



Lopholaena phippsii (Compositae: Senecioneae: Othonninae), a new species from Zimbabwe, and a synopsis of the genus

D. J. Nicholas Hind

Summary. A new species of *Lopholaena* DC. (Compositae: Senecioneae: Othonninae), *Lopholaena phippsii* D.J.N.Hind, is described from Mt Binga, on the Zimbabwe-Mozambique border. The new species is illustrated, and comments provided on the etymology, distribution, altitudinal range, habitat and ecology, phenology and its proposed conservation status. A synopsis of *Lopholaena*, commonly known as FLUFF BUSH, is also provided, with a generic description, a key to species, the currently accepted names, synonymy in chronological order, classical type citations (simply a transcription from the basionym protologue), and the location of known type material and their barcodes (when available). Under each accepted name comments on distribution, altitudinal range, habitat and ecology, phenology, habit, its proposed conservation status, together with known vernacular names, appear. Lectotypification is undertaken for *Lopholaena brevipes* E.Phillips & C.A.Sm., *L. glaucescens* E.Phillips & C.A.Sm., *Othonna coriifolia* Sond., *Senecio avasimontanus* Dinter, *Senecio trianthemos* O.Hoffm., and *Senecio ussanguensis* O.Hoffm. (a re-selection). Second-step lectotypification was also carried out for *Lopholaena brickelliioides* S.Moore, *Lopholaena pauciflora* Thell., *Othonna disticha* N.E.Br., and *Senecio dolichopappus* O.Hoffm. (this is effectively a re-second-step lectotypification). A study of type material of *Senecio avasimontanus* Dinter shows that this was misplaced in *Senecio* L., *Othonna* L. (and later in *Curio* P.V.Heath), and is confirmed as conspecific with *L. cneorifolia*, as originally suggested by Merxmüller, but certainly not conspecific with *Kleinia longiflora* DC. *Curio avasimontanus* (Dinter) P.V.Heath is provided as a *synon. nov.* under *Lopholaena cneorifolia* (DC.) S.Moore. *Lopholaena alata* P.A.Duvign. is a *synon. nov.* of *L. acutifolia* R.E.Fr. *Lopholaena dolichopappa* (O.Hoffm.) S.Moore is now considered a *synon. nov.* of *L. whyteana* (Britton) E.Phillips & C.A.Sm. A nomenclator of all relevant names in *Lopholaena* is provided, together with a table showing the distribution of species. Eighteen species are now recognised in the genus.

Key Words. Asteraceae, *Curio*, *Doria*, *Hertia*, lectotypification, nomenclature, *Othonna*, *Othonnopsis*, *Senecio*.

Introduction

A few years ago, whilst still engaged full-time completing the Compositae treatment of *Flora Zambesiaca*, the author came across a collection from the Flora area of the genus *Lopholaena* DC. (Compositae: Senecioneae: Othonninae) — the FLUFF BUSH of South Africa, in reference to the often conspicuous, markedly elongated pappus setae in many species at achene maturity. This turned out to be a new species. Species in the genus have a unique appearance, not unlike some more succulent members of the tribe Senecioneae, such as in *Kleinia* Mill., *Hertia* Less., *Othonna* L., and some species of *Senecio* L. itself.

The new species described and illustrated below (see Fig. 1) is a few-branched glabrous shrub, with wingless stems bearing alternate sessile pseudopetiolate fleshy leaves (Fig. 1A), these possessing a prominent midrib and entire margins. The inflorescences are few-headed, the homogamous discoid capitula in a lax corymb, the involucre are ecalyculate, surrounded by relatively large foliaceous bracteoles (in the paratypes), and the uniseriate phyllaries appearing connate up to 2/3 their length by the scarious margins interlocking with the marginal groove of the thickened midrib portion of the adjacent

phyllary (Fig. 1C, 1D & 1E). The florets are many (20 – 25), all hermaphrodite, possess white corollas surrounding a partially exerted anther cylinder with balusterform anther collars (Fig. 1L). The style is glabrous with an enlarged base (Fig. 1M), and possesses subulate style arms that are flattened and papillose marginally above and densely long-papillose abaxially, the papillae longer at the mid-point of the style arm and shorter towards the tapering apex (Fig. 1N). The achenes are cylindrical, 10-ribbed, glabrous (Fig. 1P), with numerous, capillary barbellate pappus setae in 2 – 3-series. A total of 18 species are now recognised in the genus. The genus is an African endemic, found in the Democratic Republic of the Congo south to Namibia, Eswatini, South Africa, and east to Tanzania and Mozambique.

