sandy soils of the southwestern Cape to EC. Declared weed that invades and smothers coastal vegetation. White flowers somewhat similar to those of the guava, but the leaves are small, leathery and pointed. Sometimes not visited by bees for unknown reasons. A gall-forming midge was released for biological control.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Leucas martinicensis (Lamiaceae)	Tumble weed *Klein tolbossie*	N0–2 P0–1?	2–4

Remarks

KZN, SZ, FS, northern provinces, ZIM, BOT, NAM. Indigenous annual herb that has become a weed on roadsides, waste places and cultivated lands. White flowers in crowded, round clusters or whorls spread on an upright stem. Lower lip of flower is bilobed. Long-flowering.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Lythrum hyssopifolium** (Lythraceae)	Hyssop-leaved loosestrife	N2? P2?	11–1

Remarks

Europe. Sprawling annual of disturbed damp places in the southwestern Cape. **Lythrum** flowers on the same plant have pollen grains of different size and colour: green and yellow. The pellets therefore are greenish-yellow. In New Zealand a dark honey is harvested.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***L. salicaria**	Purple loosestrife	N1–3? P2–3	11–2

Remarks

Eurasia. Escaped ornamental of moist sites on the Cape Peninsula. Honey source of Europe and North America. Two basic pollen colours: a dark type that is greyish-blue to purple and a light type that is yellowish to sandy. A mixture of types results in pellets with a greenish hue.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Malva parviflora** (Malvaceae)	Small mallow *Kasies* *Pampoentjies*	N0–2 P0–1	10–3?

Remarks

Europe. Cosmopolitan bushy weed of gardens, roadsides and waste places. Widespread in southern Africa. A perennial of which the aerial parts are annual. Small flowers are white, pink or mauve. Pollen light grey. Afrikaans names refer to the shape of the fruit.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***M. verticillata**	Large mallow	N0–3? P0–1?	9–2

Remarks

Asia. Naturalised in L, FS, NW, NC, NAM in disturbed places, often along streams. Biennial herb up to 1 m high. Pink to pale violet flowers with uneven petals that have nectar guidelines. Pellets white to pale mauve.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Medicago laciniata** (FABACEAE) (PAPILIONACEAE)	Cut-leaf medick Little burr clover *Karoo klitsklawer*	N0–1 P0–1	8–11

Remarks

Mediterranean. Naturalised in southern Africa, particularly in lawns. Nowhere abundant. Annual or semi-perennial, with leaves that are lobed. Yellow pea-type flowers. Single burr (pod) per stalk. Bee information lacking, but attractivity is low. In **Medicago** species the middle leaflet is stalked. This distinguishes medicks from clovers and melilots. (See also CROP PLANTS).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***M. polymorpha** (= *M. denticulata*) (= *M. hispida*)	Rough medick Burr clover *Klitsklawer* *Stekelklawer*	N1–3 P0–2	1–12 (8–12) WR (3–6) SR

Remarks

Eurasia. From G to FS to KZN, EC, WC. A good annual fodder crop if grazed, otherwise burrs entangle wool. Has become a nuisance in lawns and cultivated fields. Several burrs (pods) together on a stalk. Yellow pea-type flowers. Pollen deep yellow. Major bee activity observed during August in the southwestern Cape. More information is needed. The perennial sickle medick, **M. falcata**, and the semi-annual black medick or hop clover, **M. lupulina**, have established themselves in several provinces in the summer and winter rainfall regions as minor weeds. Both have a high beeplant rating.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Melilotus albus** (FABACEAE) (PAPILIONACEAE)	White melilot Sweet white clover *Wit stinkklawer*	N3–4 P1–3	10–2

Remarks

Asia Minor. Widespread in southern Africa, but nowhere abundant. Erect biennial, up to 1.5 m high. Occurs mostly in disturbed soils along roads and streams. Many small white flowers. Pollen brownish-yellow or light greyish-brown, of high quality. Plants have a characteristic coumarin odour, which is prevalent in fresh honey. Famous North American honey plant.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***M. indicus**	Yellow melilot Sweet yellow clover *Geel stinkklawer*	N1–2 P0–2	10–1

Remarks

Europe, southwestern Asia. Erect annual herb up to 0.6 m high. Many, small, yellow pea-type flowers. Established in all provinces as a minor weed. Distinctive coumarin smell. Formerly used as a pasture plant. Pellets mustard-coloured.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Nicandra physalodes** (SOLANACEAE)	Apple-of-Peru *Baster appelliefie*	N0–1 P0–2	11–5

Remarks

Peru. Large annual herb of disturbed soils in different habitats of summer rainfall regions with higher precipitation. Bell-shaped light mauve flowers with a white centre. Foraging bees are rarely seen. Pollen whitish. Fruit: a yellow berry enclosed by a papery bract, as in the Cape gooseberry.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Nidorella resedifolia (Asteraceae)	Poverty weed Weed nidorella *Stinkkruid*	N0–3 P0–3	1–12 (12–4) SR

Remarks

Southern Africa. Common annual herb of disturbed areas such as ploughed fields or trampled veld. Leafy stems are rough-hairy. Each leaf has a pair of lobes on its lower half. These lobes can be very small or quite conspicuous. Yellow flower heads in dense clusters. No ray florets. Pellets orange. Bee attractivity very variable and probably related to soil moisture. Honey flow and colony build-up at Brandfort, Free State, from plants in wheat fields, after abundant rain. Honey: yellowish-golden colour (74 mm Pfund); soft, biscuit-coloured granulation; mild caramel taste with a faint bitterness.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Nothoscordum gracile** (Alliaceae)	False garlic *Baster knoffel*	N0–1 P0–1	10–2

Remarks

North America. Weed in southwestern Cape, EC, KZN, FS, northern provinces. Bulbous plant with white flowers and long flat leaves – it has the looks of garlic, but not the smell. Serious garden weed: reproduces with seeds, as well as with many small bulbs. Bee visits are rare.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Oenothera indecora** (Onagraceae)	Small evening primrose *Klein nagblom*	N0–2? P0–3	9–2

Remarks

South America. Widespread in S. Africa, except Namaqualand and NC. Serious weed in vineyards and orchards of the WC. Small yellow flowers, fading to reddish. Nectar and pollen foraging observed early mornings, but possible activity at dusk has not been monitored. **Oenothera** pollen grains are large, triangular and have long threads. Bees compact these into untidy pellets.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***O. jamesii**	Giant evening primrose *Reuse nagblom*	N0–1? P	10–3

Remarks

North America. Found in northern provinces, KZN, EC and WC. Robust, erect perennial, up to 1.5 m high, of disturbed moist soils or roadsides. Large yellow flowers have a thin 10 mm long flower tube. Bees have been seen stealing nectar above the ovary through slits possibly made by carpenter bees. More observations are needed.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***O. rosea**	Rose evening primrose *Pienk nagblom*	N0–1 P0–3	9–2

Remarks

Central America. Widely established in S. Africa. Low-growing, much-branched shrublet. Annual or perennial of fields and gardens. Small pink flowers open near sunrise. They stay open longer during the day than in other species. Pollen cream-coloured.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***O. stricta**	Yellow/Sweet evening primrose *Geel/Soet nagblom*	N1? P2?	1–12 (11–4)

Remarks

Chile. Widespread in S. Africa, except NC and Namaqualand. Serious weed of orchards and vineyards in the WC. Scented flowers are open from sunset to sunrise. Evening and morning foraging by bees observed. Pollen cream-coloured. Wilted flowers are pink or orange. More information is needed.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***O. tetraptera**	White evening primrose *Wit nagblom*	N? P0–3	9–3 (11–12)

Remarks

Mexico. Mainly a weed of disturbed grazing areas of the EC, KZN, FS and northern provinces. Small perennial herb with stems densely covered in hairs. Flowers white, fading to purplish. Major pollen gathering observed during evenings – possibly nectar gathering in the morning. Pellets lemon-coloured.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Opuntia** spp. (Cactaceae)	Cactus Prickly pear *Turksvy* *Kaktus*	N0–2 P0–3	10–1
O. aurantiaca	Jointed cactus		
O. engelmannii	Free State prickly pear		
O. exaltata (= **Austrocylindropuntia subulata** subsp. **exaltata**)	Long-spine cactus		
O. ficus-indica	Sweet prickly pear		
O. humifusa	Creeping prickly pear		
O. imbricata (= **Cylindropuntia imbricata**)	Imbricate prickly pear		
O. lindheimeri	Roundleaf prickly pear		
O. monacantha	Drooping prickly pear		
O. rosea (= **Cylindropuntia rosea**)	Rosea cactus		
O. spinulifera	Saucepan cactus		
O. stricta	Australian pest pear		

Remarks

South America, Mexico, USA. The listed species are all minor to very serious weeds in different parts of S. Africa. Almost all of them have been seen with honeybees in their flowers. They all provide pollen, sometimes abundantly, as well as nectar in some species that have been examined. **Opuntia** flowers are shallow, unlike other members of the Cactaceae with long narrow flower tubes. Bees nevertheless have to grope their way between the stamens to reach the nectar. Known sources of honey: **O. engelmannii** in native Texas, with abundant pollen; **O. ficus-indica** in the Eastern Cape;

O. stricta in Florida, USA, with plentiful pollen. Some opuntias have very little nectar, and bees only forage for pollen. Bee pollination results in the set of numerous seeds in **C**. **imbricata**, and most probably in other species as well. Bees therefore contribute to further veld invasion in those species where birds and other animals distribute the seeds. Bees collect the juice from ripe damaged fruit. The flowers of **A**. **subulata** subsp. **exaltata** are sterile and therefore bear no fruit.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Oxalis corniculata** (= *O. repens*) (Oxalidaceae)	Creeping sorrel *Rank tuinsuring*	N0–2 P0–1	8–4 (11–3)

Remarks

Europe. Troublesome weed of lawns in eastern S. Africa and southern coastal areas. Perennial without bulbs. Prostrate stems that root at the nodes. Small yellow flowers open in sunlight, but are rarely attended by bees. Pollen yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***O. latifolia**	Pink garden sorrel *Pienk tuinsuring*	N0–3? P0–1?	10–3

Remarks

S. America. Ornamental that has become established in disturbed grassland and cultivated crops of EC, KZN, FS, MP, ZIM. Several flowers on a single stem, pink to mauve, with a greenish throat as nectar guide.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Oxygonum delagoense (Polygonaceae)	Salt-of-the-tortoise *Mens suring*	N0–3 P0–2	10–5

Remarks

NC, northern provinces, ZIM, BOT, NAM. Annual weedy herb of sandy soils. Semi-succulent stems and small leaves are eaten raw. Small, white, star-shaped flowers. Flowering time variable, depending on good rainfall. Dark honey with a strong taste and smell, from the Central Kalahari of Botswana and from the Kgalagadi Transfrontier Park.

Botanical Name	Common Name	Beeplant Value	Flowering Time
O. sinuatum	Star stalk *Dubbeltjie suring*	N0–2 P0–1?	11–3

Remarks

Northern provinces, ZIM, NAM. Annual or semi-perennial spreading herb. Weed of disturbed sandy soils. Fruit with three sharp spines. Flowers small, white with a pink tinge, star-shaped, close at midday. Pollen pellets dirty-yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Papaver aculeatum (Papaveraceae)	Wild poppy Orange poppy *Doring papawer*	N0 P2?	10–4

Remarks

Eastern half of S. Africa, as well as southwestern Cape. Prickly annual of cultivated fields. Not common. Flowers salmon-coloured to orange. Pellets yellow to yellowish-brown. (See also **Papaver** under ANNUALS AND BIENNIALS).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Paraserianthes lophanta** (= *Albizia lophanta*) (FABACEAE) (MIMOSACEAE)	Stink bean *Stinkboon*	N1–3? P1?	5–9 (7–8)

Remarks

Southwestern Australia. Declared weed that smothers stream bank vegetation from the Cape Peninsula to the EC. Beans have an obnoxious odour. Water-white honey in New Zealand.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Parthenium hysterophorus** (ASTERACEAE)	Demoina weed Parthenium weed	N1? P3?	9–5

Remarks

Caribbean. Annual that somewhat resembles a blackjack, but has white flower centres. KZN, SZ, MP, LIM, ZIM. In 1986 the cyclone Demoina transported the seeds of this weed from Swaziland to the Lowveld of Mpumalanga, where it became well-established in banana orchards and sugarcane fields, as well as in other disturbed soils. It has developed into a serious weed in some localities. Biological control agents were released recently. Pollen pellets greyish-white.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Pentarrhinum insipidum (APOCYNACEAE)	Donkey fruit *Donkieperske*	N0–3 P0	11–4

Remarks

Southern Africa. Slender twining plant with woody perennial rootstock. Inflated knobbly green fruit. In grassland and shrubbery. Foraging bees may have pollinia attached to any of the six legs and to the proboscis.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Pereskia aculeata** (CACTACEAE)	Barbados gooseberry *Barbados stekelbessie*	N0–2 P0–3?	3–7

Remarks

Argentina, Brazil, West Indies. Semi-succulent straggly climber with vicious thorns. Invades and smothers natural vegetation and plantations in the Lowveld of the EC, KZN, MP, LIM and also G. Cream-coloured lemon-scented flowers. Yellow, succulent, edible berries, of which birds spread the seeds.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Physalis viscosa** (SOLANACEAE)	Sticky gooseberry *Klewerige appelliefie*	N1–3 P0–1	10–4

Remarks

Tropical America. Established in the EC, KZN, FS, SZ, northern provinces. Perennial shrublet with extensive underground rhizomes and sticky stems. Disturbed soils of grassland, roadsides, waste places and perennial crops. Nectar water-white, without noticeable smell. One record from the NW of a small honey contribution. Long-flowering. Pollen light biscuit.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Phytolacca octandra (PHYTOLACCACEAE)	Forest inkberry *Inkbessie*	N0–2 P?	1–12 (10–2)?

Remarks

Southern and eastern S. Africa. Large, soft-wooded, perennial shrub. Invades disturbed soils, particularly clear-felled areas in forestry plantations. Of low attractivity to bees. From ripe berries to developing flowers on the same plant.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Picris echioides* (= **Helminthotheca echioides) (ASTERACEAE)	Bristly oxtongue *Stekel picris*	N0–2? P1–3?	12–3?

Remarks

Europe. Annual herb of waste places, orchards, roadsides and vineyards. Found in WC, EC. Leaves have small bristles. Yellow flowers with many fine ray florets. Flowers close at 10:00 in January. Pellets orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Plantago lanceolata** (PLANTAGINACEAE)	Ribwort Plantain *Smalweëblaar*	N0 P0–3	1–12 (10–3)

Remarks

Europe. Widespread in southern Africa, except in arid regions. Common perennial weed along roads, or soils that were disturbed previously. Light lemon pellets may have anthers incorporated. The pollen, which has 20.5% crude protein, can sustain brood production if accompanied by a nectar source. In wet weather the anthers close, protecting the pollen grains. In S. Africa the broadleaf ribwort, ***P. major***, has not been observed to be visited by bees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Polygonum aviculare** (POLYGONACEAE)	Prostrate knotweed *Koperdraad* *Voël-duisendknoop*	N1–3? P0–1	11–5

Remarks

Eurasia. Widespread in southern Africa, except in arid western regions. Annual or perennial with tough, wiry, green to brownish stems. Small pink flowers. At times a major weed of winter wheat and vegetables. Minor honey source in Australia: dark, reddish colour.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Populus × canescens** (SALICACEAE)	Grey poplar *Vaalpopulier*	N0 HD0–1 P0–2?	7–9

Remarks

Europe, Asia Minor. Declared invader of many areas in southern and eastern S. Africa, particularly riverbanks and vleis. Ornamental grey-green leaves and grey bark. Pollen source in Europe, but no bees yet seen here on the reddish male catkins. Aphid honeydew collected during August in MP.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***P. nigra**	Lombardy poplar *Italiaanse populier*	N0 P?	8–9

Remarks

Eurasia. Large, narrowly columnar trees. Invasive along rivers in the interior of S. Africa. Pollen source in Europe, but no local observations yet. Report in the *S. African Bee Journal* of July 1922: 'Abundant dark red pollen for about six days in December'. This 'pollen' most probably was fungal rust spores.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Portulaca oleracea** (PORTULACACEAE)	Common purslane *Gewone porslein*	N0–2? P0–3	1–4

Remarks

Europe. Widely distributed in southern Africa. Cosmopolitan, succulent, sprawling annual of gardens and fields. Yellow flowers only open in bright sunlight. Pellets light yellowish-brown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Prosopis glandulosa**	Honey mesquite *Heuning prosopis*	N1–4 P1–3	6–4 (9–11) (12–2)
***P. velutina** (FABACEAE) (MIMOSACEAE)	Velvet mesquite *Fluweel prosopis*		(3–4)

Remarks

North and Central America. Serious invaders of arid western regions of S. Africa, particularly along river courses and drainage lines. Multi-stemmed spiny shrubs or small trees. One spring flowering only in winter rainfall areas. Summer rainfall areas have spring flowering, plus an additional bloom in summer or autumn. The latter is dependent on high rainfall. Light-coloured honey and nutritious pollen. Honey is produced in summer rainfall regions, though irregularly. Good flows depend on strong showers the previous summer and autumn, and probably moist soil during flowering as well. (See also OTHER TREES).