The proposed new species, because of its inflorescence form, shrubby habit, and the lack of any conspicuous dorsal wing or crest on the phyllaries, would fall into Phillips & Smith's '*Lopholaena* sect. *Simplices* E.Phillips & C.A.Sm., subsect. *Fruticosae* E.Phillips & C.A.Sm.' (Phillips & Smith 1933: 225), differing markedly from *L. brickelliioides* S.Moore (from sect. *Paniculatae* E.Phillips & C.A.Sm.), *L. coriifolia* (Sond.) E.Phillips

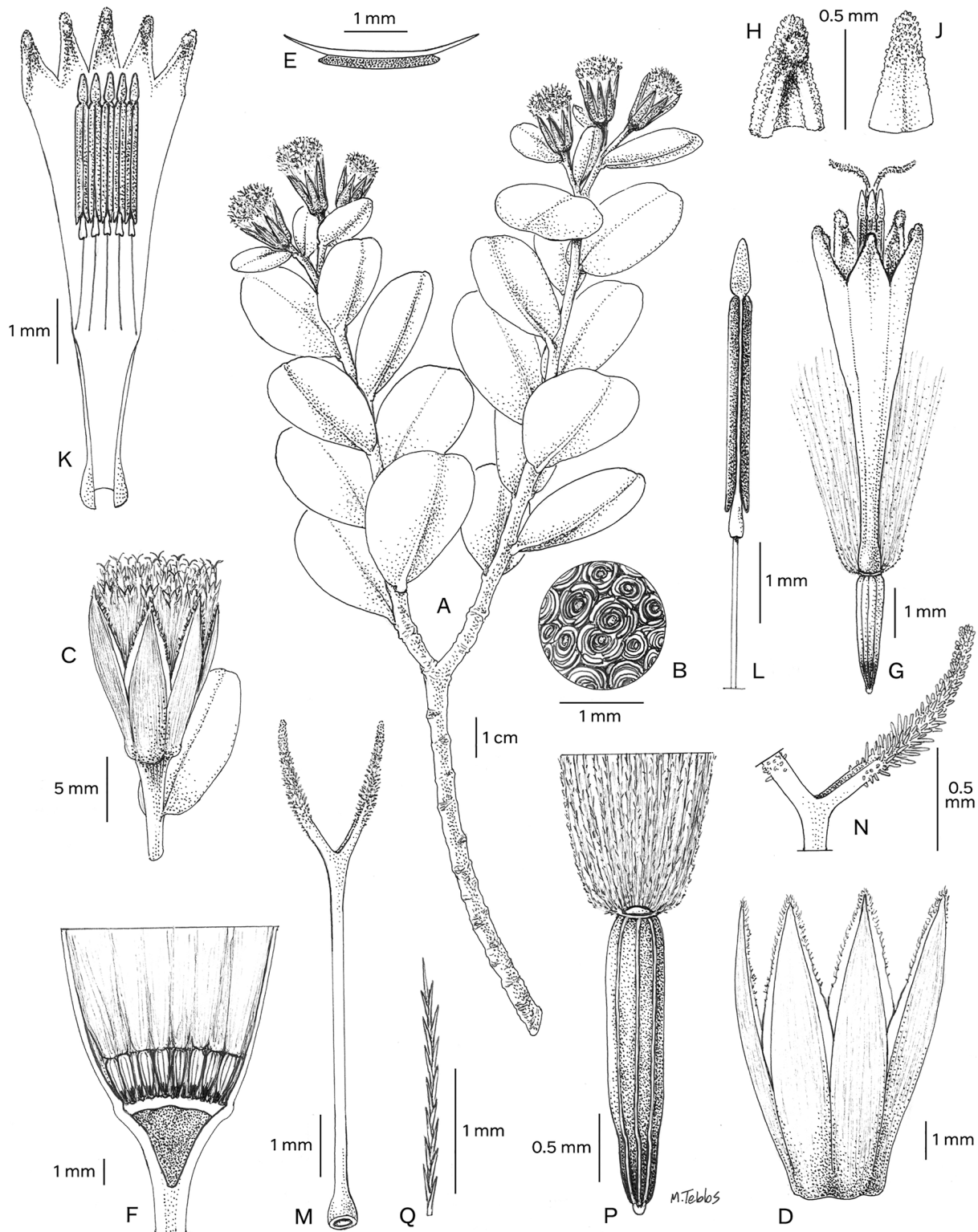


Fig. 1. *Lopholaena phippsii*. **A** habit of flowering portion of side shoot/main stem; **B** detail of lower leaf surface; **C** capitulum; **D** phyllaries, showing interlocking bases (when dry); **E** t.s. through phyllary (adaxial surface uppermost) showing broad 'keel' and edges of 'keel' that interlock with adjacent phyllary margins; **F** l.s. capitulum; **G** floret; **H** corolla lobe — adaxial surface; **J** corolla lobe — abaxial surface; **K** corolla opened out showing attachment point of anther filaments; **L** stamen; **M** style; **N** detail of style arm; **P** achene and base of pappus setae; **Q** detail of apex of pappus seta. From *Phipps* 646 (holotype, K000374763). DRAWN BY MARGARET TEBBS.

& C.A.Sm., and *L. dolichopappa* (O.Hoffm.) S.Moore (both from 'subsect. *Fruticosae*') that also occur in Zimbabwe, and are all shrubby species differing in leaf shape and inflorescence form. Unfortunately, Phillips & Smith's Sect. *Simplices* contained the generic type in what they recognised as 'subsect. *Multicaules* ser. *Platylophae*'. The infrageneric taxonomy would therefore have to be adjusted to provide the relevant type section, subsection and series, but only if infrageneric ranks were to be recognised. In the generic synopsis presented below Phillips & Smith's infrageneric concepts have not been used.

Pelser *et al.* (2007) considered that *Euryops* (Cass.) Cass. (PARIS DAISY), *Gymnodiscus* Less. (HAIR DAISY), *Hertia* (SPRINGBOKBUSH), *Lopholaena* and *Othonna* (BABOON CABBAGE, BOBBEJAANKOOL), were the core genera in the subtribe Othonninae of the tribe Senecioneae, and relationships were later maintained (Pelser *et al.* 2010). Nordenstam (2012) has since added *Crassothonna* B.Nord. (now composed of 14 species removed from *Othonna*). Whilst all the genera possess ecalyculate involucre, commonly they have heterogamous radiate, or sometimes disciform, capitula (but homogamous and discoid in *Lopholaena*), the majority have connate phyllaries, yellow corollas (rarely white, cream, pink or purplish), undivided styles (except in *Lopholaena*), style arm apices predominantly obtuse (rarely subulate in *Lopholaena*), the achene setulae (when present) are of slender twin-hairs, and the pappus setae usually capillary, barbellate and white.

In the following synoptic treatment of *Lopholaena*, under each accepted name, synonyms are provided in chronological order. For each name references are provided, and a type citation given for all basionyms. The type citation is a classical one, and is simply a transcription from the basionym protologue. The location of known types is stated (acronyms following Thiers [continuously updated]) and, when available, the barcode numbers of type material given. In instances where institutional barcodes unnecessarily start with six or more zeros the barcode number is concatenated to the remaining digits — the suggestion that institutions could ever have that number of specimens when fully digitized is somewhat excessive. Herbarium or manuscript names are also provided where they are relevant to the history of taxa concerned and have appeared in the literature. A full nomenclator of names is also provided, together with a table of distribution, by country, of accepted species (Table 1).

Description of *Lopholaena phippsii*

The description of the new species is based on leaf measurements of herbarium material, and measurements of the florets based on rehydrated herbarium material.