Botanical Name	Common Name	Beeplant Value	Flowering Time
Pueraria lobata* (= *Dolichos hirsutus*) (= **Pueraria montana var. **lobata**) (FABACEAE) (PAPILIONACEAE)	Kudzu vine	N2 P1?	3–4

Remarks

East Asia, Pacific Islands. Perennial vine with long runners covered with rusty-brown hairs. Formerly tested as forage crop for stock, but did not gain acceptance. Has become established in some localities in LIM and MP, where it is a weed that covers other vegetation. Fragrant reddish-purple pea flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Raphanus raphanistrum** (BRASSICACEAE)	Wild radish *Ramnas*	N1–2 P2–3	3–12 (6–8)

Remarks

Europe. Plentiful in southwestern Cape and SC in grain fields and other disturbed soil. A lesser weed in the summer rainfall regions, for example during winter in fields under conservation tillage. Yellow or cream-flowered annual. Two large tongue-shaped nectaries, plus four small inconspicuous nectar glands. Occasionally a source of quick-granulating, light yellow honey. Fresh honey has an unpleasant smell, which in one case attracted blowflies. Pellets yellow to mustard-coloured. Excellent pollen to build up colonies, with its 26.1% crude protein.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Rapistrum rugosum** (BRASSICACEAE)	Wild mustard Turnip weed *Wilde mosterd* *Knoppies mosterd*	N0–2 P0–3	7–11 (8–9)

Remarks

Europe. In orchards, annual crops and waste places, but not common. Southwestern Cape to EC and northwards to FS and NW. An annual or biennial that is similar to *ramnas* (**Raphanus raphanistrum**), but the very short, beaked 'pods' are diagnostic. Pellets lemon coloured. Pollen crude protein 25–29% (Kleinschmidt & Kondos 1976).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Richardia brasiliensis** (RUBIACEAE)	Mexican richardia	N0–1 P0–1	11–4

Remarks

Tropical America. Common in cultivated fields of higher rainfall regions with summer precipitation, i.e. KZN, FS, northern provinces. Prostrate, much-branched, hairy perennial. Inflorescence: a terminal head surrounded by four leaves, with small white flowers densely packed. Only a few flowers are open at any given time.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Ricinus communis** (EUPHORBIACEAE)	Castor oil *Kasterolie*	N0 EN0–1 P0–3	1–12 (11–4)

Remarks

East Africa. Widespread in southern Africa, but rare in the central interior. Semi-perennial with large, hand-shaped leaves. Roadsides, river banks, waste places. Declared invader. Very toxic seeds – ricin. Upper reddish flowers female; lower cream-coloured male. Nectar obtained only from extra-floral nectaries that are located on different parts of the plant. They rarely secrete nectar. Pollen pellets whitish-yellow. One record of bees collecting **Melampsora** rust spores from castor leaves.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Rosa rubiginosa** (= *R. eglanteria*) (ROSACEAE)	Sweet briar Eglantine *Wilde roos*	N0 P2?	10–12

Remarks

Eurasia. Invades high altitude grassland in eastern S. Africa, particularly EC, KZN and FS. Multi-stemmed, deciduous, very thorny shrub. Single flowers with five light pink petals. Pellets light orange to orange-brown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Rubus cuneifolius** (ROSACEAE)	American bramble *Amerikaanse sandbraam*	N2 P2–4	9–1 (10–11)

Remarks

North America. Declared weed that invades grasslands, roadsides, riverbanks and plantations of KZN and MP. Erect to sprawling, and very thorny. Flowers white with long yellow stamens. Pollen light grey. Edible black fruit. Build-up and maintenance value in KZN.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***R. fruticosus**	European bramble *Europese braam*	N2–3 P3–4	9–4 (10–12)

Remarks

Europe, including Mediterranean. Invades fynbos, roadsides, grassland and plantations, from southwestern Cape to EC. Very thorny shrub to 2 m high with arching stems – a declared invader. One of the parents of cultivated blackberries. Pollen light greenish-grey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Rumex acetosella** subsp. **angiocarpus** (Polygonaceae)	Sheep sorrel *Boksuring*	N0 P0–2	9–2 (10–11)

Remarks

Europe. Small, rhizomatous, hardy perennial in cultivated lands. WC to KZN to LIM. Pellets light yellow to cream-coloured. Pollen crude protein 11.7% (Maurizio & Grafl 1980). This species is possibly dioecious.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Salsola kali** (Chenopodiaceae)	Russian tumbleweed *Rolbos*	N0 P0–2	11–4

Remarks

Eurasia. From western S. Africa to EC, FS, NW. A robust, much-branched, rounded annual with many small sharp leaves. Winds dislodge the dry plants, rolling them for long distances. No attention from honeybees observed yet in S. Africa. The given beeplant value was taken from overseas information. Crude protein of bee-collected pollen 14.3% (USA).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Schkuhria pinnata** (Asteraceae)	Dwarf khaki weed *Klein kakiebos*	N0–2 P0–1	11–6

Remarks

South America. Thin, much-branched, annual herb. EC, KZN, FS, northern provinces, ZIM, BOT, NAM. Common in ploughed fields. Small flower heads without ray florets. Yellowish-orange pollen loads. Beeplant value generally low.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Senecio apiifolius (= **Mesogramma apiifolium**) (Asteraceae)	Winter weed *Winterbossie*	N1–3 P2–4	4–10 (6–8)

Remarks

NC, FS, NW, G, LIM. Annual herb of disturbed places, particularly harvested fields. Grows best in clay soils that retain moisture during dry winter months. When plentiful, attracts swarms on the Springbok Flats. Honey: very dark, unpleasant sourish taste, quick granulation, high acidity curdles milk. Pollen dark yellow, mild taste, promotes brood production.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. consanguineus	Starvation senecio Radiator weed *John Deere bossie*	N1–4 P1–3	5–9 (7–8)

Remarks

NAM, NC, FS, NW. Annual herb, at times longer-lived. Grassland and stony ground, but sometimes a serious weed of cultivated fields. Spring honey flow in NW is preceded by good autumn rains. Honey: mild taste, light yellow colour, quick granulation. Pollen: shades of yellow, boosts brood production.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. inaequidens	Molteno disease weed *Geelgif*	N2? P2	10–2

Remarks

Higher lying areas of eastern half of S. Africa, i.e. northern provinces, FS, L, SZ, KZN, EC. Weed of previously disturbed soils in different locations. Erect perennial herb, much branched from base. Leaves narrow, toothed. Contributes to mixed honeys in the FS.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. madagascariensis		N2? P3?	1–12

Remarks

SC, EC, KZN, SZ. From coast to midlands. Annual herb that is a common weed in disturbed areas at times. Open, branched inflorescence. Ray florets light yellow; disc florets dark yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Sesbania punicea** (Fabaceae) (Papilionaceae)	Red sesbania *Rooi sesbania*	N0–1 P0–1	1–12 (10–12)

Remarks

South America. Poisonous, deciduous shrub that invades damp places, from the WC to KZN, FS, SZ and northern provinces. Orange to red pea-type flowers, which are usually ignored by bees. Pollen dirty yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Sida cordifolia (Malvaceae)	Heartleaf sida Flannel weed *Verdompsterk*	N0–1 P0–2	9–5 (1–4)

Remarks

KZN, SZ, northern provinces, ZIM, BOT, NAM. Annual to perennial, upright shrublet with a very strong taproot. Established in disturbed soils, also in woodlands. Densely-hairy leaves. Flowers cream to yellow, several together at the end of stems. Pollen in shades of yellow. Two other species that are found in the east of S. Africa, **S. acuta** and **S. alba**, have been noticed with bees attending their flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. rhombifolia	Arrowleaf sida *Taaiman*	N0–1 P0–3	10–5 (12–3)

Remarks

EC, KZN, FS, northern provinces, ZIM, BOT. Upright biennial or perennial with very strong taproot. Found in disturbed areas, except where annual crops are grown. Flowers open forenoon in sunny, hot weather, then mostly close during the afternoon. Pellets light brownish-orange. One report from outside S. Africa of extrafloral nectar collected by bees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Silene gallica** (CARYOPHYLLACEAE)	Gunpowder weed *Kruitbossie*	N? P1?	9–2

Remarks

Europe. WC to KZN to LIM. Semi-decumbent to usually erect, hairy annual weed, particularly in vineyards and orchards of the WC; rare elsewhere. Minor bee activity observed. It is not known whether bees can reach the nectar in the tubular flowers. Pollen greyish.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Silybum marianum** (ASTERACEAE)	Variegated thistle Milk thistle *Melkdissel*	N2 P2	10–2?

Remarks

Mediterranean. Uncommon weed in WC, EC, FS, G. Annual or biennial. Spiny flower head on a long stem. Disc flowers pinkish-purple. Pollen crude protein 19.9%.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Sinapis arvensis** (BRASSICACEAE)	Charlock Wild mustard *Wilde mosterd*	N2–3 P2	5–2 (5–10) WR (11–2) SR

Remarks

Europe. There is some confusion over the distribution of this species in S. Africa. It is likely to be found in MP, FS, KZN and southwestern Cape. Very similar to the yellow-flowered form of *ramnas* (**Raphanus raphanistrum**), but its seed 'pods' are not constricted between the seeds. There are also three distinct lines on each half of the pod. Pellets lemon-coloured to yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Sisymbrium capense (BRASSICACEAE)	Cape wild mustard *Strand wildemosterd*	N2? P2?	10–4

Remarks

Cape Peninsula to KZN; also Karoo and FS. Competitor of winter cereals. Indigenous annual with lobed leaves crowded near the ground. The yellow flower heads are small, as in other species of this genus.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. thellungii (= **Erucastrum austroafricanum**)	Rosette wild mustard *Roset wildemosterd*	N0–2 P0–1	8–5

Remarks

WC, EC, KZN, FS, northern provinces. Erect, sparsely branched annual or biennial. Hairy, deeply lobed leaves in a rosette on the ground. Weed of cultivated fields, orchards, gardens and waste places. Few small yellow flower heads at any time, i.e. long-flowering. Not particularly attractive to bees. Pellets mustard-coloured to light yellow. Hedge mustard, ***S. officinale**, has established itself in the eastern and southern regions of S. Africa. It has the same beeplant value as the rosette mustard.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Sonchus oleraceus** (Asteraceae)	Common sow thistle *Gewone sydissel*	N0–1 P0–1	1–12 (8–10) (3–5)

Remarks

Europe. Widespread in southern Africa in cultivated fields, gardens and waste places. Erect annual; a soft thistle with milky sap. Pale yellow flower tubes probably too long for honeybees to obtain all the nectar. Pellets light beige to deep yellow. The spiny sow thistle, ***S. asper**, is a more robust plant and its value is probably higher than that of the common sow thistle.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Spergula arvensis** (Caryophyllaceae)	Corn spurry	N0–2 P0–1?	6–3

Remarks

Europe. Small, suberect annual of disturbed sandy soils in WC, EC, KZN, MP, G. Poultry and stock eat the thin succulent leaves. The small white flowers rarely attract bees. Flowering is earlier with winter rainfall. Minor honey source in New Zealand.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Spergularia rubra** (Caryophyllaceae)	Sand spurry	N0–1 P0–1	9–12

Remarks

Europe. Prostrate annual or perennial with thin succulent leaves, established in WC and EC. Minor weed of sandy, open places in winter rainfall regions. Has a similar habitus as the preceding corn spurry. Flowers pink, purple or white. Pellets greyish.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Stachys arvensis** (Lamiaceae)	Field woundwort	N1–3? P0–1	1–12

Remarks

Europe. An annual established in the southwestern Cape and SC. Small hairy weed of cultivation. Flowers: two-lipped, white or mauve, in whorls.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Stellaria media** (Caryophyllaceae)	Chickweed *Gewone sterremuur*	N0–2 P0–2	6–3

Remarks

Europe. Established in vineyards or moist gardens of the WC, EC, KZN, FS, northern provinces. Slender prostrate annual with small white flowers, of which each petal is deeply bilobed. Rarely visited in sunny but not hot weather. Pellets brownish. Early flowering with winter rain; later in summer rain regions.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Stoebe vulgaris (= **Seriphium plumosum**) (Asteraceae)	Bankrupt bush *Bankrotbos* *Slangbos*	N0 P0–1	1–12 (3–8)

Remarks

Southern Africa. Much-branched greyish shrub of disturbed and overgrazed grassland. Small flowers in brownish clusters on erect flowering stalks on which bees run up and down. Bee visits rare. Pollen yellow. Small white woolly galls are not flowers or seeds. The majority of species in the genus are found in the WC, where their pollen has been found in trapped pellets.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Tagetes minuta** (Asteraceae)	Khaki weed *Kakiebos*	N0–2 P0–1	12–6

Remarks

South America. Found throughout southern Africa. Erect, single-stemmed, annual weed, mostly of cultivated fields. Distinctive strong smell. Attractiveness to bees generally low. Pollen light brownish-orange. One 1921 record of April honey with a caraway flavour, locality not mentioned. Also a 1933 note: 'Maintains colonies in the Transvaal'. There is a third, recent observation of an unexpected, medium-dark, strong-tasting honey during March after good summer rains in the Magaliesberg.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Taraxacum officinale** (Asteraceae)	Dandelion *Perdeblom*	N2–3 P2–3	1–12 (9–11)

Remarks

Eurasia. Minor weed in higher rainfall areas of S. Africa, mainly on roadsides and in lawns. Less common than false dandelion. Important spring beeplant for beekeepers in the northern hemisphere. Flower head with ray florets only – no disc florets. Pollen is of minor to medium quality: 11.1–14.9% crude protein, but a high 14% oil (Maurizio & Grafl 1980). Pellets in shades of orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Tithonia rotundifolia** (Asteraceae)	Red Mexican sunflower *Rooi Meksikaanse sonneblom*	N0–3 P0–2	12–7 (3–4)

Remarks

Central America, including Mexico. Escaped ornamental that is a weed in G and eastern S. Africa. Roadsides, riverbanks, wasteland. Large, bushy, erect annual with a slightly woody base. Showy bright orange-red flower head with a yellow

centre. Where plentiful, contributes to mixed honey crops. The abundant orange pollen stains new combs with a pinkish-orange colour. The pellets have a distinct bitter taste, which is not strong or persistent. Pollen-dusted nectar foragers may completely ignore their covering. Nectar rises by capillary action, between style and filaments, in the floret's corolla tube. The nectar has a somewhat unpleasant smell, and a light yellow colour, implying a honey with at least a medium dark colour. The yellow Mexican sunflower, ***T. diversifolia**, is a perennial weedy escape in the lower-lying parts of KZN, SZ, MP and LIM. It has the same beeplant value as its red counterpart, but flowers during autumn and winter. Its nectar was found to be water-white, but also with an unpleasant smell.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Tribulus terrestris (Zygophyllaceae)	Common devil's thorn *Gewone dubbeltjie*	N0–2 P0–3	10–5 (3–4)

Remarks

Southern Africa. Prostrate annual with spiny fruit. Common in overgrazed veld or disturbed soil along roads and in fields. Small yellow flowers close forenoon in sunny weather. Nutritious pollen and stimulative nectar promote brood production. Small honey crops occasionally. Pellets in shades of yellow. **Tribulus terrestris** pellets made up 53% of all pollen trapped during January to April at Bainsvlei, Bloemfontein.

Botanical Name	Common Name	Beeplant Value	Flowering Time
T. zeyheri	Kalahari devil's thorn *Kalahari dubbeltjie*	N0–3 P0–3	11–3

Remarks

NAM, NC, BOT, LIM. Similar to **T. terrestris**, but with larger, light yellow flowers. Common after good summer rains in disturbed sandy areas. Light golden honey with a mild taste and aroma. Pollen yellow. **Tribulus cristatus**, the winged devil's thorn or *duifiedoring*, also provides nectar and pollen for honeybees. It is found in sandy soils and on calcrete outcrops of the NC and NAM.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Ursinia nana (Asteraceae)	Ant ursinia Dwarf ursinia *Mier ursinia* *Dwerg ursinia*	N0–1 P0–2	1–12 (7–9)

Remarks

S. Africa. Small yellow-flowered weed of disturbed veld. Annual or semi-perennial that has 'outbreak' years. Pollen yellow to brownish-yellow. Value as for Highveld and Bushveld. Ants freely collect the seeds.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Verbena aristigera* (= *V. tenuisecta*) (= **Glandularia aristigera) (Verbenaceae)	Fine-leaved verbena	N0 HD0–1 P0–1	9–4

Remarks

South America. Found in EC, KZN, FS, northern provinces. Prostrate, much-branched perennial, usually seen on roadsides and waste places. Small mauve or white flowers in dense terminal clusters. Very rarely visited by honeybees for the whitish pollen or for honeydew excreted by black aphids.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***V. bonariensis**	Tall verbena Purple top *Blou waterbossie*	N1–3? P0–2	9–6 (11–1)?

Remarks

South America. Annual or biennial 1.5 m high herb of moist sites. Occurs in southern Africa, except northwestern Cape, NAM and Kalahari regions. Leaves never lobed, but dentate. Purple florets congested on spikes. Needs moist soil for nectar secretion. Pellets light yellow. This species, together with fewer numbers of the next species, gave a honey surplus during March to April in NW.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***V. officinalis**	European verbena Vervain *Europese verbena*	N1–3 P0–1	10–4 (11–12)?

Remarks

Europe. Widespread in S. Africa, except drier northwest. Gardens, roadsides, fallow lands. Erect 1 m high annual or perennial, branching in the upper part. Deeply lobed leaves. Small blue to mauve flowers. Needs 'wet feet', i.e. ample water, for nectar secretion. Nectar is water-white, without a detectable smell. Pellets: light to dark khaki, small.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Verbesina encelioides** (Asteraceae)	Wild sunflower *Wilde sonneblom*	N0–3 P0–3	12–5 (2–4)

Remarks

South America. Naturalised, annual, bushy herb of NC, NW, LIM, BOT, NAM. Grows in disturbed areas and along roads. Can be troublesome in croplands, e.g. Vaalharts Scheme. No nectar produced during dry spells. Heavy yields of a light honey under favourable moisture conditions. Pure honey granulates finely within weeks. Pollen orange. Draws bees away from crops that are to be pollinated, such as seed sunflowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Veronica persica** (Scrophulariaceae)	Field speedwell *Akker ereprys*	N1–2 P0–1	8–3? (8–10)

Remarks

Eurasia. Not a serious weed of fields, orchards and gardens in southern and eastern S. Africa. Annual herb with prostrate stems rooting at the nodes. Pale blue flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Xanthium spinosum** (Asteraceae)	Spiny cockle burr *Boetebossie*	N0–1? P0–2?	12–5

Remarks

South America. Declared weed in WC, EC, KZN, FS, NW, G, LIM, BOT. Much-branched, very spiny, 1.2 m high, annual. Old fields, pastures and waste places. Extrafloral nectar or possibly honeydew on undersides of leaves in USA and New Zealand.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***X. strumarium**	Large cockle burr *Kankerroos*	N0? P0–3	10–4

Remarks

South America. Declared weed in southwestern Cape, EC, KZN, FS, SZ, northern provinces, BOT. Much-branched annual, 1.2 m high. Usually along streams and in cultivated fields. Inconspicuous lemon- to biscuit-coloured flowers visited during early forenoon. Pellets light yellow to cream-coloured.





Ageratum sp. The ageratums or floss flowers are exotic garden escapes. They are minor weeds in low-altitude regions of eastern S. Africa.



Amaranthus hybridus. Although the wild pigweed is an exotic, it is widely used as wild spinach in S. Africa.



Araujia sericifera. The moth catcher creeper is made conspicuous by its large fruit. Its flowers sometimes catch and hold bees by their mouthparts.



Arctotheca calendula. The Cape weed is commonly seen in spring alongside or within wheat fields and vineyards of the Western Cape.



Argemone ochroleuca. The pollen of Mexican poppy is only collected by honeybees if there is a concomitant source of stimulative nectar from other plants.