***Lopholaena phippsii* D.J.N.Hind, sp. nov.** Type: [Zimbabwe:] 'Melsetter. Chimanimani. Point 71. Crevices of rock pavement, at summit. Shrub 2' to 4' high. Leaves glaucous, involucre green, corolla off-white, A sepi, Quite common. 8000'. 16.3.1957. *J.B.Phipps* 646.' Holotype K(000374763); isotype: SRGH(CAS-SRGH 28776) (as image).

<http://www.ipni.org/urn:lsid:ipni.org:names:77364921-1>

Shrub, 0.6 – 1.20 m tall. *Stems* few-branched, wingless, somewhat blackened (often on one side only, most probably due to passing fires), uppermost branches (as of type material) 3 – 5 mm diam., glabrous. *Leaves* alternate, sessile/pseudopetiolate, lamina obovate, 18 – 60 mm long × 13 – 37 mm wide (*Whellan* 2101 accounts for the extreme leaf measurements over *Phipps* 646), lamina glabrous, glaucous, both surfaces with polygonal packing of sunken stomata (in herbarium material) (Fig. 1B), single-veined and lacking any visible secondary venation, midrib prominent and sometimes paler beneath (at least with some leaves in *Weiste* 9136), base pseudopetiolate/sessile and short-decurrent on stem, but stems not conspicuously winged, apex rounded or obtuse, margins entire, sometimes with a conspicuous (in herbarium material) marginal line. *Inflorescences* usually of few, terminal, loose clusters of 3 – 6 capitula, each pedicel with 2 or more leaf-like bracteoles just beneath involucre, c. 12 × 4 – 7 mm wide (and often masking the phyllaries), 1-veined; pedicels apparently increasing in length post-anthesis (see *Whellan* 2101) and continuing to branch with additional capitula produced, eventually appearing cymose. *Capitula* homogamous and discoid (Fig. 1C), 20 – 25-flowered; *involucre* broadly cylindrical to campanulate; *phyllaries* uniseriate, 7 or 8, valvate, 10 – 12 mm long × 2.5 – 4.7 mm wide (size at anthesis — any increase in size post-anthesis unknown), margins scarious and interlocking in groove of mid-portion of adjacent phyllary (see Fig. 1D, and detail of midrib in Fig. 1E), phyllary apices slightly incurved at anthesis; receptacle solid, scarcely convex, epaleaceous, glabrous (Fig. 1F). *Florets* all hermaphrodite and fertile (Fig. 1G), corollas actinomorphic, 5-lobed, 'off-white', corolla tube c. 5 mm long, 0.5 mm diam. at slightly dilated base, 0.3 mm diam. beneath limb, corolla limb c. 2 mm to base of corolla lobes, corolla lobes 5, c. 1.5 mm long × c. 0.5 mm wide at base, apices thickened (Fig. 1H); anther cylinder scarcely exerted from corolla throat, apical anther appendages narrowly triangular, apices reddish towards centre (in herbarium material), acute, basal anther appendages rounded; anther collar balusterform, filaments attached to corolla tube in lower part of upper half of corolla tube just below base of expanded portion of limb (Fig. 1K), glabrous; style shaft glabrous throughout, style base expanded into

Table 1. Distribution of species of *Lopholaena* DC.

Country	Democratic Republic of the Congo	Tanzania	Angola	Malawi	Mozambique	Zambia	Zimbabwe	Namibia	Eswatini	South Africa
Species	3	3	4	2	3	3	4	1	4	8
<i>L. acutifolia</i>	×					×				
<i>L. brickellioides</i>					×		×			
<i>L. cneorifolia</i>								×		×
<i>L. coriifolia</i>			×				×		×	×
<i>L. decurrens</i>			×							
<i>L. deltombei</i>	×									
<i>L. disticha</i>									×	×
<i>L. dregeana</i>										×
<i>L. festiva</i>										×
<i>L. glaucescens</i>			×							
<i>L. longipes</i>										×
<i>L. phippsii</i>					×		×			
<i>L. phyllodes</i>			×							
<i>L. platyphylla</i>									×	×
<i>L. segmentata</i>									×	×
<i>L. trianthema</i>	×	×		×		×				
<i>L. ussanguensis</i>		×								
<i>L. whyteana</i>		×		×	×	×	×			

@ — *Lopholaena phippsii* is highly likely to be present on both sides of the border at the type locality

basal node, glabrous (Fig. 1M), style arms eventually divergent above a scarcely dilated portion (at least in well-rehydrated material) at top of style shaft, long-papillose from just below half way along length, papillae shortening towards apex (Fig. 1N). *Achenes* cylindrical and narrowing in lowermost portion towards base, c. 4 mm long × c. 1.2 mm broad, glabrous, c. 12-ribbed, ribs rounded (Fig. 1P — showing adaxial surface); *carpopodium* inconspicuous (in immature achenes); *pappus setae* 2 – 3-seriate, c. 8 mm long (mature length unknown, but on immature achenes setae appear fragile, breaking off at apical callus of achene), off-white to pale fawn, barbellate, cells finely acute. Fig. 1.

RECOGNITION. *Lopholaena phippsii* is both unique in the genus and amongst the Zimbabwean and Mozambiquan species in that it is a glabrous shrub with broad, obovate, fleshy, sessile, single-veined glaucous leaves, has moderately large, 20 – 25-flowered capitula in terminal or in few-headed subapical clusters, an involucre of c. 7 or 8 phyllaries, and glabrous achenes. *Lopholaena phippsii* can be compared with *L. coriifolia*, also a well-branched glabrous shrub (or treelet), with obovate leaves but these do not possess decurrent bases forming any wing on the stems (rarely obscurely so in the lower leaves), venation (1 –) 3, diverging from base, capitula terminal or on abbreviated side shoots, (13 –) 16 – 20-flowered, an involucre of 5 phyllaries, and densely setuliferous achenes.

SPECIMEN EXAMINED. The species is known from the type collection and images of two other collections: [Zimbabwe:] Chimanimani Mts, 22 May [19]42, *Miss Weiste* [SRGH No. 9136] (SRGH); Melsetter, Summit of Chimanimani (Binga), 8000 feet, 25 April 1964, *J. A. Whellan* 2101 (SRGH).

DISTRIBUTION. A Chimanimani endemic. Currently only known from Mt Binga, probably co-endemic to Zimbabwe and Mozambique — see Note below for the location of ‘Point 71’.

ALTITUDINAL RANGE. c. 2436 m.

HABITAT AND ECOLOGY. In crevices of rock pavement on mountain summit.

PHENOLOGY. March – May.

ETYMOLOGY. The specific epithet *phippsii* honours the collector, James Bird Phipps (1934 –), the Canadian Botanist who collected the type material, and who worked extensively on the flora of Zimbabwe and Malawi, but also ventured into Uganda.

CONSERVATION STATUS. This species is currently only known from the type and two other collections in Zimbabwe. Whilst it is highly unlikely that there is any threat to the habitat at the summit of Mt Binga, especially because of access issues, the population size may very well be restricted, although recorded as ‘Quite common’ by Phipps, and no mention was made of colony size by Weiste or Whellan. The summit itself, on both sides of the border, falls within the Trans-Frontier Conservation

Area. The portion on the Mozambican side lies within the Parque Nacional de Chimanimani, and that within Zimbabwe lies in the Chimanimani National Park. This suggests a measure of protection, and Timberlake *et al.* (2016) indicated no specific threats. Whilst this might suggest that the status could be recorded as Least Concern, it is felt best to record it as DD (Data Deficient) until further fieldwork can be undertaken in the type locality, on both sides of the border between Zimbabwe and Mozambique, to determine the population size, potential recruitment, and any obvious potential threats to the species. It should certainly be added to the list of ‘range-restricted’ taxa associated with the Chimanimani Mountains (see Timberlake *et al.* 2016: Annex 2).