Asclepias fruticosa. The shrubby milkweed secretes substantial amounts of nectar if the plants are not subject to moisture deficit stress.



Bidens formosa. Cosmos on the Highveld heralds Easter time.



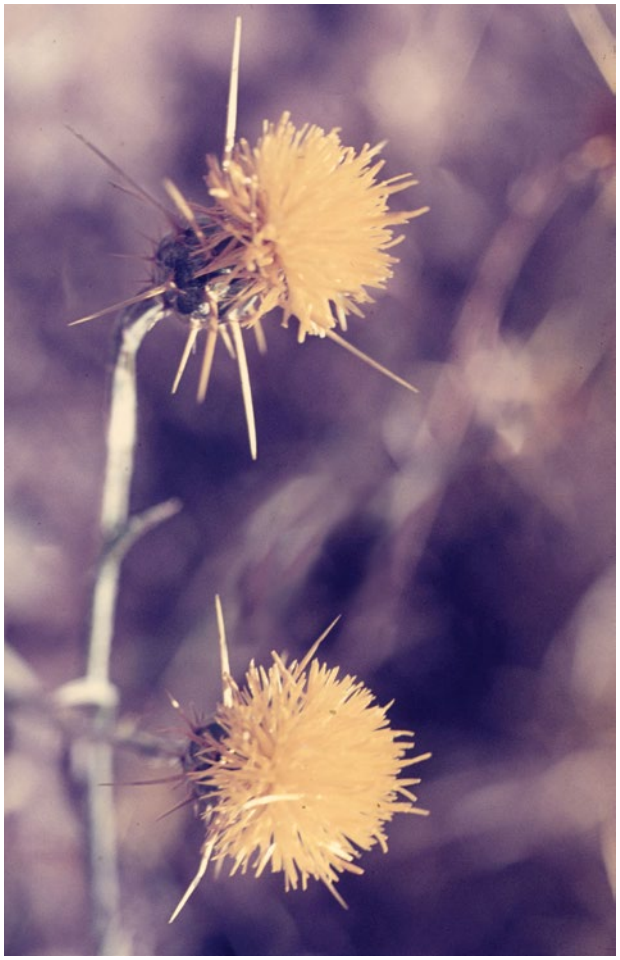
Bidens pilosa. The common blackjack has only three leaflets per leaf, while small ray florets may or may not be present.



Caesalpinia decapetala. Mauritius thorn, which was once planted as a hedge to protect stock against marauding lions, has become a serious invader in the subtropics.



Campuloclinium macrocephalum. The pom-pom weed is potentially the single greatest weed threat to S. African grasslands.



Centaurea solstitialis. Star thistles have spiny flower heads, but no spines on stems and leaves as in other true thistles.



Ceratotheca triloba. The flowers of wild foxglove superficially resemble those of the garden foxglove, but the plants are not related botanically.



Cereus jamacaru. This night-flowering cactus is visited by honeybees for pollen during the evening and for nectar in the morning.



Chromolaena odorata. These are the inconspicuous flowers of the triffid weed, which is a serious invader in eastern escarpment areas.



Cirsium sp. A true thistle with spiny flower heads and leaves.



Cleome maculata. The yellow, dark-rimmed spots on two of the petals act as nectar guides for this cleome.



Dolichandra unguis-cati. The cat's claw creeper has become a serious weed in the northern provinces of S. Africa.



Echium plantagineum. In recent years there has been a noticeable increase of purple echium in the southwestern Cape. This weed supplies a number of beekeepers with some honey and very beneficial pollen.



Flaveria bidentis. Its first impression of a yellowish-green herb is an aid to the identification of the smelter's weed.



Hypochaeris radicata. The tell-tale leaf rosette and branched flowering stalk of false dandelion.



Melilotus alba. The white melilot is best identified by its elongated inflorescence with many small white flowers.



Opuntia monacantha. A large number of prickly pear species pose a serious threat as invasives in S. Africa.



Physalis viscosa. In warm weather the flowers of sticky gooseberry are seldom without bees.



Oenothera stricta. As the common name implies, the flowers of evening primroses open late afternoon or evening, and close or wilt the following morning.



Plantago lanceolata. Honeybees eagerly visit the ribwort or plantain for its light, lemon-coloured pollen.



Prosopis glandulosa. Prolific flowering of honey mesquite after good rains in the Karoo.



Raphanus raphanistrum. Flowering *ramnas* in fruit orchards compete for pollinating honeybees.



Rapistrum rugosum. The wild mustard looks very similar to the *ramnas,* the latter which is differentiated by its deeply divided leaves.



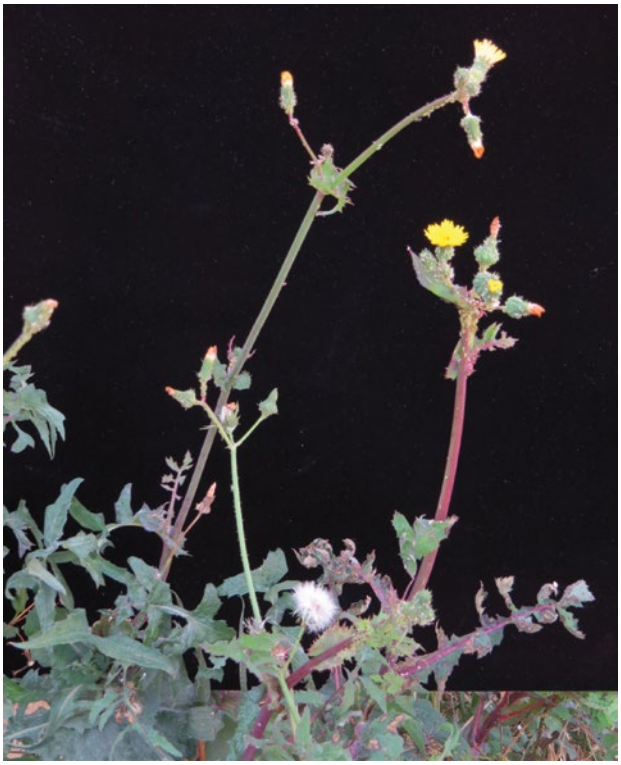
Rubus cuneifolius. Wild brambles are excellent sources of nectar and pollen for honeybees. However, they are serious invaders that are difficult to control.



Senecio apiifolius. Some senecios, like this winter weed, have become honey producers due to their large numbers on disturbed soils.



Sesbania punicea. The exotic red sesbania is a minor food source for honeybees.



Sonchus oleraceus. The seed head of the sow thistle is a silky white pom-pom, which assists in quick identification.



Tagetes minuta. Honeybees are observed infrequently on the khaki weed.



Tithonia rotundifolia. The red Mexican sunflower contributes nectar with an unpleasant smell to multi-floral honeys.



Tribulus terrestris. The thorny *dubbeltjie* needs no introduction. In sunny weather the flowers are open for a few hours only.



Verbesina encelioides.The wild sunflower is a weed in the northwestern regions of S. Africa. Note the ray petals with three lobes.



Verbena bonariensis. The tall verbena weed grows in moist soil, which it needs to secrete nectar.



Xanthium strumarium. Burrs with hooked spines make the identification of cockle burrs easy. The flowers are greenish and inconspicuous.

7. Bulbous Plants

Bulbs, or geophytes, have their leaves, stems or roots modified into storage organs. When the subject 'bulbs' is broached, no doubt our thoughts turn to well-known garden plants such as dahlias, tulips, daffodils, ranunculi and anemones. That these exotic flowers are beeplants has probably not crossed our minds. They all contribute in some small measure to the upkeep of a few colonies in suburban settings.

Our indigenous bulbs offer a wealth of form, colour and numbers of species, particularly in the western parts of the winter rainfall region, where they are adapted to survive in seasonal, semi-arid habitats. Because of their storage organs, they are more dependable flower producers, by and large, than the other plants in their habitat. They are poorly known from an apicultural point of view, but undoubtedly supply sustenance to honeybee colonies, and most probably also produce some surplus honey at times. The many question marks in the 'Value' column are an indication of how incomplete our bee-knowledge is about them.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Agapanthus spp. (Alliaceae)	Agapanthus *Bloulelie*	N1–3 P0–2	8–3 (12–2)
A. africanus	Cape agapanthus		
A. campanulatus	Bell agapanthus		
A. caulescens	Rock agapanthus		
A. praecox	Common agapanthus		

Remarks

LIM to KZN to WC in a variety of habitats. Rhizomatous perennials and popular garden subjects. Funnel-shaped or cylindrical, blue to purple flowers. The pollen pellets of **A. praecox** are purplish-grey to purplish-brown, with 13.5% crude protein (Köttner 1991). Other recorded pellet colour is grey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Albuca setosa (Hyacinthaceae)	Fibrous slime lily *Slymui* *Dik tamarak*	N1? P2?	8–1 (10–11)

Remarks

S. Africa, except southwestern Cape. Open, often rocky habitats. The flowers, which are sometimes scented, face upwards. Petals are thick, white to yellowish, with a dark green keel. Three outer petals are folded open, whereas the three inner petals are folded together into a column. Bees have to force their way into this column to reach the nectar and pollen. Pellets are light greenish-brown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Alstroemeria aurea** (= *A. aurantiaca*) (Alstroemeriaceae)	Peruvian lily Inca lily *Peru lelie*	N0–2 P0	8–5

Remarks

Chile. Tough, fibrous-rooted 'lilies' with dark nectar guides on the petals. Multi-coloured varieties in shades of red, pink, yellow and white. Grown in many gardens.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Anemone coronaria** (RANUNCULACEAE)	Anemone *Anemoon*	N0 P2–3	7–10

Remarks

Mediterranean. Popular tuberous-rooted perennials with purple, red, blue and white flowers. Pollen dark purple or bluish-grey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Aquilegia vulgaris** (RANUNCULACEAE)	Columbine *Akelei*	N0–1? P0–2	8–11

Remarks

Europe. Rhizomatous ornamental that can also be propagated by seed. Compound leaf with three leaflets. Five brightly-coloured sepals and petals, each of the latter ending in a nectar spur. Many yellow stamens. Pollen light yellow. Nectar robbing of the spurs by bumblebees has been observed overseas. The resulting slits are utilised by bees at times.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Aristea spp. (IRIDACEAE)	Aristea *Bloukanol*	N0–2? P2	9–3 (11–12)
A. abyssinica			
A. capitata			
A. ensifolia			
A. torulosa (= *A. woodii*)			

Remarks

Southwestern Cape to KZN and northwards to ZIM. Sandy slopes in the WC; grassland and rocky outcrops in the east. Rhizomatous perennials. Leaves tufted, grass-like, but without a midrib. Blue to mauve to violet flowers on upright stems. Flowers close and typically twist after midday.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Babiana spp. (IRIDACEAE)	Babiana *Bobbejaantjie* *Babianer*	N0–2? P1?	6–11 (8–9)
B. angustifolia			
B. pygmaea			
B. rubrocyanea			
B. stricta			

Remarks

Almost exclusively in Namaqualand and WC. Deciduous, cormous perennials, often with hairy stems and leaves. Flowers in white, mauve, purple or red colours. In the species visited by insects, the six 'petals' are similar, or there may be nectar guides on one, two or more of the petals. Several species have a differently coloured flower centre that acts as a nectar guide. Pollen is available to bees from three exserted anthers. More information is needed on honeybee–flower interactions. The corms are favoured by baboons and porcupines, hence the Afrikaans vernacular name.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Bobartia orientalis (IRIDACEAE)	Rush iris *Blombiesie*	N? P2?	1–12? (8–11)

Remarks

SC, EC. Dry, stony sandstone slopes. Evergreen perennial rhizome, resembling a rush when not in flower. Leaves stiff, quill-like. The flower cluster on the long leafless stem is enclosed by a green, leaf-like spathe. Yellow star-shaped flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Bulbine spp. (ASPHODELACEAE)	Bulbine *Kopieva* *Geelkwassie*	N0–1 P1–3	1–12 (8–11)

Remarks

Widespread in S. Africa. Tuberous or rhizomatous plants. Long, upright, succulent leaves. Flowers with bearded filaments. Pollen loads yellow. **Bulbine frutescens** is a common garden plant and at times much favoured by bees for pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Bulbinella spp. (ASPHODELACEAE)	Bulbinella *Katstert*	N0–1? P0–2?	3–12 (8–9)

Remarks

Winter rainfall region of S. Africa. Rhizomatous perennials of clay or sandy soils. Leaves not succulent. Dense spikes of white, pink, yellow or orange flowers. They are some of the most spectacular of our indigenous flora. Pollen pale orange (one record).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Canna indica** (= *C.* × *generalis*) (CANNACEAE)	Canna Indian shot *Kanna*	N0–2 P0–1	10–5

Remarks

Tropical America. Popular rhizomatous perennial. Most cultivated cannas are hybrids. Some of these are not visited by bees, probably because excessive petals hinder bees to reach the nectar. Bees obtain pollen from some cultivars or forms.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Chasmanthe spp. (IRIDACEAE)	Cobra lily *Kapél pypie* *Piempiempie*	N0–1? P0–2?	4–9

Remarks

Southwestern to southeastern Cape. Honeybee visits observed in some unidentified species. One nectar record received for **C. floribunda**, which also provides yellow pollen. The common name probably refers to the inflorescence, of which the open flowers and the dark shiny flower buds above them are bent forward, resembling the head of a cobra.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Crinum bulbispermum (Amaryllidaceae)	Orange River lily *Rivierlelie*	N0–1 P0–2	9–2

Remarks

KZN, MP, G, FS, NC. Along rivers or in moist depressions. Time and intensity of flowering very dependent on rainfall. Rarely is nectar secretion so copious that it can flow through the narrow flower tube to the base of the flower cup where the stamens are fixed to the petals – the point at which bees may reach it. Bees also attempt to obtain nectar from the outside, at the base of overlapping petals. Occasional collection of light-coloured pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Dahlia pinnata** (= *D.* × *hybrida*) (= *D. variabilis*) (Asteraceae)	Garden dahlia *Dahlia*	N0–2 P0–2	11–3

Remarks

Mexico. Well-known ornamental in many colours and forms. Single cultivars with normal disc florets are preferable. Pellets in shades of orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Dietes grandiflora (Iridaceae)	Large white iris *Groot wilde iris*	N0 P0–2	1–12 (11–3)

Remarks

EC to KZN. Hardy, clump-forming plants with iris-like flowers. Grown in many S. African gardens. Yellow nectar guides on white 'petals'. Pollen cream-coloured to white.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Dipcadi marlothii (Hyacinthaceae)	Green bells *Slymuintjie*	N0–1? P2	9–4

Remarks

KZN, FS, northern provinces, NC, NAM, BOT, ZIM. Sandy or rocky grassland. Tip of inflorescence with buds droops downward. Flowers light green, with flower tube and six recurved 'petals'. Pellets yellowish-olive.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Empodium plicatum (Hypoxidaceae)	Autumn star *Ploegtyd sterretjie*	N? P	4–6

Remarks

Southwestern Cape. On open flats and lower slopes, but nowhere abundant. Leaves pleated lengthwise. Yellow flowers with long pointed 'petals' open at noon. The nectar report is questionable because of the long narrow flower tube. It is very likely that the other members of this genus are also pollen sources for bees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Eucomis autumnalis (Hyacinthaceae)	Pineapple flower *Wilde pynappel*	N0–1 P?	11–4

Remarks

EC, KZN, L, FS, SZ, northern provinces, BOT, ZIM. Moist grassland and rocky outcrops. Large bulb with annual rosette of leaves. The cylindrical inflorescence, with a topknot of leaves, somewhat resembles a green pineapple. Rarely visited by bees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Ferraria ferrariola (IRIDACEAE)	Spider lily *Krulletjie* *Spinnekopblom*	N? P?	6–10

Remarks

Northern Namaqualand to Clanwilliam. Pale green to greenish-blue flowers are sweetly-scented. Margins of 'petals' are curled, which is typical for the genus. One record of bee visits.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Galtonia candicans (HYACINTHACEAE)	Common berg lily *Gewone berglelie*	N0–2 P0–1	11–3

Remarks

EC, KZN, FS, MP. Moist high-lying grassland. White, hanging, bell-shaped flowers. Grown as an ornamental in many countries. Nectar is collected from the front of the flower, and rarely through slits pierced by carpenter bees. Pollen biscuit-coloured.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Geissorhiza aspera (IRIDACEAE)	Satin flower *Syblom* *Blousysie*	N2? P2?	8–9

Remarks

Southwestern Cape. Common on some sandy flats and slopes. Flowers blue to violet. Bees obtain nectar from a very short flower tube.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Gladiolus spp. (IRIDACEAE)	Gladiolus Painted ladies	N0–2? P0–2?	8–10 WR
G. dalenii	*Swaardlelie*		
G. sericeovillosus	*Pypie*		12–3
G. venustus	*Afrikanerlelie*		SR
G. watsonius	*Kalkoentjie*		
G. aureus			
G. carinatus			
G. gracilis			
G. griseus			
G. hirsutus			
G. inflexus			
G. jonquilliodorus			
G. patersoniae			
G. quadrangulus			
G. trichonemifolius			

Remarks

The majority of the 177 species in S. Africa are found in the WC, extending eastwards to KZN and further north. Cormous perennials with tubular, funnel-shaped, bell-shaped or open flowers. Probably no other indigenous group of flowers has such a wide range of colours, including green and brown. Most of them also have prominent nectar guides.

Gladiolus dalenii is the main parent of many cultivars grown worldwide. These have been designated **G.** × **hortulanus** for easier reference. Sometimes the ample low-sugar nectar in some types can be reached by honeybees. The following pollen pellet colours have been recorded: white, cream-coloured and light yellow. The given flowering times are averages. The first four listed species were noticed with pollen-collecting bees. The second list of ten **Gladiolus** species were all observed to be visited by honeybees for nectar, with three species providing pollen as well (Goldblatt et al. 1998). These bee flowers were the open, short-tubed type with nectar guides on the lower 'petals'. A flower typically lasts three or four days. The male phase, when pollen is shed, lasts at least two days, followed by the female phase, when the stigmatic surfaces are exposed. Secreted nectar volumes were reported to be 'modest'.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Gloriosa superba (COLCHICACEAE)	Flame lily *Vlamlelie*	N0–2 P0–1	11–5

Remarks

EC, KZN, SZ, MP, LIM, ZIM, BOT, NAM. Semi-climber of sandy bushveld. Perennial corms, but annual leafy parts. Leaves have tendrils for climbing. Red or yellow flowers, which are turned upside-down. Nectar is available in the slit between two tight lips, on the outward-facing side of the upright petals. Pollen pellets deep orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Hemerocallis aurantiaca* (= **Hemerocallis fulva var. **aurantiaca**) (LILIACEAE)	Day lily Brown day lily *Daglelie*	N0–1 P0–1	10–4

Remarks

China. Clump-forming perennial with orange flowers that are produced for several weeks at a time. The flowers rarely attract bees, least of all for pollen. Another closely related species also grown in S. Africa is the yellow day lily, **H. lilioasphodelus** (= *H. flava*). In Italy the yellow and brown (**H. fulva**) day lilies have been recorded as minor nectar and pollen sources of honeybees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Hesperantha coccinea (= *Schizostylis coccinea*) (IRIDACEAE)	Scarlet river lily *Rooi rivierlelie*	N1? P?	11–4

Remarks

Montane river banks from EC to LIM. Clump-forming, cormous perennial. Leaves sickle-shaped. Large pink to scarlet flowers on a spike. Each flower lasts about four days. Nectar probably rises in the relatively long, thin tube for the bees to reach.

Botanical Name	Common Name	Beeplant Value	Flowering Time
H. pauciflora	Hesperantha *Pienk aandblom*	N2? P?	8–9

Remarks

Richtersveld, Namaqualand, Bokkeveld Plateau. Deciduous corm with sword-shaped leaves, found in sandy and clay soils that are seasonally wet. The flowers, which are pink to purple and rarely yellow, open late afternoon and are fragrant. The short open flower tube allows honeybees to access the nectar.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Ixia spp.	Ixia	N0–2?	7–1
(IRIDACEAE)	*Kalossie*	P0–2?	(9–10)

Remarks

Winter-rainfall S. Africa. Open slopes and flats. The bulb is a globose corm from which the narrow leaves and wiry flowering stems arise. Flowers white to mauve to yellow to orange, sometimes with a dark centre which serves as a nectar guide for daytime pollinators. Some flowers are fragrant. Bees can have access to the nectar of funnel-shaped flowers, or in the case of flowers with thin tubes, when these are short, about 10 mm or less. Honeybees have been recorded on **I. dubia** and **I. flexuosa**, with pollen collection specifically noted on the latter species.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Kniphofia spp.	Red-hot poker	N0–2	1–12
(ASPHODELACEAE)	*Vuurpyl*	P0–3	
K. caulescens	Grey-leaved poker		
K. ensifolia	Highveld poker		
K. praecox	Common poker		
K. rooperi	Winter poker		
K. uvaria	Cape poker		

Remarks

S. Africa, ZIM. Tufted, rhizomatous perennials of moist grassland. Flower tubes mostly too narrow for bees to enter. The flow of dilute nectar is usually copious, so that it runs down to the flower mouth where bees collect it. Nectar sugar can be as low as 11%. Pollen pellets in shades of yellow. Different species flower at different times of the year, which usually is either winter or summer. **Kniphofia praecox** is a garden hybrid that flowers mainly in winter.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Lachenalia spp.	Lachenalia	N0–2?	4–12
(HYACINTHACEAE)	Wild hyacinth	P0–2	(8–10)
	Kaapse viooltjie		

Remarks

Winter rainfall regions of S. Africa, particularly Namaqualand and West Coast. Bulbous perennials, mostly with broad leaves that are spotted or barred. Upright spikes with tubular flowers in different colours: cream to yellow to orange to red to purple to mauve and green. The nectar in the tubular flowers is mostly not accessible to bees. Anthers are inside the flower tube in some species, or outside in others. Duncan (2012) noted that honeybees visited the full range of differently shaped flowers in **Lachenalia**, including long-tubed flowers that are adapted primarily to sunbird pollination, as well as scented and non-scented species. Most probably all these species are utilised as sources of pollen, whereas nectar collection is only possible in those flowers that have shorter and wider flower tubes. Honeybees visit the flowers from mid-morning to mid-afternoon. A selection of cultivars is available in the flower trade.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Lapeirousia spp. (IRIDACEAE)	Lapeirousia *Koringblom* *Cabong*	N0–2? P	7–12 (8–10)

Remarks

West Coast, Namaqualand, western Karoo. Plants originate from a bell-shaped corm, and are of small height: 350 mm or less. Flowers mostly have long, thin tubes, in different colours: cream, pink, red, mauve and purple. Some are sweetly scented. Nectar is only available to bees in relatively few species with campanulate, short-tubed flowers. Prominent nectar guides can usually be seen on the three lower 'petals', but in some species they are displayed on five or all six petals. Anthers are carried outside the flower mouth. Dark-coloured pollen has been recorded in one species. Honeybees have been seen visiting the flowers of **L. coerulea**, **L. exilis** and **L. plicata**.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Ledebouria revoluta (= *Scilla lanceifolia*) (HYACINTHACEAE)	Common ledebouria Spotted squill	N0–2? P?	1–12 (8–12)

Remarks

SC to KZN, L, FS, SZ, northern provinces, ZIM, BOT, NAM. Stony grassland and open woodland. Bulbous perennial with broad, dark-spotted leaves. Many greyish-purple flowers in a dense inflorescence. Rarely seen with bees. The nectar value stems from an EC report.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Leucojum vernum** (AMARYLLIDACEAE)	Spring snowflake *Sneeuvlokkie*	N0–1 P1–2	6–8

Remarks

Central Europe. Early pollen source for cooler regions, i.e. Highveld gardens. Pollen pellets bright orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Merwilla plumbea (= *Scilla natalensis*) (HYACINTHACEAE)	Large blue squill *Blou slangkop*	N0–1 P0–2	7–12

Remarks

EC, KZN, L, FS, SZ, MP. Grassland and open rocky locations, from coast to high veld. Light blue to light purple flowers on a 1 m high flowering stem. Needs full sun and moist soil to flower.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Moraea spp. (IRIDACEAE)	Moraea *Tulp*	N0–2? P0–2?	1–12 (7–11) WR
M. bifida			(10–3)
M. collina			SR

M. comptonii

M. elegans

M. miniata

M. ochroleuca

M. pseudospicata

M. reflexa

Remarks

S. Africa, with the bulk of the species in the winter rainfall region. Corms covered in rough fibres for protection. Two flower types: all six 'petals' are similar and have no nectar guides. Second type: the inner three petals are variously modified, while the outer three have conspicuous nectar guide spots. Those species that have prominently displayed anthers are visited by pollen-collecting bees. **Moraea papilionacea** and **M. polystachya**, the poisonous *bloutulp*, have been recorded as nectar sources of bees, and **M. bituminosa** as a source of pollen. The eight listed **Moraea** species were documented as sources of pollen for honeybees in the southwestern Cape (Goldblatt & Bernhardt 1999). Six of the listed species were also visited for their nectar (identity not specified). Flowers last one or two days, depending on the species.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Narcissus pseudonarcissus** (Amaryllidaceae)	Daffodil *Affodil*	N0–1 P0–2	6–8

Remarks

Western Europe. This is the common daffodil with six yellow 'petals' and a yellow 'trumpet' in the centre. At the bottom of the flower the bases of the stamens shield the nectar, which is not easily accessible to honeybees. Pollen pellets are yellow. Double cultivars are of no use to bees. Bulbs are planted in autumn, with flowers emerging in winter or early spring. The flowers tolerate some frost. The cup-type daffodils, derived from other **Narcissus** species, have an orange cup in the centre of the flower. They are said to produce yellowish-orange pollen, and probably have the same beeplant value.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Nerine spp. (Amaryllidaceae)	Nerine	N0–2 P0–1	2–4

N. angustifolia

N. filifolia

N. gaberonensis

N. pancratioides

Remarks

Southern and eastern regions of S. Africa. Moist grassland or rocky slopes. Deciduous or evergreen bulbous perennials. Flowers with crinkly pink 'petals', together in a hemispherical head on an upright stalk. Water-white nectar without an aroma. Pollen pellets light grey in **N. filifolia**.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Onixotis punctata (= **Wurmbea punctata**) (COLCHICACEAE)	*Hanekammetjie*	N P2?	7–9

Remarks

Southwestern Cape, SC. Cormous geophyte that only produces three leaves that are slightly channelled: two above the ground and one halfway up the flowering stem. On rocky and clay slopes, particularly after fire. Upright inflorescence with 5–20 white, saucer-shaped flowers with a pinkish centre. The Afrikaans name is not fitting and refers to the flowers of some plants that have a reddish-brown colour.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Ornithogalum conicum (HYACINTHACEAE)	Summer chinckerinchee *Somer-tjienk*	N2? P2?	9–12

Remarks

Namaqualand, western Karoo, southwestern Cape. Flowers brilliant white, lightly scented, in cone-shaped heads. Seasonally damp clay or loam of flats or slopes. Flowers similar to common chink, but without a dark centre.

Botanical Name	Common Name	Beeplant Value	Flowering Time
O. thyrsoides	Common chink *Gewone tjienk*	N P0–1	10–12

Remarks

Namaqualand to southwestern Cape. Common in pastures and fields. Favourite perennial garden bulb. Flowers in a rounded cluster at the tip of the stem, cup-shaped, cream-coloured, with dark centre. Pollen light yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
O. seineri (= **Albuca seineri**)	Bushveld chink *Bosveld-tjienk*	N1–2 P1–2	10–2

Remarks

NC, FS, NW, LIM, ZIM, BOT, NAM. Sandy, overgrazed areas. White and green flowers appear about ten days after the first good rains. Pollen light greyish or yellowish.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Oxalis depressa (OXALIDACEAE)	Large-flowered sorrel *Grootblom-suring*	N P	10–5 (2–4)

Remarks

NC, NW, FS. Bulbous perennial with large white to pink to reddish flowers. Darker-coloured lines act as nectar guides. Single flower per stem. Beeplant value not known.

Botanical Name	Common Name	Beeplant Value	Flowering Time
O. obliquifolia	Oblique-leaf sorrel Succulent-leaf sorrel	N2 P2?	10–5 (11–3)

Remarks

Damp grassland of eastern S. Africa and further north. Solitary pink flowers with a yellow throat as nectar guide. Leaflets semi-succulent and oblique in respect to each other.

Botanical Name	Common Name	Beeplant Value	Flowering Time
O. pes-caprae	Cape sorrel Yellow sorrel *Langbeen-geelsuring*	N0–2 P2–4	5–10

Remarks

Namaqualand to EC. Cosmopolitan weed that is grazed by stock. Clusters of yellow flowers on a long stout stem. Pollen light brown to light orange. Small honey surplus in Australia, where it is used for build-up and even queen rearing. The *baster geelsuring*, **O. compressa**, is very similar to the Cape sorrel, but differs with its flattened or compressed leaf stalk. It is also a source of nectar and pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
O. purpurea	Grand duchess sorrel *Bobbejaan-suring*	N P2	4–9

Remarks

Namaqualand and western Karoo to Port Elizabeth. Leaves at ground level, with leaflets hairy and purple beneath. Large, short-stemmed flowers in different colours, often light purple with a yellow throat as nectar guide. Pollen pellets yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
O. semiloba	Common pink sorrel Folded-leaf sorrel	N2 P2	10–5 (2–4)

Remarks

Grassland of eastern S. Africa and further north. Bilobed leaflets often folded. Flowers in clusters, bright pink, with a yellow centre as nectar guide. Grazed by stock.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Ranunculus asiaticus** (RANUNCULACEAE)	Garden ranuncula *Gewone ranonkel*	N0 P2	7–9

Remarks

Asia Minor. Well-known garden plant in S. Africa, available as singles and doubles in a wide colour range. Pollen dark purple to black from dark-centred single cultivars.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Romulea rosea (IRIDACEAE)	Romulea *Froetang* *Knikkertjie*	N? P2?	7–11

Remarks

Southwestern Cape to EC. Slopes and flats, often in disturbed sandy places. An asymmetrical corm produces quill-like leaves and solitary flowers at ground level. Striking pink to purple flowers with a yellow cup that has a dark rim – a prominent guide for pollinators. Filaments and anthers are close together in a peg-like structure in the middle of the flower cup, which makes the pollen easily available to bees. Unknown whether flowers contain nectar.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Scadoxus puniceus (= *Haemanthus magnificus*) (AMARYLLIDACEAE)	Blood lily Paintbrush lily *Rooikwas*	N0–1 P0–2	7–2 (9–11)

Remarks

SC to KZN, SZ, northern provinces. Forest margins, bushveld and coastal bush. Flower head: large, compact, brush-like, densely packed with orange florets, many protruding stamens, surrounded by prominent reddish-brown bracts. The low-sugar nectar is rarely collected by bees. Pollen-collecting bees have also been observed on **Haemanthus humilis** and **Scadoxus multiflorus**.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Sparaxis spp. (IRIDACEAE) **S. auriculata** **S. bulbifera** **S. grandiflora** **S. parviflora** **S. variegata** **S. villosa**	Sparaxis Harlequin flower *Fluweeltjie* *Kappie*	N0–2? P1–2?	8–10

Remarks

Southwestern Cape in seasonally moist flats. A fibrous corm produces leaves that are arranged fan-like. Hybrids in many colours are popular garden subjects and known as harlequin flowers. Four types of pollination have been reported in the genus **Sparaxis** by Goldblatt & Manning (2000), namely beetle pollination, fly pollination, self-pollination and bee pollination. The last group includes the six listed species. Four of these are typical bee flowers, which have a lower lip with nectar guides, as well as an enlarged hood-like upper lip that protects the pollen against weather elements. **Sparaxis auriculata** does not produce nectar.

Botanical Name	Common Name	BeeplantValue	Flowering Time
Trachyandra spp. (ASPHODELACEAE) **T. ciliata** **T. divaricata** **T. falcata** **T. hirsutiflora**	Trachyandra *Veldkool*	N1? P2?	6–10 WR 9–3 SR

Remarks

Mainly winter-rainfall regions of southern Africa in sandy soils. There are fewer species in the grasslands of eastern S. Africa. Tufted plants on rhizomes or tubers, i.e. geophytes. Leaves grass-like to lily-like. White star-shaped flowers last only one day or only an afternoon, but the inflorescence is long-flowering generally. The prominent anthers are lemon-coloured, providing the bees with pollen in shades of yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Tritonia spp. (IRIDACEAE)	Tritonia *Agretjie*	N1–2? P0–1?	8–12 (9–10) West
T. crocata			10–3 (11–2) East
T. dubia			
T. nelsonii			

Remarks

Most species grow in the WC in clay, shale and sandstone slopes. Only a few are found in grasslands of eastern S. Africa. Perennial, deciduous, cormous plants. The sword-shaped leaves are arranged fan-like. Flowers appear in different colours and are directed to one side of the flowering stem. There are different flower forms, depending on the mode of pollination. In typical bee flowers the upper 'petal' forms a hood that contains the style and three stamens. The lower three petals each have a peg- or tooth-like, upright outgrowth. Bees have to climb over these structures to reach the mouth of the flower and the nectar. In so doing they touch the anthers and the stigma with the upper parts of the body and thus bring about cross-pollination (Vogel 1954).

Botanical Name	Common Name	Beeplant Value	Flowering Time
Urginea spp. (= **Drimia** spp.) (HYACINTHACEAE)	Snake head Poison squill *Maerman* *Slangkop* *Brandui*	N0–2 P0–2?	8–12

Remarks

Southern Africa. Slender 'lilies' with scaly bulbs, mostly of grasslands. Leaves are often dry during flowering. A number of species are poisonous to stock. Erect inflorescence usually bent at the top, the so-called 'snake head'. Many small, light-coloured, open flowers. Some species have very bitter nectar that taints other spring honeys. The only identified species to cause this is **D. altissima**. It is found in all the northern regions of S. Africa. Bitter honey has been harvested from the bushveld of central LIM and from the Vaal River of NW. Contaminated honeys may also have a distinct turpentine aroma, depending on the amount of **Drimia** nectar that is involved.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Wachendorfia spp. (HAEMODORACEAE)	Blood root *Rooikanol*	N0–3? P0–2?	7–12 (9–11)
W. brachyandra			
W. paniculata			
W. thyrsiflora			

Remarks

Southwestern Cape to EC. Damp sites of slopes, flats and stream banks. Red tuberous roots with red plant sap. Pleated leaves in a loose fan shape. Flowers with six unequal 'petals', apricot-coloured to golden yellow to brownish-mauve. Upper three petals are close together and have nectar guides. Lower three petals are separate and unmarked. Honeybee visits were recorded on the three listed species. Pellets light brownish-orange. One communication by a beekeeper: '**W. paniculata** is the source of an unpalatable honey'.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Watsonia spp. (IRIDACEAE)	Watsonia *Suurkanol* *Kanolpypie*	N0–2 P0–2	8–4 (10–12)

Remarks

Mountainous regions of the southwestern Cape to the Drakensberg. Robust cormous perennials with tough, fibrous, sword-shaped leaves, which are deciduous or evergreen. Flowers arranged in two opposite rows on the upright flowering stem. They are often too narrow for nectar bees, particularly in the trumpet-shaped types. Nectar is more easily available in the funnel-shaped flowers. Bees may rob nectar via bird holes or carpenter bee slits. Recorded pellet colours: light purple, light grey, white, cream-coloured and light yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Zantedeschia aethiopica (ARACEAE)	Arum Calla *Varklelie* *Aronskelk*	N0 P0–3	5–2 (8–10)

Remarks

Southwestern Cape to EC, KZN, SZ, MP, LIM. Popular garden plant. The pollen, collected in large white loads, is sometimes totally ignored. Major pollen-gathering activity was observed in several locations in the SC. Flowering time is extended under cultivated conditions.





Agapanthus caulescens. In veld and gardens the blue flowers of agapanthus species delight the eye during summer.



Aristea sp. Aristeas are little-known bulbous plants of the southwestern and eastern regions of S. Africa.



Bulbine frutescens. This long-flowering bulbine is grown along sidewalks and in gardens throughout S. Africa.



Crinum bulbispermum. The large pollen grains of the Orange River lily are collected only infrequently by honeybees.



Dietis grandiflora. The indigenous large white iris can be seen in many gardens and parks.



Gloriosa superba. The flame lily presents its nectar in a slit on the outward-facing side of a petal.



Hesperantha coccineus. The scarlet river lily with its red colour and long thin corolla tube is not typically a bee flower, but honeybees can access some nectar during times of intense secretion.



Gladiolus caryophyllaceus. The flower shape of this gladiolus would allow honeybees to access its nectar.



Kniphofia uvaria. The indigenous red-hot pokers are old favourites in S. African gardens.



Lachenalia bulbifera. Wild hyacinths are found in the western winter-rainfall region. They have different pollination modes.



Nerine filifolia. The crinkly pink petals of nerines lend a special enchantment to these bulbous evergreens.



Oxalis purpurea. A large number of **Oxalis** species provide honeybees with pollen and nectar.