NOTE. The reference to ‘Chimanimani Point 71’ on Phipps’ label is to the ‘Border beacon number 71’, which is on Mt Binga, and lies exactly on the border between Zimbabwe and Mozambique. Mt Binga (c. 2440 m), the highest peak in Mozambique, and the second highest in Zimbabwe, is composed of a Precambrian quartzite which underlies the whole of the Chimanimani Plateau. **NOTE.** The main label was annotated as ‘*Lopholaena* sp. = G.H. 9136’, and Torre provided a det. slip indicating ‘*Lopholaena* aff. *disticha* (N.E.Br.) S.Moore — which the material clearly isn’t. It was not immediately clear what collection ‘G.H. 9136’ referred to. It refers to a Miss Weiste 9136 collection made on 22nd May 1942, but is simply localised to the ‘Chimanimani Mts’ [CAS-SRGH 28778]. There is an image of the duplicate Phipps 646 collection (showing two flowering stems and an identical label to that on the sheet in K) on the *Flora of Zimbabwe* web site (see Hyde *et al.* 2023), but the sheet is not barcoded and has a small label ‘CAS-SRGH 28776’; it is clear that the material was also seen by Torres (who appears to have considered it ‘aff. *disticha*’). The web site also indicates that the specimens in SRGH are in a folder labelled ‘*Lopholaena* sp. no. 1’. An image of Whelan 2101 [CAS-SRGH 28777], collected 25th April 1964, suggests that the inflorescence continues growing, and the capitula become notably pedicellate. Torres (May 1973) appears to have considered this material ‘aff. *platyphylla* sp. nov.’, from which it differs in leaf size, the lack of amplexicaul leaf bases, and inflorescence structure (i.e. single capitula subtended by very large leaf-like bracts). None of these other collections show any post-anthesis growth of the pappus setae, suggesting fruiting material has rarely, if ever, been seen and collected.

Synopsis of *Lopholaena* DC.

Lopholaena DC., *Prodr.* 6: 336 (de Candolle 1838). Type: *Lopholaena dregeana* DC.

Lopholaena DC. § *Platylopha* S.Moore, *J. Bot.* 67 (No. 802): 275 (1929), nom. illeg. Note: This section contains the generitype and should have been sect. *Lopholaena*. Type: *Lopholaena dregeana* DC.

Lopholaena DC. § *Pachylopha* S.Moore, *J. Bot.* 67 (No. 802): 275 (1929). Type: not specified.

Lopholaena DC. § *Alopha* S.Moore, *J. Bot.* 67 (No. 802): 275 (1929). Type: not specified.

Lopholaena DC. sect. *Paniculatae* E.Phillips & C.A.Sm., *Trans. Roy. Soc. South Africa* 21 (3): 225 (Phillips & Smith 1933). Type: not specified.

Lopholaena DC. sect. *Simplices* E.Phillips & C.A.Sm., *Trans. Roy. Soc. South Africa* 21 (3): 225 (Phillips & Smith 1933), nom. illeg. as this section includes the generitype, *L. dregeana* DC. Type: not specified.

Lopholaena DC. sect. *Simplices* subsect. *Fruticosae* E.Phillips & C.A.Sm., *Trans. Roy. Soc. South Africa* 21 (3): 225 (Phillips & Smith 1933).

Lopholaena DC. sect. *Simplices* subsect. *Multicaules* E.Phillips & C.A.Sm., *Trans. Roy. Soc. South Africa* 21 (3): 225 (Phillips & Smith 1933), nom. illeg. Type: not stated.

Lopholaena DC. sect. *Simplices* subsect. *Multicaules* E.Phillips & C.A.Sm. ser. *Platylopha* (S.Moore) E.Phillips & C.A.Sm., *Trans. Roy. Soc. South Africa* 21 (3): 226 (Phillips & Smith 1933), nom. illeg.

Lopholaena DC. sect. *Simplices* subsect. *Multicaules* E.Phillips & C.A.Sm. ser. *Alopha* (S.Moore) E.Phillips & C.A.Sm., *Trans. Roy. Soc. South Africa* 21 (3): 226 (Phillips & Smith 1933).

NOMENCLATURAL NOTE. In Phillips & Smith’s account (1933), their sect. *Simplices* subsect. *Multicaules* ser. *Platylopha* is the typical series of *Lopholaena* since it contained *L. dregeana*; their new infrageneric names were thus illegitimate as they should have taken the appropriate version of the generic epithet at each rank, i.e. sect. *Lopholaena* subsect. *Lopholaena* ser. *Lopholaena*. For the time being the author has decided not to use infrageneric ranks in dividing the genus.