Moraea fugax. Moraeas or *tulpe* are colourful representatives of the iris family in open veld in S. Africa.



Ornithogalum thyrsoides. The chinckerinchee from Namaqualand has found its way into many gardens.



Scadoxus puniceus. Species of **Haemanthus** and **Scadoxus** boldly advertise their presence with colourful paintbrush-like flower heads.



Sparaxis villosa. This sparaxis species has a yellow landing platform for honeybees and a hood that shelters the anthers.



Wachendorfia thyrsiflora. The wachendorfias of the Cape flora are found nowhere else in the world.



Eucomis autumnalis. The pineapple flower superficially resembles a green pineapple, but the two are not related botanically.

8. Annuals and Biennials

Flower gardening and annuals are synonymous, particularly in South Africa where a year round blaze of colour can be enjoyed by man and bees. Planting annuals literally brings the gardener close to the soil and provides him with immediate gratification. For honeybees the annuals can also render sustenance at certain times when shrubs and trees don't, both in the wild and in gardens.

With few exceptions the garden annuals are exotics, but a far greater number are wild in South Africa, being mainly found in the western sandveld and in Namaqualand. Here they have adapted well to the climatic extremes of hot, dry summers and wet, cold winters. Their flowering in spring is restricted to a few weeks. As can be inferred from the comparatively scant information of relatively few species in the table below, the plant–bee relationships of indigenous annuals have barely been studied.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Alcea rosea** (= *Althaea rosea*) (Malvaceae)	Hollyhock *Stokroos*	N0–3 P0–1	1–12 (11–12)

Remarks

Asia Minor? Popular long-flowering garden biennial. Single cultivars are better for bees. They become dusted white with large pollen grains while foraging for nectar. Members of the Malvaceae, which include hibiscus, cotton and hollyhock, have very large spinuliferous pollen grains, which honeybees do not readily collect. They may be seen to actively clean themselves of the pollen while in flight near the flower, or they can be recognised at the hive entrance covered in whitish pollen grains.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Alyssum maritimum* (= **Lobularia maritima) (Brassicaceae)	Sweet alyssum Honey flower *Heuningblom*	N0–2 P2–3	1–12 (9–12) (3–5)

Remarks

Southern Europe. Hardy annual or short-lived perennial. Also found as an escape. Small plants covered in white, mauve or purplish flowers that have a strong honey scent. Almost without exception only pollen gatherers are observed. Despite their quick action, they probably collect a little nectar as well. Only once in many years of observation was major nectar activity recorded, without any pollen bees. Pellets brownish-yellow to orange-brown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Anchusa azurea** (= *A. italica*) (Boraginaceae)	Alkanet forget-me-not *Europese ossetong*	N2–3 P1	9–2

Remarks

Mediterranean. Perennial treated as annual. Flowers in shades of blue, with a yellow to bluish flower centre. Small pollen loads yellowish or light greyish-beige. Escapes in FS, EC and WC.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. capensis	Cape forget-me-not *Kaapse ossetong*	N1–4 P1–2	7–4 (9–11)

Remarks

Cape provinces and FS. Biennial garden plant, but at times longer-lived in the wild. Flowers purplish to blue, with a white centre as nectar guide. Flowering peak is later in summer rainfall regions. Pellets light beige or dirty white. Hairy throats of flowers of **Anchusa** species protect the nectar against moisture.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Antirrhinum majus** (SCROPHULARIACEAE)	Snapdragon *Leeubekkie*	N0–1 P0–1	7–3

Remarks

Mediterranean. Large heavy bumblebees of Europe easily open the flowers and access the nectar. Honeybees in S. Africa have been observed to sometimes insert their heads into the flowers, and occasionally even their thoraxes, to reach the nectar. Pollen loads are small, with a dirty yellow colour. Winter-spring flowering in warm climates, and summer flowering in cooler ones.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Arctotis fastuosa (= *Venidium fastuosum*) (ASTERACEAE)	Double Namaqua marigold *Bitter gousblom*	N1? P2?	7–10

Remarks

Namaqualand and western Karoo. Sandy and gravelly flats. Light to deep orange petals, with dark bases, in two rows. Pollen orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. hirsuta (= *V. hirsutum*)	*Grootblaar gousblom*	N0? P2	7–10

Remarks

Namaqualand to southwestern Cape. Flowers orange or cream-coloured. Pollen: pale to deep orange, collected in sunny weather, only during forenoon.

Botanical Name	Common Name	Beeplant Value	Flowering Time
A. venusta	Free State daisy *Wit gousblom*	N2? P0–3	10–3

Remarks

Karoo, FS. Indigenous annual used as an ornamental. Weed in ploughed fields. Ray florets white, disc florets purplish-black. Light-coloured pollen. After flowering the heads hang down.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Bellis perennis** (Asteraceae)	Bachelor's button English daisy *Engelse madeliefie*	N0–1? P1–2?	7–11

Remarks

Europe. Self-seeding, herbaceous, biennial daisies. Single cultivars better for bees. Pellets pale yellow. Formerly a favoured ornamental, but infrequently grown nowadays. Naturalised in pastures and lawns in other parts of the world.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Calendula officinalis** (Asteraceae)	English marigold *Tuin gousblom*	N1 P2–3	6–10

Remarks

Southern Europe. Single cultivars needed for bees, doubles not visited. Useful winter pollen source for gardens. Pellets orange. Other marigolds are **Tagetes** species.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Carpanthea pomeridiana (Aizoaceae)	*Vetkousie*	N2? P1?	9–11

Remarks

Southwestern Cape. Tufted, succulent annual of sandy flats. Flowers on stalks above the ground, said to be unpleasantly scented. Numerous thin, golden-yellow petals and staminodes.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Centaurea cyanus* (= **Cyanus segetum) (Asteraceae)	Cornflower Garden centaurea *Koringblom*	N2–3 P1–3	8–4

Remarks

Europe. Ornamental that has become established in MP and EC. Single, blue-flowered cultivars are best for bees. Pollen loads white to light beige.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Cheiranthus* × *allionii* (= **Erysimum × marshallii)	Siberian wallflower	N2–3 P1–2	7–11
C.* × *cheiri* (= **E. × cheiri) (Brassicaceae)	Common wallflower		

Remarks

Europe to Central Asia. Biennial ornamentals. Flowers: four petals, fragrant, yellow to mauve to burgundy colours. Very bee-attractive. Pellets pale greenish-yellow to whitish. May flower beyond the indicated time.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Chrysanthemum paludosum* (= **Mauranthemum paludosum) (Asteraceae)	Dwarf shasta daisy *Klein tuinmagriet*	N0–1 P0–1	9–5

Remarks

Portugal. Small white daisy flowers with yellow centres. Very floriferous. Pellets deep yellow. Bee-visited when other bee forage is scarce.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Clarkia pulchella** (= *C. elegans*) (Onagraceae)	Satin flower *Satynblom*	N0–2 P0–2	7–11

Remarks

Western Canada and USA. Flower 'bunches' spaced on an upright stem. Single flowers have four satiny petals in white, pink, mauve and shades of red. Pollen light-coloured. Flowering time depends on sowing time, the latter which could be autumn in the subtropics or spring on the Highveld.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Cleome hassleriana* (= **C. spinosa) (Capparaceae)	Spider flower *Spinnekopblom*	N3? P2?	11–3

Remarks

Subtropical South America. Pink flowers with long purple stamens and style = 'spider'. Found in many Highveld gardens. Established in a few locations in the wild. Nectar secretion observed at night.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. hirta	Pretty lady Purple cleome	N? P1–2	1–12 (1–3)

Remarks

MP, LIM, ZIM, BOT, NAM. Herb with digitate aromatic leaves. Different open habitats on disturbed soils. Of the four petals, two have a prominent yellow dot as nectar guide. Pellets purple. Growth and flowering is very dependent on rain – note the possibility of flowers at any time of the year.

Botanical Name	Common Name	Beeplant Value	Flowering Time
C. paxii	*Ertjie cleome*	N2? P1?	2–5

Remarks

NC, NAM. On sandy flats and dunes of the southern Kalahari. Herb with several erect, hairy, glandular stems. Narrow trifoliolate leaves. Flowers bright yellow with four petals of about equal size. Relatively thick seed 'pods'.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Consolida ajacis** (= *Delphinium ambiguum*) (RANUNCULACEAE)	Larkspur *Ridderspoor*	N? P0–2	8–2 (10–11)

Remarks

Mediterranean. Ornamental with finely-divided feathery leaves. Flower colours traditionally blue, but hybrids in shades of mauve, pink and white. The nectar in the long flower spur cannot be reached by honeybees – perhaps with a strong nectar flow? Pollen light brownish-yellow. The similar-looking **Delphinium** hybrids have the same beeplant value.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Crassocephalum cf. **crepidioides** (ASTERACEAE)		N1–2 P2?	3–9

Remarks

KZN, MP, LIM, ZIM. Erect annual herb of different habitats, from the coast to high-lying regions. Flower head cylindrical, nodding at first, without ray florets, but with reddish-purple disc florets.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Cucumis metuliferus (CUCURBITACEAE)	Spiny cucumber *Doring-komkommer*	N0–2 P?	11–5

Remarks

KZN, SZ, northern provinces, ZIM, BOT, NAM. Wild, annual, climbing cucumber of riverine bush. Small, light green to light yellow flowers. Best nectar secretion in hot weather after rain. Fruit: large, spiny, edible, orange when ripe.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Dianthus barbatus** (CARYOPHYLLACEAE)	Sweet William *Baard angelier*	N0–1 P0–1?	6–12

Remarks

Europe. Lifespan of 2–3 years. Flowers with a clove-like fragrance and a wide variety of colours. Seldom visited by honeybees. Flowering time can extend beyond the given dates.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Digitalis purpurea** (SCROPHULARIACEAE)	Foxglove *Vingerhoedjie*	N0–2 P0–1?	9–12

Remarks

Europe. Well-known biennial ornamental. Nectar is reached with difficulty. Pollen is rarely collected and actively discarded at times.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Dimorphotheca pluvialis (ASTERACEAE)	White Namaqualand daisy *Witmagriet* *Reënblom*	N0–2 P0–3	7–10

Remarks

Southwestern Cape to NAM. Ray florets white above and violet below. Preferred by bees to **D. sinuata** when together, but little worked when other competitive plants are nearby. Pollen pellets orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
D. sinuata	Orange Namaqualand daisy *Namakwalandse madeliefie*	N0–1 P0–3	5–10 (8–10)

Remarks

Namaqualand to NAM. Well-known annual that is widely grown throughout S. Africa. Generally offers little attraction to bees. Best foraging conditions are calm, sunny, warm weather with moist soil, when high pollen values can be reached. Pollen dark orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Dorotheanthus bellidiformis (Aizoaceae)	*Bokbaaivygie*	N1? P2?	6–11 (8–9)

Remarks

Southwestern Cape and West Coast. Sandy soils. Flowers white, pink, red or purple. Flower centre light yellow or dark-coloured. Pellets in shades of brown or dark reddish-purple.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Eschscholzia californica** (Papaveraceae)	California poppy *Kaliforniese papawer* *Slaapmussie*	N0? P1–2	10–3

Remarks

California. Popular self-seeding annual or occasional perennial. Escape in southwestern Cape. Summer-flowering. Suspected nectar source not yet proven. Pollen loads light orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Euphorbia marginata** (Euphorbiaceae)	Snow-on-the-mountain	N2–3 P1?	11–2

Remarks

North America. Foliage plant with green and white leaves. Insignificant yellowish-green flowers. Planted less and less in S. African gardens. Texas honey source.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Felicia bergeriana (Asteraceae)	Kingfisher daisy *Breëblaar astertjie*	N1? P1?	7–10 (8–9)

Remarks

NC to southwestern Cape. Small, slender, hairy annual with solitary flower heads. On rocky lower slopes and sandy flats; also cultivated. Blue ray florets and bright yellow disc florets.

Botanical Name	Common Name	Beeplant Value	Flowering Time
F. dubia	*Sambreeltjies*	N2? P1?	7–10

Remarks

Namaqualand to Cape Peninsula, including the western Karoo. Locally common on gravel flats, sand and rocky places. The leaves as well as the long flowering stem are hairy. Light blue to purplish ray florets are held horizontally, but their tips are turned downwards, giving rise to the Afrikaans name. Intense yellow disc florets. Beeplant value from a single record.

Botanical Name	Common Name	Beeplant Value	Flowering Time
F. elongata	Tricolour felicia Saldanha Bay felicia	N1? P	8–10

Remarks

Coastal limestone sands around Saldanha Bay. Single flower head on an elongated stalk. Flowers with a yellow centre and with white ray florets that are maroon at their base.

Botanical Name	Common Name	Beeplant Value	Flowering Time
F. heterophylla	Blue-eyed felicia *Bloublom astertjie*	N1? P1?	8–10

Remarks

Clanwilliam to Cape Peninsula. Sandy flats and lower slopes. Sparsely-branched annual with soft, hairy leaves. Pale purple ray florets. The disc is dark purplish, which is unusual for felicias.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Gisekia africana (Gisekiaceae)	Red gisekia Ostrich herb *Volstruiskruid* *Rooi rankopslag*	N1? P2?	11–6 (3–5)

Remarks

Northern provinces, NC, NAM, BOT, ZIM. Annual or occasional perennial herb with slender prostrate branches. Disturbed sandy soils of grassland, bushveld and dunes. Small flowers in clusters, pink to red. Midday foraging. Pellets white. Beeplant value unsure.

Botanical Name	Common Name	Beeplant Value	Flowering Time
G. diffusa (= *G. pharnacioides*)	Common gisekia *Wit rankopslag*	N0–2 P0–1?	9–4

Remarks

Summer rainfall regions of southern Africa. Sprawling annual. Occasional weed in crops and gardens. White to yellow flowers that open simultaneously in the same cluster. **Gisekia** is an anomalous genus that has also been placed in other plant families.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Gomphrena globosa** (Amaranthaceae)	Globe amaranth	N1–2 P0–2	10–3

Remarks

India. Purple globose flower heads, but white and pink cultivars are also grown. Pollen pellets yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Grielum humifusum (Neuradaceae)	Desert primrose Yellow satin flower *Pietsnot* *Duikerwortel*	N2? P2?	7–11 (8–9)

Remarks

NAM, BOT, Namaqualand, western Karoo. Prostrate annual, but perennial at times. Sandy soils, often where disturbed. Lemon-coloured flowers with a white centre. Similar **G. grandiflorum** with green flower-eye; occurs on stony and sandy coastal flats of the west. It probably has the same bee value.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Gypsophila paniculata** (Caryophyllaceae)	Baby's breath *Bruidsluier*	N0–1? P0	12–3

Remarks

Eastern Mediterranean. Short-lived perennial grown as annual. Sprays of tiny white or soft pink flowers that are very popular with florists. Double cultivars not attended by bees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Hebenstretia dentata (Scrophulariaceae)	*Slakblom* *Vlagblom*	N? P1?	6–10 (8–9)

Remarks

Namaqualand to Cape Peninsula on sandy soils of flats and slopes. Small annual with several erect stems that end in spikes of white flowers. Unusual flower anatomy: thin flower tube has only one upper lip with four finger-like lobes. This tube is partly slit on one side. The style and four stamens of unequal length emerge through this slit. It is not known whether bees can reach the nectar.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Helianthus debilis** (Asteraceae)	Cucumber-leaf sunflower	N2–3 P0–3	11–3

Remarks

North America. Small multi-flowered bush that flowers for three months. Rarely without bees. Pellets deep yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Helichrysum argyrosphaerum (Asteraceae)	Dwarf everlasting *Poprosie sewejaartjie*	N0–1? P0–2	1–12 (9–12)? (3–6)?

Remarks

Southern Africa, except WC, EC and Karoo. Prostrate mat-forming woolly annual with small yellow and pink flower heads. Easily becomes a weed in disturbed sandy areas. Pellets yellowish-green. Afternoon foraging observed in winter in the Kalahari.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***H. bracteatum**	Everlasting Straw flower *Strooiblom*	N0? P0–2	1–12? (10–1)?

Remarks

Australia. The classical everlasting with large, showy flowers in different colours: the original golden-yellow, as well as white, pink, scarlet and red. They are seldom visited by bees. Pollen orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
H. foetidum	Stinking everlasting *Brandblaar*	N1? P2?	8–5

Remarks

Damp rocky slopes, from the Cederberg to the EC, often being a constituent of shrubby vegetation. Can become a weed in disturbed soils. A stout, foetid-smelling biennial herb. A rosette of glandular, hairy leaves is produced in the first year. In the second year the upright flowering stem carries a loose cluster of pale yellow to cream-coloured flower heads of the straw flower type. Leaf poultices are used on festering sores, hence the Afrikaans name.

Botanical Name	Common Name	Beeplant Value	Flowering Time
H. indicum		N2–3 P2	8–2 (10–1)

Remarks

Southwestern Cape. Woolly non-showy annual, often weedy. Dark surplus honey from Robben Island. Pollen has an unpleasant odour.

Botanical Name	Common Name	Beeplant Value	Flowering Time
H. paniculatum (= **Syncarpha paniculata**)	*Baba sewejaartjie*	N P2?	1–12 (10–6)

Remarks

Gifberg to Port Elizabeth. On coasts and lower slopes. Small flowers mostly white, but also pale yellow, or pink in bud. The roundish heads have many ray florets ('petals') and a dark centre.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Heliophila spp. (Brassicaceae)	Blue cross Sun flax *Bloubekkie* *Sporrie* *Flaks*	N1–3 P1–3	1–12 (8–10) (4–6) (11–3)

Remarks

Southern Africa; mainly southwestern Cape. Slender upright herbs with long narrow leaves. Perennial to mostly annual. Flowers with four petals: white to mauve to mainly blue. Main flowering time: August–October in the southwestern Cape to Namaqualand; autumn–winter in the NC following autumn showers; further east mainly spring–summer. Heliophilas contribute to mixed honeys and colony build-up in the NC, of which the annual **H. trifurca**, *bees sporrie*, has been specifically identified. At Christiana a *bloubekkie* honey is harvested at long intervals, following flooding or exceptional summer–autumn rains. **Heliophila africana**, *sand flaks*, of the Western Sandveld and southwestern Cape, has been implicated as a source of honey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Iberis umbellata** (Brassicaceae)	Common candy tuft *Skeweblom*	N0–2 P0–2	1–12 (10–5)

Remarks

Mediterranean. Flowers white to pink to mauve. Two small and two large petals; bees land on the latter. Pellets olive-coloured. Long-flowering.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Impatiens balsamina** (Balsaminaceae)	Garden balsam *Balseminie*	N0–1 P0–1	10–5

Remarks

Asia. Nectar is obtained from the curved flower spur. Double cultivars, called rose or camellia balsams, are of little value to bees. The garden balsam is confused with the perennial busy lizzy, **I. walleriana**, on which bee visits have rarely been observed. Pollen pellet colour varies in different balsam species, from whitish to yellowish to reddish and purple. For the garden balsam it is dirty-white.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Laggera crispata (= *Blumea alata*) (Asteraceae)	Laggera thistle	N2? P0–1	3–9

Remarks

EC, KZN, northern provinces, ZIM, BOT, NAM. Found in different bushveld habitats, but not common. Large, erect, single-stemmed, thistle-like annual. Stem with toothed wings or ridges. Flower heads short, cylindrical, without ray florets. Disc florets pinkish-purple. Pollen pellets white.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Lavatera trimestris** (Malvaceae)	Common mallow *Tuinmalva*	N1–2 P0–2	11–3

Remarks

Mediterranean. Vigorous annual with large pink or white flowers. Pollen whitish. Another annual mallow, **L. cretica**, is larger than the common mallow and occurs as an escape in the southwestern Cape. It has the same beeplant value.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Limeum viscosum (Limeaceae)	Sticky limeum *Klosaarbossie*	N0–2 P0–1	8–4 (12–2)

Remarks

EC, KZN, FS, SZ, northern provinces, ZIM, BOT, NAM. Prostrate sticky herb of disturbed sandy soils and grassland. Small white flowers with yellow stamens. Foragers get slightly stuck on sticky parts of the plant. Moist soil and warm to hot weather give best nectar secretion. Pellets light yellowish-brown. **Limeum** is another anomalous genus that has been classified under different plant families.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Limnanthes douglasii** (Limnanthaceae)	Poached egg Meadow foam	N3 P2?	8–4 (9–11)?

Remarks

California. Quick-growing floriferous ground cover. Withstands saline coastal conditions. White, cup-shaped flowers have a yellow centre.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Linaria maroccana** (Scrophulariaceae)	Garden toadflax Baby snapdragon *Weeskindertjies*	N0–2? P0–2	3–10

Remarks

Morocco. Popular garden annual of miniature snapdragons in various colours. A single downward-pointing spur contains the nectar. Yellow pellets. Long-flowering and floriferous. The perennial common toadflax, ***L. vulgaris**, an escape from Europe, has become established from G to KZN and EC. Visited by honeybees, but whether these can reach the nectar in the long spur, is unknown. Bees are marked yellow on their thoraxes with pollen when working these flowers.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Lobelia erinus (Lobeliaceae)	Garden lobelia *Tuin lobelia*	N1–2 P0–1	1–12 (8–12)

Remarks

Coastal flats and lower mountain slopes of the WC to EC, and further north in grasslands. Popular garden plant in different colours: blue, violet, pink or white. Pellets grey to white.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Matthiola incana** (Brassicaceae)	Stocks *Vilet*	N2? P1?	7–10

Remarks

Mediterranean. Scented multi-coloured biennials grown as annuals. Useful cut flower. Single cultivars preferred by bees. Pellets cream-coloured.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Mesembryanthemum aitonis (Aizoaceae)	Ganna mesemb *Ganna vygie*	N3 P2	8–4 (11–1)

Remarks

Caledon to EC and Karoo. Pioneer plant: a semi-succulent weed of roadsides and disturbed soils. White to pinkish flowers. Honey: light colour, mild taste. October rains are best for a December honey flow in the EC.

Botanical Name	Common Name	Beeplant Value	Flowering Time
M. crystallinum	Common ice plant *Slaaibos*	N2–4? P0–3?	(11–12) WR (3–6) SR

Remarks

NAM, NC, WC, EC. Spreading annual or biennial, often in coastal sands. Small flowers white or pinkish. Glistening papillae on fleshy leaves. Light-coloured, quick-setting honey from Bushmanland and southeastern Karoo.

Botanical Name	Common Name	Beeplant Value	Flowering Time
M. guerichianum	*Brakslaai* *Soutslaai*	N3? P2?	9–1

Remarks

Drier western parts of S. Africa, from NAM to Karoo and WC. Different open habitats with disturbed sandy soils. Small rosette of broad, flat leaves. Entire plant covered in glistening water cells. White to pale pink flowers open from noon to dusk. Much favoured by bees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Monsonia angustifolia (Geraniaceae)	Pink monsonia *Pienk angelbossie*	N1? P2	11–4

Remarks

Southern Africa, except WC and NC. Grassland, bushveld and savanna. Herb with reddish, hairy stems. Flowers usually pink, but also white, mauve and even yellow, with dark veins as nectar guides. The fruit (seed) is the 'heron's bill', typical of this family.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Myosotis** spp. (Boraginaceae)	Forget-me-not *Vergeet-my-nie*	N1–3 P0–1	7–1 (8–10)
***M. alpestris**	Alpine forget-me-not		
***M. scorpioides**	Marsh forget-me-not		
***M. sylvatica**	Wood forget-me-not		

Remarks

Europe. Popular garden subjects. Flowers in shades of blue, with a yellow to white 'eye' or nectar guide. Honey in Europe: mild taste, light colour. As flowers age, there is a slight change in the shade of their colour. Pellet colours: recorded as light orange-brown for **M. sylvatica**, and shades of yellow for another species. The wood forget-me-not, a biennial or short-lived perennial, is naturalised in the southern and eastern regions of S. Africa. There are no honeybee records for any of the indigenous **Myosotis** species.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Nemesia strumosa (SCROPHULARIACEAE)	Cape snapdragon Cape jewels *Wilde leeubekkie*	N2–3 P1	8–10

Remarks

Southwestern Cape. Grown worldwide as hybrids in shades of yellow, orange and purple. Wide range in flowering time when cultivated. A pit or hollow in the flower stores the nectar, which is secreted by many small nectaries. Pellets light brownish-yellow or orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Nigella damascena** (RANUNCULACEAE)	Love-in-a-mist *Juffertjie-in-groen*	N2? P2?	9–4 (11–3)

Remarks

Mediterranean. Pale blue flowers embedded in fine feathery foliage. A self-seeding ornamental. Pellet colours: yellowish-green and light orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Oncosiphon grandiflorum (= *Pentzia grandiflora*) (ASTERACEAE)	Large button daisy *Groot stinkkruid*	N2? P3?	8–12 (11–12)

Remarks

Southern Namibia to western Karoo to Melkbosstrand on sandy flats. Strong-smelling plant that produces a dark, quick-granulating honey (one report). Yellow button flower heads without ray florets. Large pellets pale orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Papaver nudicaule** (PAPAVERACEAE)	Iceland poppy *Yslandse papawer*	N0 P2–3	6–10

Remarks

Arctic regions. Plentiful yellow pollen is collected during the morning. Bees dust themselves with pollen by rolling between the stamens, after which the pollen is gathered from their bodies in hovering flight. Where this species and ***P. rhoeas** are grown together, two-toned pellets may result, with a dark and a light colour.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***P. rhoeas**	Field poppy Corn poppy Shirley poppy *Gewone papawer*	N0 P2–4	8–10

Remarks

Europe. The garden cultivars are called Shirley poppies, which appear in red, pink, white and bi-colours. Although honeybees are colour blind to red, the red petals of poppies strongly reflect UV light, which attracts the bees. Escaped red-flowering poppies occur as weeds in Cape wheat fields. Pollen loads are dark green to dark grey on dark stamens, but beige to orange on light-coloured stamens. Poppy pollen is 'biologically highly effective' for honeybees with its 25.7% crude protein (Maurizio & Grafl 1980).

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Penstemon spectabilis** (SCROPHULARIACEAE)	Penstemon	N2–3 P0–2	12–5

Remarks

Mexico, California. Bell-shaped flowers usually on one side of the flowering stem. They are available in shades of blue, red or white as well as bi-coloured. Biennial if cut back after first flowering. Pellets white to light grey.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Phlox drummondii** (POLEMONIACEAE)	Annual phlox *Floksie*	N1–2 P0–1	1–12

Remarks

Texas. Long-flowering annual in shades of red, pink, mauve and white. Yellow pollen available inside the narrow flower tube. Generally better flowering in cooler regions.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Portulaca grandiflora** (PORTULACACEAE)	Moss rose Portulac	N0–1? P2–3	11–4

Remarks

Brazil, Uruguay. Single forms in bright sunshine are valuable to bees. Double cultivars that somewhat resemble small roses, are of little value to bees. Nectar source needs confirmation. Pellets deep orange to reddish-brown. On the North Coast of KZN an ornamental **P. grandiflora** × **oleracea** cross, with dark orange pollen, had a P4 value.

Botanical Name	Common Name	Beeplant Value	Flowering Time
P. quadrifida	Dwarf purslane *Rooi porselein* *Dwerg porselein*	N0–1 P0–2	11–4

Remarks

Widespread in summer rainfall regions, but mainly northern provinces. Succulent prostrate annual of disturbed areas. Growth and flowering depends on the amount and time of rain. Small flowers yellow to red. Pellets orange. Generally not very attractive to honeybees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Primula malacoides** (PRIMULACEAE)	Fairy primula *Feëtjie primula* *Sleutelblom*	N0–2 P0–1	7–10

Remarks

China. A perennial that is grown as a spring-flowering annual. Floriferous and self-seeding. Flower colours in white, pink and magenta. Visited in warm sunshine, but rarely. Pollen dirty pale yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Reseda odorata** (RESEDACEAE)	Common mignonette	N3 P2	11–3

Remarks

North Africa. Tiny lemon-coloured flowers with orange stamens, on an upright inflorescence. Colour of pellets terracotta. Formerly a garden favourite with its spicy scent, now rare.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Rudbeckia hirta** (ASTERACEAE)	Cone flower *Kegelblom*	N1–2 P1–2	12–5

Remarks

North America. Popular biennial garden flower with its intense colours of yellow, orange and maroon. The central florets form a dark reddish-brown cone. Nectar and pollen very bitter. Pellets yellow to orange. **Rudbeckia laciniata** has the same beeplant value.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Senecio arenarius (ASTERACEAE)	*Hongerblom*	N1? P3?	7–10 (8–9)

Remarks

Southern Namibia to western Karoo to De Hoop. Common annual on sandy flats. Sticky glandular leaves. Pinkish-purple ray florets tend to point downward. Pellets orange.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***S. bicolor** (= *S. cruentus*) [unresolved names]	Cineraria hybrids Florist's cineraria	N2 P3	8–12

Remarks

Canary Islands. Multi-coloured, multi-purpose annuals. May flower beyond the given time, depending on sowing dates. Pollen pale yellow to light orange-brown.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. chrysocoma		N2? P2?	9–1

Remarks

Riversdale to KZN. Slender biennial; pioneer in disturbed grassland. Very long narrow leaves. Ray florets cream-coloured.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. elegans	Wild cineraria *Strandblom*	N P	7–3 (9–11)

Remarks

WC to EC coastal flats. Erect hairy annual with pinkish to purple flowers. Successful garden introduction.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. polyanthemoides		N2? P3?	1–12 (10–12)

Remarks

EC, KZN, SZ, MP, LIM. Large, bushy, annual herb. Coast to escarpment. Usually on forest margins, but takes advantage of disturbed soils along roads and fields. Light orange pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Silene coeli-rosa** (Caryophyllaceae)	Rose-of-heaven	N0–2 P0–1?	10–2

Remarks

Mediterranean. Free-flowering summer annual or short-lived perennial. The flowers have five notched petals that are coloured in shades of pink and lavender.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Tagetes erecta**	African marigold *Afrikaner*	N0–2 P0–2	9–5
T. patula* (= **T. erecta) (Asteraceae)	French marigold		

Remarks

Mexico to Costa Rica. Widely-cultivated ornamentals with aromatic foliage and vividly-coloured flower heads. They are hardy and long-flowering. Double cultivars are of little or no value to bees. Pollen pellets in shades of orange. Note inappropriate common names.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Tropaeolum majus** (Tropaeolaceae)	Nasturtium *Kappertjies*	N0–2 P1–2	1–12 (10–3)

Remarks

Brazil, Peru. Spurred flowers in shades of yellow to deep red. Single cultivars are better for bees. The nectar is secreted and collected in the spur. Pollen light brownish-orange. Naturalised in many localities in S. Africa.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Ursinia anthemoides (Asteraceae)	Ringed ursinia *Gruis magriet*	N0–1 P0–1	7–12 (8–9)

Remarks

S. Namibia to Port Elizabeth. Erect annual in sandy and gravelly areas. The long, narrow petals are usually white to cream-coloured, but sometimes light yellow. The bases of the petals have a distinct yellow colour, which forms a ring around the flower disc. Bee activity around midday in warm, sunny weather.

Botanical Name	Common Name	Beeplant Value	Flowering Time
U. cakilefolia	Glossy-eyed daisy Calvinia ursinia *Glansoog gousblom*	N0–1 P0–1	7–10

Remarks

Namaqualand and western Karoo. Annual herb of sandy locations. Leaves finely double-divided. Yellow to orange daisies, with a dark shiny centre before the disc florets open. No bees forage at temperatures of 17°C and lower. Foraging ceases around 16:00.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Viola tricolor** (Violaceae)	Pansy *Gesiggie*	N0–1 P0–1	5–10

Remarks

Europe. Annual, biennial and perennial varieties are available in different colours. **Viola** species have a spur on the lower petal, from which bees collect nectar. The length of the nectar spur is variable, therefore some cultivars are not suitable for bees. Pollen is very rarely gathered.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Zinnia angustifolia** (= *Z. linearis*)	Dwarf zinnia	N0–2 P0–3	11–5
***Z. elegans** (Asteraceae)	Common zinnia *Jakobregop*		

Remarks

Mexico. Flower heads in different colours, with single and double cultivars. The latter are of little value to bees. Bees force their heads into the florets to reach the nectar when its secretion is weak. The dwarf zinnia has light orange, single flowers, and the pollen pellets are yellow. Staggered planting extends flowering time. No bees have yet been observed on the flowers of ***Z. peruviana**, the red-star zinnia, an escape that has become widely established in the eastern half of South Africa.





Alyssum maritimum. Honey flowers get their name from the marked honey scent released by the many small flowers.



Anchusa capensis. Forget-me-nots are placed in the genera **Anchusa** and **Myosotis**, both of which have representatives in Europe and the Cape.



Arctotis venusta. Free State daisies are prized as garden ornamentals. They have also taken advantage of ploughed fields, becoming minor weeds.



Dimorphotheca spp. White and orange Namaqualand daisies growing together.



Dorotheanthus bellidiformis. The *bokbaaivygie* is a colourful annual mesemb, which has found favour with gardeners.



Grielum sp. The annual satin flowers are only found in the Western Cape, Northern Cape, Namibia and Botswana.



Helianthus debilis. For the gardener and for honeybees the long-flowering cucumber-leaf sunflower is a distinct asset.



Helichrysum argyrosphaerum. The dwarf everlasting may become a weed in disturbed sandy soils.



Heliophila sp. The many different species of blue cross have four bluish petals, to which the common name refers.



Lavatera sp. The common mallow is a garden ornamental in temperate regions around the world.



Limeum viscosum. This sticky plant impedes the movement of foraging bees.



Lobelia erinus. Different colour forms of the garden lobelia have been developed from the original blue colour.



Nemesia sp. In general, the nemesia species are sources of food for honeybees, but very little is known about the flower/bee relationships.



Portulaca grandiflora. The long-flowering moss rose or portulac is a profitable source of pollen for bees.



Senecio polyanthemoides. One of many indigenous senecios that play an important supportive role for wild honeybee colonies.



Tropaeolum majus. Nasturtiums have retained their popularity as annual garden plants, from which honeybees benefit.



Zinnia elegans. Over many decades the common zinnia has remained a favourite cut flower and garden ornamental.

9. Grasses

Grasses of the plant family Poaceae (formerly Gramineae) include the crop plants millet, sorghum and maize. They are annuals or perennials, flowering during summer and autumn, some 3–5 weeks after good rains. Grasses provide bees with pollen and very rarely with extrafloral leaf nectar. Occasionally honeydew is also collected from aphids. The ergot fungus that infects grass inflorescences secretes a sweet substance that bees may collect at times. Pollen is gathered by bees during the morning, usually when air humidity is higher and even when dew is still present.

Grass florets are borne on a relatively long flowering stem or culm. There are three main types of grass inflorescences. When the florets or spikelets, as they are called, are borne directly on an unbranched culm or axis, like a bottlebrush, they form a **spike**. If the spikelets are carried on finger-like branches on the culm, the inflorescence is a **raceme**. If the inflorescence is compoundly branched, i.e. divided several times, it is called a **panicle**. Honeybees prefer to collect pollen on firm spikes and racemes.

Pollen pellets are mostly light yellow, but also whitish or light biscuit-coloured, with a relatively high crude protein content of 17–20 per cent. Bees may incorporate anthers and filaments into the pellets. Although grasses are considered to be wind-pollinated, it is highly likely that honeybees contribute to an as yet unknown degree in the pollination of some species.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Andropogon gayanus	Rhodesian bluegrass *Blougras*	N0 EN0–1 P0–2	12–6 (12–2)?

Remarks

Woodland of NAM, BOT, ZIM, eastern S. Africa. Tufted perennial. Panicle with spikelet branches in pairs. Extrafloral nectar secretion on leaf sheath. Pollen light yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Anthephora pubescens	Common wool grass *Gewone borseltjiegras*	N0 P0–3	12–4

Remarks

NAM, BOT, ZIM, northwestern S. Africa. Tufted perennial of sandy savanna; also established pastures with high food value. Inflorescence: light-coloured, hairy spike on a long culm.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Brachiaria brizantha	Common signal grass *Gewone sinjaalgras* *Brood sinjaalgras*	N0 P1–3	10–5

Remarks

From KZN to LIM to NC. Tufted perennial of undisturbed veld, especially under bushveld trees. Raceme with few, alternate spikelet branches on an upright culm. Leaf margins slightly thickened and purplish. Afrikaans name probably refers to bee bread.

Botanical Name	Common Name	Beeplant Value	Flowering Time
B. eruciformis	Sweet signal grass *Litjies sinjaalgras*	N0 P2	11–5

Remarks

Eastern half of S. Africa, ZIM, BOT, NAM. Annual, with culms erect or decumbent where they root at the nodes. Few thin fingers on an upright culm. Moist places on disturbed soils, where it may be common. Pollen light yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
B. marlothii	Creeping grass *Kruipgras*	N0 P0–3	12–5 (3–4)

Remarks

FS, NC, BOT, NAM. Usually an annual; decumbent, with stolons. Frequent on disturbed, sandy soils. A few spikelet fingers on an erect culm. Long hairs on lower leaf margin. Cream-coloured pollen.

Botanical Name	Common Name	Beeplant Value	Flowering Time
B. nigropedata	Spotted signal grass Black-footed signal grass *Swartvoetjiegras*	N0 P0–3	11–4

Remarks

NAM, BOT, ZIM, northwestern S. Africa. Densely tufted perennial, usually in sandy soil of stony slopes. Raceme, with spikelet fingers attached to the culm at irregular intervals. Each spikelet or floret typically with a black stalk.

Botanical Name	Common Name	Beeplant Value	Flowering Time
B. serrata	Velvet signal grass *Fluweel sinjaalgras* *Rooi sinjaalgras*	N0 P0–2	10–5

Remarks

SC to EC and northwards to ZIM, BOT, NAM. Tufted perennial with alternate fingers on the culm, which may be hairy. A variable species, particularly leaves and culms. Spikelets with dense, silky, white to purple hairs.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Chloris gayana	Rhodes grass *Rhodesgras*	N0 P0–1?	11–5 (3–5)?

Remarks

Occurs widely in eastern S. Africa and in northern BOT on well-drained soils; prefers moist sites. Up to 20 thin, brownish spikelet fingers radiating from the top of the culm. Excellent grazing and hay crop. Introduced to the southwestern Cape by Rhodes.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Cortaderia selloana**	Pampas grass *Pampasgras*	N0 P0–2	1–5 (3)

Remarks

S. America. Large, robust, dioecious, tussock grass. Farm gardens. Invasive, particularly in SC and southwestern Cape. Inflorescence very light yellow, pink or mauve in female plants and silvery-white in male plants. Pellets light yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Cynodon dactylon	Common quick grass Couch grass *Gewone kweek*	N0 EN0–1 HD P1–3	9–5 (12–2)?

Remarks

Southern Africa. Perennial, mat-forming grass with creeping rhizomes and stolons. Good pasture, but weed in cultivated fields. Pollen light yellow to cream-coloured. Crude protein 20.4%. One early morning observation: bees sucking sweet leaf exudate, i.e. extrafloral nectar. Bees were also noticed to collect honeydew from the grass mealybug, *Antonina graminis*.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Dactyloctenium australe	LM grass	N0 P0–2?	1–5

Remarks

Eastern subtropical regions, where it is a popular low-growing lawn grass. Stoloniferous creeping grass with a raceme consisting of two or three spikelet fingers on the end of the culm. Good stock forage.

Botanical Name	Common Name	Beeplant Value	Flowering Time
D. geminatum	Sign grass *Wysergras*	N0 P0–3?	12–3

Remarks

Lowveld sandy soils, often in brackish conditions. Similar to the previous species, but larger and more robust. Biscuit-coloured pollen pellets.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Digitaria eriantha (= *D. smutsii*)	Smuts finger grass *Smuts vingergras*	N0 P0–3?	1–4

Remarks

Southern Africa. Discovered by Gen. Smuts at Irene in 1924. Tufted perennial of savanna and grassland or established pastures; valuable forage. Inflorescence is a slender, digitate (hand-shaped) raceme. Major bee activity observed once.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Diheteropogon amplectens	Broad-leaved bluestem *Breëblaar blougras*	N0 P0–1	11–4 (1–3)

Remarks

NW to KZN. Open bushveld and grassland, often on stony slopes. Tufted perennial with two upright 'fingers' on the top of the culm. Greyish-blue leaves. Pollen light yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Echinochloa haploclada	Riverbed grass	N0 P3	3–4

Remarks

LIM, G, MP, SZ. Tufted and rhizomatous perennial. In dry river beds and on stream banks in grasslands and open bushveld. Inflorescence a spike-like raceme, i.e. many upright 'fingers' close together.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Eleusine coracana (= *E. indica* subsp. *africana*)	African finger millet Goose grass *Osgras*	N0 P0–2?	10–5 (12–2)?

Remarks

NAM, ZIM, eastern S. Africa; also coastal WC and SC. Tufted low-growing annual. Weed of cultivation. Very strong roots, difficult to remove. Inflorescence: semi-digitate raceme. Pollen light yellow. Seeds are a famine food. Cultivated forms in East Africa and India.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Elionurus muticus	Wire grass *Kopergras*	N0 P0–3	9–5

Remarks

Eastern half of S. Africa. Densely tufted perennial with 1 m high culms, ending in a single upright spike. Old spikes are white and typically bent in sickle shape. Open grassland, especially sourveld. Indicator of poor veld management.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Eragrostis superba	Sawtooth love grass *Weeluisgras*	N0 P0–2?	8–5

Remarks

NAM, BOT, ZIM, LIM, NW, FS, MP, SZ, KZN. Tufted, hardy perennial with culms up to 1 m high. Usually in disturbed sandy to stony soils of grassland and savanna. Inflorescence: a contracted panicle. Diagnostic: spikelets are ± heart-shaped, flattened and toothed.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Eriochloa meyeriana	Harpoon grass	N0 P0–1	10–5

Remarks

Lowveld of LIM to KZN. Tufted perennial with very long culms that can root at the nodes below. Contracted panicle that appears spike-like (harpoon-shaped) when young. Usually on moist, heavy soils.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Eulalia aurea (= *E. geniculata*)	Golden velvet grass *Goue fluweelgras*	N0 P0–1	12–3

Remarks

A rare grass of central LIM; also northern BOT. A creeping, rhizomatous perennial with culms up to 1 m high. Floodplains and river banks. Inflorescence a digitate raceme, with thin 'fingers' covered in golden-brown hairs.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Eustachys paspaloides	Fan grass *Bruin hoenderspoor*	N0 P0–2	12–4

Remarks

Eastern half of S. Africa; also SC? Rhizomatous and tufted perennial. Raceme with golden-brown 'fingers' in fan- or hand-shaped plume. Sandy and stony grasslands.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Heteropogon contortus	Spear grass *Assegaaigras*	N0 P0–1	10–6

Remarks

NAM, BOT, ZIM, eastern half of S. Africa, SC. Tufted hardy perennial. Rocky places with well-drained soils in grassland and bushveld. 'Seeds' have a very hard, sharp barb on one end, which can penetrate the skin of stock. The other end has a long, brown, bristly awn. These awns typically intertwine (contort).

Botanical Name	Common Name	Beeplant Value	Flowering Time
Hyparrhenia spp.	Thatch grass *Tamboekie* *Dekgras*		
H. dregeana	Hairy blue thatch *Blou dekgras*	N0 P0–1	11–5
H. filipendula	Fine thatch grass *Fyn dekgras*	N0 P0–2?	11–4
H. hirta	Common thatch *Gewone dekgras*	N0 P0–1	9–3

Remarks

Eastern S. Africa, except **H. hirta**, which is widely distributed in southern Africa. Thatch grasses are rhizomatous, strongly tufted perennials, 1–3 m high. In open bushveld and grassland. Commonly found along roads. Their golden-coloured inflorescences catch the eye. The inflorescence is a panicle, of which each branchlet ends in two limbs carrying the spikelets or flowers. The closely related **Hyperthelia dissoluta**, or yellow thatch grass, is also a source of pollen for honeybees. One record of an ergot fungus on the inflorescence of **H. filipendula**. Its sweet secretion was collected by honeybees.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Panicum deustum	Broadleaf panicum *Breëblaar buffelsgras*	N0 P3?	9–4

Remarks

Eastern S. Africa in wooded bushveld and coastal forests. Tufted perennial with culms reaching 2 m high. Leaf blade up to 40 mm wide. Inflorescence a panicle that superficially looks like a raceme, but closer inspection will show that the apparent 'fingers' have small side-branches.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Paspalum spp.	Paspalum grass	P, HD	
* **P. dilatatum**	Common paspalum *Gewone paspalum*	N0 P1?	11–2
P. distichum	Couch paspalum *Kweek paspalum* *Bankrotkweek*	N0 P0–3	11–5
* **P. notatum**	Bahia grass *Bahiagras*	N0 P0–4	12–4

Remarks

Eastern half of S. Africa, and southwestern Cape. The two exotics are from S. America, and have become naturalised. **Paspalum distichum** and **P. notatum** are moisture-loving and mat-forming perennials. **Paspalum dilatatum** is a perennial that forms loose tufts. Inflorescence is a raceme with two 'fingers' at the tip of the culm or with 3–8 hanging fingers in **P. dilatatum**. Pellet colour is light to mid-yellow to light biscuit. Dark brown to blackish anther parts are incorporated into the pollen loads. Bees have been observed to collect honeydew from fungal ergot on a **Paspalum** species.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***Pennisetum clandestinum**	Kikuyu grass *Kikoejoe gras*	N0 P0–2	1–12 (10–4)

Remarks

Tropical East Africa. Commonly used for lawns, sports fields, forage, erosion stabilisation. Invasive in southwestern to EC; also G, MP and KZN. Flowering in short grass: mown or grazed. Long silvery stamens. Beige pellets collected in flight.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Schmidtia kalahariensis	Sour grass *Suurgras*	N0 P1–3	1–12 (1–5)

Remarks

NAM, BOT, NC. Tufted annual of disturbed, dry, sandy soils. Inflorescence a dense panicle that looks like a spike. The plant is covered in a sticky, acidic secretion during flowering, protecting itself from grazing animals. Brood stimulation recorded during May in Namibia.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Setaria incrassata	Vlei bristle grass *Vlei mannagras*	N0 P0–2	10–5

Remarks

NAM, northern provinces, FS, EC, KZN. Rhizomatous, tufted perennial, up to 2 m high. Mostly clay soils of moist areas. Single spike per culm, i.e. a bristle or thin bottlebrush.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. sphacelata	Common bristle grass *Gewone mannagras*	N0 P0–3	9–6 (12–4)

Remarks

Northern NAM and BOT; LIM, G, MP, KZN, EC. Tufted perennial with short rhizomes; culms to 1 m high. Various habitats, usually well-drained soils. Good natural and planted grazing. Inflorescence a single bristle. Strong bee activity has also been recorded on ***S. italica**, the foxtail millet or *boermanna*. It has a restricted cultivation for bird seed.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. verticillata	Burr bristle grass *Klitsgras*	N0 P0	12–4

Remarks

WC, EC, Karoo, FS, northern provinces, ZIM, BOT, NAM. Tufted annual with a spike inflorescence. Long bristles are finely barbed. Mostly in disturbed soil under trees in bushveld. When in flower in front of hives, the inflorescences entangle drones and bee pirates, but worker bees have not yet been seen in these traps.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Sorghum bicolor subsp. **arundinaceum** (= *S. verticilliflorum*)	Common wild sorghum *Gewone wilde sorghum*	N0 P0–3?	1–6

Remarks

NAM, BOT, ZIM, northern provinces, KZN. Weed of moist disturbed places such as alongside fields and irrigation channels. Annual or short-lived perennial without rhizomes and with several thin, upright culms, up to 2.5 m high. Inflorescence an open panicle, of which the branches are arranged in whorls around the main axis. The closely related **S. bicolor** subsp. **drummondii** (= *S. sudanense*), called Sudan grass or wild grain sorghum, is a much less common weed from LIM to the northern FS. There are two records of it being an important pollen source.

Botanical Name	Common Name	Beeplant Value	Flowering Time
***S. halepense** (= *S. almum*)	Johnson grass Columbus grass	N0 P2?	11–5

Remarks

Mediterranean to India. Troublesome weed in cultivated fields, grasslands and riverbanks in the eastern half of S. Africa. A 2.5 m high perennial, with extensive rhizomes. Superficially it strongly resembles the common wild sorghum.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Sporobolus fimbriatus	Bushveld dropseed *Bosveld fynsaadgras*	N0 P2?	12–5

Remarks

Southern Africa, except the western winter rainfall region. Perennial, densely tufted, rhizomatous grass, up to 1.6 m high. Usually found in moist sites along rivers or under trees, often in disturbed places. Inflorescence an open to semi-contracted panicle with numerous small spikelets or flowers. Pellets light yellow.

Botanical Name	Common Name	Beeplant Value	Flowering Time
S. pyramidalis	Cat's tail dropseed *Katstert fynsaadgras*	N0 P2?	11–5

Remarks

EC, KZN, SZ, northern provinces, ZIM, BOT, NAM. Generally found in disturbed places. It is an indicator of poor veld management and overgrazing. A weed in some established pastures. Densely tufted perennial with culms up to 1.2 m high. The panicle is long and pointed, i.e. narrowly pyramidal.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Stenotaphrum secundatum	Coastal buffalo grass *Strand buffelsgras*	N0 P0–2?	10–5

Remarks

WC to KZN, SZ, NAM. A coastal species, usually near fresh water or sea water. Creeping perennial with stolons. Inflorescence a spike, with florets or spikelets on one side of the short culm only. Used for grazing and coarse lawns.

Botanical Name	Common Name	Beeplant Value	Flowering Time
Urochloa brachyura	Signal grass *Sinjaalgras*	N0 P1–3	10–4 (12–3)
U. mosambicensis	Bushveld signal grass *Bosveld beesgras*	N0 P1–3	10–5 (12–4)
U. panicoides	Garden signal grass *Tuin beesgras*	N0 P0–3	10–5

Remarks

NAM, BOT, ZIM, northeastern S. Africa. Tufted annuals or perennials, upright to spreading, rooting at lower nodes. Common on disturbed soils. Leaf blades are hairy, and relatively short and wide. Palatable grazing. Inflorescence a raceme with semi-erect, spaced 'fingers'. Sweet extrafloral leaf nectar at times: no foraging bees observed yet. Pollen pellets are light yellow and may contain anthers. The name signal grass is applied to both **Brachiaria** and **Urochloa** species. It refers to the raceme that reminds one of a person with handheld signals.



Grass Inflorescence Types

Spike



Elionurus muticus



Setaria sphacelata

Raceme

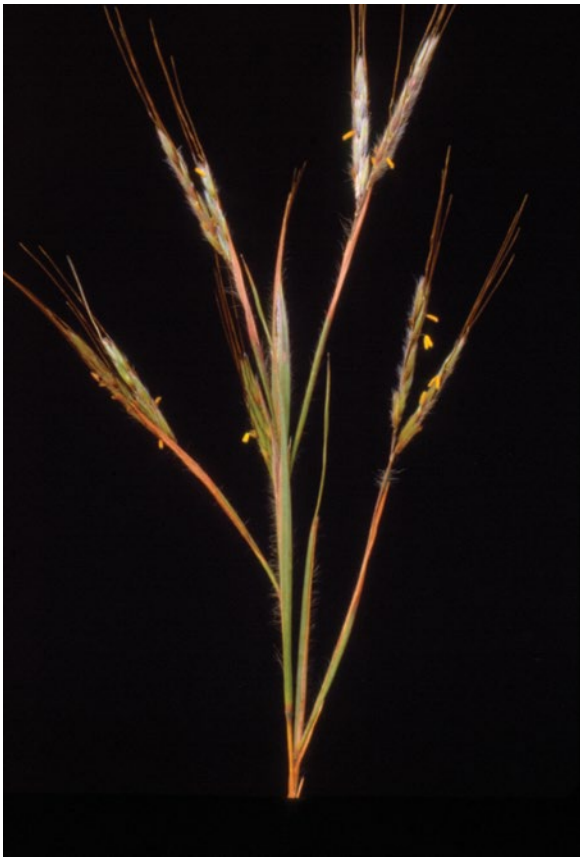


Brachiaria nigropedata



Paspalum dilatatum

Panicle



Hyparrhenia hirta



Sorghum bicolor subsp. **arundinaceum**



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General beeplant literature and aids to identification

ANONYMOUS. 2015. *Bees & Gums. A roadmap for landowners in South Africa*. South African National Biodiversity Institute and Department of Environmental Affairs, Pretoria.

BEAN, A. & JOHNS, A. 2005. *Stellenbosch to Hermanus. South African Wild Flower Guide* 5. Botanical Society of South Africa, Kirstenbosch, Cape Town.

BOHNEN, P. 1986. *Flowering plants of the southern Cape*. Still Bay Trust, Still Bay.

BOTHA, C. 2001. *Common weeds of crops and gardens in southern Africa / Algemene onkruide in gewasse en tuine in suidelike Afrika*. Grain Crops Institute, Agricultural Research Council, Potchefstroom, with Syngenta, Halfway House, Gauteng.

BROMILOV, C. 2010. *Problem plants and alien weeds of South Africa*. Briza Publications, Pretoria.

CLEMSON, A. 1985. *Honey and pollen flora*. Department of Agriculture of New South Wales, Sydney.

DUNCAN, G. 2010. *Grow bulbs. A guide to the cultivation and propagation of bulbs of South Africa and neighbouring countries*. South African National Biodiversity Institute, Kirstenbosch, Cape Town.

ETHERINGTON, K., FOULIS, L., JACKSON, H., PAGE, S. & TAYLOR, M.-L. (Eds). 1996. *Kristo Pienaar introduces the ultimate book of trees & shrubs for southern African gardeners*. Southern Book Publishers, Halfway House, Gauteng.

FABIAN, A. & GERMISHUIZEN, G. 1997. *Wild flowers of northern South Africa*. Fernwood Press, Cape Town.

GERMISHUIZEN, G. & CLARK, B. 2003. *Illustrated guide to the wildflowers of northern South Africa*. Briza Publications, Pretoria.

JOFFE, P. 2001. *Creative gardening with indigenous plants. A South African guide*. Briza Publications, Pretoria.

JOHANNSMEIER, M.F. (Ed.). 2001. *Beekeeping in South Africa*. Plant Protection Research Institute Handbook No. 14, Agricultural Research Council, Pretoria.

KIRK, W.D.J. & HOWES, F.N. 2012. *Plants for bees. A guide to the plants that benefit the bees of the British Isles*. International Bee Research Association, Cardiff.

KIRSTEN, K. 2008. *Gardening with Keith Kirsten.* Struik Lifestyle, Cape Town.

LEECH, M. 2012. *Bee friendly. A planting guide for European honeybees and Australian pollinators*. Rural Industries Research and Development Corporation, Kingston, Australian Capital Territory. [Website: www.rirdc.gov.au. Accessed: July 2013].

LE ROUX, A. & WAHL, Z. 2005. *Namaqualand. South African Wild Flower Guide* 1. Botanical Society of South Africa, Kirstenbosch, Cape Town.

LE ROUX, P.M., KOTZE, C.D., NEL, G.P. & GLEN, H.F. 1994. *Bossieveld. Weiplante van die Karoo en karooagtige gebiede / Grazing plants of the Karoo and karoo-like areas*. Bulletin 428, Department of Agriculture, Pretoria.

MANNING, J. 2009. *Field guide to the wildflowers of South Africa, Lesotho and Swaziland*. Struik Nature, Cape Town.

MANNING, J., BATTEN, A. & BOKELMANN, H. 2001. *Eastern Cape. South African Wild Flower Guide* 11. Botanical Society of South Africa, Kirstenbosch, Cape Town.

MANNING, J. & GOLDBLATT, P. 2002. *Nieuwoudtville, Bokkeveld Plateau & Hantam. South African Wild Flower Guide* 9. Botanical Society of South Africa, Kirstenbosch, Cape Town.

MANNING, J. & GOLDBLATT, P. 2007. *West Coast. South African Wild Flower Guide* 7. Botanical Society of South Africa, Kirstenbosch, Cape Town.

MANNING, J., GOLDBLATT, P. & SNIJMAN, D. 2002. *The color encyclopedia of Cape bulbs*. Timber Press, Cambridge.

MORIARTY, A. 1997. *Outeniqua, Tsitsikamma & Eastern Little Karoo. South African Wild Flower Guide* 2. Botanical Society of South Africa, Kirstenbosch, Cape Town.

MUSTART, P., COWLING, R., ALBERTYN, J. & PATERSON-JONES, C. 2003. *Southern Overberg. South African Wild Flower Guide* 8. Botanical Society of South Africa, Kirstenbosch, Cape Town.

ONDERSTALL, J. 1996. *Wild flower guide: Mpumalanga & Northern Province*. South African Pulp and Paper Industry (SAPPI), Nelspruit.

PAGE, S. & WINFIELD, K. 2000. *Botanica's 100 best annuals for your garden*. Random House, Milson's Point, New South Wales.

PIENAAR, K. & SMITH, G.F. 2011. *The southern African 'What flower is that?'* Struik Lifestyle, Cape Town.

POOLEY, E. 1998. *A field guide to wild flowers: KwaZulu-Natal and the Eastern Region*. Natal Flora Publications Trust, Durban.

POYNTON, R.J. 1984. *Characteristics and uses of selected trees and shrubs cultivated in South Africa*. Directorate of Forestry, Department of Environment Affairs, Pretoria.

REBELO, T., PATERSON-JONES, C. & PAGE, N. 2001. *SASOL Proteas. A field guide to the proteas of southern Africa*. Fernwood Press, Cape Town.

ROBERTS, M. 2002. *The essential Margaret Roberts. My 100 favourite herbs*. Spearhead, Claremont, Cape Town.

ROODT, V. 1998. *Common wild flowers of the Okavango Delta. Medicinal uses and nutritional value*. Shell Oil Botswana, Gaborone.

SCHMIDT, E., LÖTTER, M. & MCCLELLAND, W. 2002. *Trees and shrubs of Mpumalanga and Kruger National Park*. Jacana, Johannesburg.

SHEARING, D. & VAN HEERDEN, K. 2008. *Karoo. South African Wild Flower Guide* 6. Botanical Society of South Africa, Kirstenbosch, Cape Town.

SHEAT, W.G. & SCHOFIELD, G. 1996. *Complete gardening in Southern Africa*. Struik Publishers, Cape Town.

SMIT, N. 1999. *Guide to the Acacias of South Africa*. Briza Publications, Pretoria.

SMITH, G. & VAN WYK, B.-E. 2008. *Guide to garden succulents*. Briza Publications, Pretoria.

SMITH, G.F., CHESSELET, P., VAN JAARSVELD, E.J., HARTMANN, H., HAMMER, S., VAN WYK, B.-E., BURGOYNE, P., KLAK, C. & KURZWEIL, H. 1998. *Mesembs of the world*. Briza Publications, Pretoria.

STEYN, M.H. 1997. *S.A. Combretum & Terminalia identification guide / identifikasiegids*. Author-published, Pietersburg.

TRINDER-SMITH, T., KIDD, M.M. & ANDERSON, F. 2006. *Wild flowers of the Table Mountain National Park. South African Wild Flower Guide* No.12. Botanical Society of South Africa, Kirstenbosch, Cape Town.

VAN BREDA, P.A.B. & BARNARD, S.A. 1991. *100 Veldplante van die Winterreënstreek / 100 Veld plants of the Winter Rainfall Region*. Bulletin 422, Department of Agricultural Development, Pretoria.

VAN DER WALT, R. 2009. *Wild flowers of the Limpopo Valley, including Mapungubwe National Park*. Author-published, Ludwigslust Game Farms, Musina.

VAN OUDTSHOORN, F. 2012. *A guide to the grasses of southern Africa*. Briza Publications, Pretoria.

VAN ROOYEN, G., STEYN, H. & DE VILLIERS, R. 1999. *Cederberg, Clanwilliam & Biedouw Valley. South African Wild Flower Guide 10*. Botanical Society of South Africa, Kirstenbosch, Cape Town.

VAN ROOYEN, N., BEZUIDENHOUT, H. & DE KOCK, E. 2001. *Flowering plants of the Kalahari dunes*. Ekotrust, Pretoria.

VAN WYK, B. & MALAN, S. 1998. *Field guide to the wild flowers of the Highveld*. Struik Nature, Cape Town.

VAN WYK, B. & VAN WYK, P. 2013. *Field guide to trees of southern Africa*. Struik Nature, Cape Town.

VAN WYK, B.-E. 2005. *Food plants of the world. Identification, culinary uses and nutritional value*. Briza Publications, Pretoria.

VAN WYK, B.-E. & SMITH, G. 1996. *Guide to the aloes of South Africa*. Briza Publications, Pretoria.



References

ACOCKS, J.P.H. 1988. *Veld types of South Africa*. Memoirs of the Botanical Society of South Africa No. 57 (3rd edition). Botanical Research Institute, Department of Agriculture & Water Supply, Pretoria.

ADDI, A., PHILLIPSON, P. & HEPBURN, H.R. 2006. Floral resources of *Apis mellifera capensis* in the fynbos biome in the Eastern Cape Province, South Africa. *African Entomology* 14(1): 153–159.

ALLSOPP, M. & CHERRY, M. 2005. An assessment of the impact on the bee and agricultural industries in the Western Cape of the clearing of certain eucalyptus species using questionnaire survey data. *South African Bee Journal* 77(1): 5–12.

ANGIOSPERM PHYLOGENY GROUP II. 2003. An update of the Angiosperm Phylogeny Group classification for the orders and families of flowering plants: APG II. *Botanical Journal of the Linnean Society* 141: 399–436.

BUCKLAND, J. 1980. *A record of the usage by bees of trees, shrubs and creepers*. Unpublished manuscript, Ewanrigg Botanical Garden, Harare.

BURGETT, D.M., STRINGER, B.A. & JOHNSTON, L.D. 1989. *Nectar and pollen plants of Oregon and the Pacific Northwest*. Honeystone Press, Blodgett, Oregon.

CLAUSS, B. 1985. Bee forage in Botswana. *Proceedings of the 3rd International Conference of Apiculture in Tropical Climates, Nairobi, 1984;* pp. 217–221.

CLAUSS, B. 1992. *Bees and beekeeping in the North-Western Province of Zambia*. IRDP/Forest Department, Lusaka.

CLEMSON, A. 1985. *Honey and pollen flora*. Department of Agriculture of New South Wales, Sydney.

COATES PALGRAVE, K. 1985. *Trees of Southern Africa*. Struik, Cape Town.

CRANE, E. (Ed.). 1976. *Honey: a comprehensive survey*. Heinemann, London.

CRANE, E., WALKER, P. & DAY, R. 1984. *Directory of important world honey sources*. International Bee Research Association, London.

DUNCAN, G.D. 2012. *The Genus* Lachenalia. Botanical Monograph Series, Royal Botanic Gardens, Kew.

EGGERS, O. & WURST-HENNING, G. 1944. *Bienenzucht – Bienenleben*. Unpublished document, Andalusia Internment Camp, Northern Cape, South Africa.

FICHTL, R. & ADI, A. 1994. *Honeybee flora of Ethiopia*. Margraf, Weikersheim, Germany.

FREE, J.B. 1993. *Insect pollination of crops*. Academic Press, London.

GARDNER, R.A.W. 2004. Current trends regarding *Eucalyptus* species for commercial use and nectar production. *South African Bee Journal* 76(2): 44–47, 51–55.

GERMISHUIZEN, G. & MEYER, N.L. (Eds). 2003. Plants of southern Africa: an annotated checklist. *Strelitzia* 14. National Botanical Institute, Pretoria.

GIBBS RUSSELL, G.E., WATSON, L., KOEKEMOER, M., SMOOK, L., BARKER, N.P., ANDERSON, H.M. & DALLWITZ, M.J. 1991. *Grasses of southern Africa*. Memoirs of the Botanical Survey of South Africa No. 58. Botanical Research Institute, Pretoria.

GLEN, H.F. 2002. *Cultivated plants of southern Africa. Names, common names, origins, literature*. Jacana, Johannesburg and National Botanical Institute, Pretoria.

GOLDBLATT, P. & BERNHARDT, P. 1999. Pollination of *Moraea* species (Iridaceae) with a staminal column. *Annals of the Missouri Botanical Garden* 86: 47–56.

GOLDBLATT, P. & MANNING, J. 2000. Cape plants. A conspectus of the Cape flora of South Africa. *Strelitzia* 9, National Botanical Institute, Pretoria.

GOLDBLATT, P. & MANNING, J. 2000. *Sparaxis* expanded. A review of a Cape genus and its biology. *Veld & Flora* 86(1): 22–25.

GOLDBLATT, P., MANNING, J.C. & BERNHARDT, P. 1998. Adaptive radiation of bee-pollinated *Gladiolus* species (Iridaceae) in Southern Africa. *Annals of the Missouri Botanical Garden* 85(3): 492–517.

HENDERSON, L. 2001. *Alien weeds and invasive plants*. Plant Protection Research Institute Handbook No. 12. Agricultural Research Council, Pretoria.

ILLGNER, P.M. 2002. *A phenological and bioclimatic analysis of honey yield in South Africa*. PhD thesis, Department of Zoology and Entomology, Rhodes University, Grahamstown.

JOHANNSMEIER, M.F. (Ed.). 2001. *Beekeeping in South Africa*. Plant Protection Research Institute Handbook No. 14. Agricultural Research Council, Pretoria.

JOHANNSMEIER, M.F. 2005. *Beeplants of the South-Western Cape. Nectar and pollen sources of honeybees*. Plant Protection Research Institute Handbook No. 17. Agricultural Research Council, Pretoria.

JOHANNSMEIER, M.F. 2007. Notes on trees as beeplants in South Africa. *South African Bee Journal* 79(2): 36–42 (Part 1); 79(3+4): 59–63 (Part 2).

JOHANNSMEIER, M.F. 2010. Using honeybee foragers to evaluate beeplants. *South African Bee Journal* 82(2): 80–89.

KLEINSCHMIDT, G.J. & KONDOS, A.C. 1976. The influence of crude protein levels on colony production. *Australasian Beekeeper* 78(2): 36–39. [Reprinted in *South African Bee Journal* 49(4): 16–19 (1977)].

KÖTTNER, M. 1991. Apis mellifera capensis *Escholtz: Bienenhaltung, Pollenfallenversuche und pollenanalytische Untersuchungen*. Diplomarbeit, Landesanstalt für Bienenkunde, Universität Hohenheim, Stuttgart.

LEECH, M. 2012. *Bee friendly. A planting guide for European honeybees and Australian pollinators*. Rural Industries Research and Development Corporation, Kingston, Australian Capital Territory. [Website: www.rirdc.gov.au. Accessed: July 2013].

LEISTNER, O.A. (Ed.). 2000. Seed plants of southern Africa: families and genera. *Strelitzia* 10. National Botanical Institute, Pretoria.

LOOCK, E.E.M. 1948. *Eucalyptus* species [and other trees] suitable for the production of honey. *Journal of the South African Forestry Association* 16: 67–71. [Reprinted in *South African Bee Journal* 55(2): 42–46 (1983)].

MAURIZIO, A. & GRAFL, I. 1980. *Das Trachtpflanzenbuch*. Ehrenwirth, München.

MCGREGOR, S.E. 1976. *Insect pollination of cultivated crops*. Agricultural Handbook No. 496. Agricultural Research Service, United States Department of Agriculture, Washington, DC.

MORTON, J.F. 1964. Honeybee plants of South Florida. *Proceedings of the Florida State Horticultural Society* 77: 415–436.

MUCINA, L. & RUTHERFORD, M.C. (Eds). 2006. The vegetation of South Africa, Lesotho and Swaziland. *Strelitzia* 19. South African National Biodiversity Institute, Pretoria.

NKAMBULE, D. 1988. [*Swaziland bee plants*]. Unpublished manuscript, Lutheran Farmers' Training Centre, Entonjeni, Swaziland.

ORDETX ROS, G.S. 1952. *Flora apicola de la America tropical*. Editorial Cientifico-Tecnica, La Habana.

PAPADOPOULO, P. 1970. *Rhodesian indigenous trees and shrubs*. (Revised and amended). Department of Conservation and Extension, Salisbury.

PAPADOPOULO, P. 1973. *Rhodesian cultivated fruit trees, ornamental trees, shrubs, crops and flowers*. (Revised and amended). Department of Conservation and Extension, Salisbury.

PELLET, F.C. 1947. *American honey plants*. Orange Judd, New York.

PHILLIPS, J.F.V. 1926. General biology of the flowers, fruits and young regeneration of the more important species of the Knysna forests. *South African Journal of Science* 23: 366–417.

PIENAAR, K. & SMITH, G.F. 2011. *The southern African 'What flower is that?'* Struik Lifestyle, Cape Town.

POOLEY, E. 1993. *The complete field guide to the trees of Natal, Zululand and Transkei*. Natal Flora Publications Trust, Durban.

POOLEY, E. 1998. *A field guide to wild flowers. KwaZulu-Natal and the Eastern Region*. Natal Flora Publications Trust, Durban.

POYNTON, R.J. 1979. *Tree planting in southern Africa. Volume 2. The eucalypts*. Department of Forestry, Pretoria.

POYNTON, R.J. 1984. *Characteristics and uses of selected trees and shrubs cultivated in South Africa*. Bulletin No. 39. Directorate of Forestry, Department of Environment Affairs, Pretoria.

RAYNER, C.J. & LANGRIDGE, D.F. 1985. Amino acids in bee-collected pollens from Australian indigenous and exotic plants. *Australian Journal of Experimental Agriculture* 25: 722–726.

REBELO, T., PATERSON-JONES, C. & PAGE, N. 2001. *SASOL Proteas. A field guide to the proteas of southern Africa*. Fernwood Press, Cape Town.

RETIEF, E. & HERMAN, P.P.J. 1997. Plants of the Northern Provinces of South Africa: keys and diagnostic characters. *Strelitzia* 6. National Botanical Institute, Pretoria.

RICCIARDELLI D'ALBORE, G. & PERSANO ODDO, L. 1981. *Flora apistica Italiana*. Instituto Sperimentale per la Zoologia Agraria, Florence.

SCHUMANN, D., KIRSTEN, G. & OLIVER, E.G.H. 1992. *Ericas of South Africa*. Fernwood Press, Cape Town.

SMITH, C.A. 1966. *Common names of South African plants*. Memoirs of the Botanical Survey of South Africa No. 35. Botanical Research Institute, Department of Agricultural Technical Services, Pretoria.

SMITH, F.G. 1957. Bee botany in East Africa. *East African Agricultural Journal* 23(2): 119–126.

SMITH, F.G. 1969. *Honey plants in Western Australia*. Bulletin No. 3618. Department of Agriculture of Western Australia, South Perth.

SMITH, G.F., CHESSELET, P., VAN JAARSVELD, E.J., HARTMANN, H., HAMMER, S., VAN WYK, B.-E., BURGOYNE, P., KLAK, C. & KURZWEIL, H. 1998. *Mesembs of the world*. Briza Publications, Pretoria.

STRUCK, M. 1997. Floral divergence and convergence in the genus *Pelargonium* (Geraniaceae) in southern Africa: ecological and evolutionary considerations. *Plant Systematics & Evolution* 208: 71–97.

TODD, F.E. & BRETHERICK, O. 1942. The composition of pollens. *Journal of Economic Entomology* 35(3): 312–317.

VAN OUDTSHOORN, F. 2012. *A guide to the grasses of southern Africa*. Briza Publications, Pretoria.

VANSELL, G.H. 1931. *Nectar and pollen plants of California*. Bulletin 517. Agricultural Experiment Station, University of California, Berkeley.

VAN WYK, B.-E. & SMITH, G. 2001. *Guide to the aloes of South Africa*. Briza Publications, Pretoria.

VOGEL, S. 1954. *Blütenbiologische Typen als Elemente der Sippengliederung, dargestellt anhand der Flora Südafrikas*. Gustav Fischer, Jena.

WALSH, R.S. 1978. *Nectar and pollen sources of New Zealand*. National Beekeepers' Association of New Zealand, Upper Hutt.



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Martin Johannsmeier is a retired entomologist of the Plant Protection Research Institute of the Agricultural Research Council. His career began in the field of chemical insect control. Fortunately, he was later transferred to the 'Government Apiary' in Pretoria, where beekeeping extension was the main line of work. Besides presenting beekeeping courses of varied nature, most of his time was spent answering telephone calls and replying to written enquiries – no computers in those days!

The emphasis later shifted from extension to beekeeping research. For Martin, this involved testing new hive materials, determining weather factors that affected honey flows, investigating honeybee pollination of different crops, managing beekeeping pests, testing supplemental feeds, surveying nectar and pollen flora, and analysing honeys for their pollen content. The study of beeplants became his main interest, and he developed a simple method to establish the nectar and pollen value of a plant using honeybee foragers. He continued with bee and flower 'watching' as one of his hobbies after retirement.

'God's works are so great, worth a lifetime of study – endless enjoyment! Splendor and beauty mark his craft.'

Psalm 111: 2–3 in 'The Message' (1996)

While the crop grower is reliant on the beekeeper for the pollination service his honeybees provide during the flowering season, the beekeeper in turn depends on variable forage resources and habitats to sustain his honeybee colonies throughout the year, and to provide him with a honey crop. This book attempts to furnish beekeepers with information on the nectar and pollen value of South African beeplants, whether indigenous or exotic, grown in orchards or plantations, or whether ornamentals or weeds. Additionally, flowering times are documented and the pollination needs of crop plants are addressed. The applicable beeplant values can assist gardeners, farmers, beekeepers or practitioners in environmental impact assessments or rehabilitation projects, in deciding which plants to utilise, conserve or grow for multi-purpose usage.

This publication contributes to the outcomes of the Global Pollination Project and the Honeybee Forage Project, both implemented by the South African National Biodiversity Institute (SANBI).

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