Description

Shrubs, small trees, or perennial herbs with thickened, sometimes woody, rootstock. *Stems* simple or poorly-branched to well-branched, young stems green or rarely suffused red, wingless or narrowly winged from short- or long-decurrent leaf bases, glabrous or rarely pubescent, sometimes essentially glabrous but with tufts of hairs in leaf axils. *Leaves* alternate, distichous or spiralled, sessile or subsessile to distinctly petiolate, base broad-amplexicaul or decurrent, fleshy, narrow-linear to suborbicular, glabrous, or rarely pubescent, obscurely to prominently veined, venation of a single main vein or pinnate, margins entire or sometimes serrate. *Inflorescence* of solitary terminal capitula or of dense to lax corymbose panicles of few to many capitula, rachis or pedicel bracteate, capitula occasionally surrounded by upper foliage leaves or large foliaceous bracteoles rarely obscuring

involucre. *Capitula* homogamous, discoid, few- (3–7) to many- (–50) flowered; *involucre* uniseriate, ecalyculate, cylindrical, sometimes very broadly so; *phyllaries* uniseriate, few (3–10), connate at base, sometimes appearing connate to 2/3 length but margins still free and imbricate, often conspicuously elongating post-anthesis, usually abaxially keeled, very rarely with a dorsal crest or wing above midrib, margins usually scarious and interlocking with marginal groove of thickened portion above midrib of adjacent phyllaries (see Figs 1D & 1E and 3C & 3D); *receptacle* flat to slightly convex, areolate, glabrous, epaleaceous. *Florets* 3–50, hermaphrodite; *corollas* white, cream, pink or purplish, cylindrical but widening into campanulate limb, exceeding pappus at anthesis but overtopped by pappus in fruit; corolla lobes 5, deltoid, subacute, glabrous, sometimes differently coloured to throat; anther cylinder sometimes conspicuously exerted from throat, anther collar balusterform, apical anther appendages ovate to ovate-oblong, anther bases obtuse; style base enlarged, but scarcely nodal, glabrous, style shaft glabrous, filiform, style arms linear to subulate, spreading to recurved, often coiled in age, flattened and papillose marginally above, densely long-papillose abaxially, apices tapering, obtuse, apical appendages filiform

papillose, papillae longer at midpoint, noticeably shorter towards apex. *Achenes* elliptic-oblong, obscurely ribbed, glabrous or densely setuliferous, sometimes body obscured or only sinuses densely setuliferous, setulae of ‘twin-hairs’, eglandular and non-myxogenic, apices asymmetric and scarcely divided or appearing adnate, apical cells acute; carpodium inconspicuous; *pappus setae* 2–3-seriate, numerous, capillary, finely barbellate, white or straw-coloured, often elongating markedly in fruit (and reminiscent of wetted — and bent — ink brushes [= *fude*] used in Japanese calligraphy or in Chinese brush painting and calligraphy), usually persistent (but sometimes recorded as caducous, although undoubtedly fragile e.g. *L. phippsii*), apical cells acute.

A genus of 18 species, generally known as FLUFF-BUSH, but also TUFT FLOWER or PLUSBOS (Afrikaans; ≡ ‘FLUFF BUSH’) (Johannsmeier 2016: 182).

DISTRIBUTION. The genus *Lopholaena* is an Old World, entirely African, genus, found in the Democratic Republic of the Congo south to Namibia, Eswatini, South Africa, and east to Tanzania and Mozambique. The distribution of species is given in Table 1.

Key to species of *Lopholaena*

(Leaf measurements are from herbarium material, although it should be noted that the fleshy, or semi-succulent leaves of many species may shrink significantly upon drying.)

1. Inflorescences of lax panicles or of dense corymbs 2
 Inflorescences usually with solitary capitula or 2 or 3 together and subracemose (with up to 6 capitula) 5
2. Perennial herbs, suffrutices or subshrubs with annual flowering stems and a woody xylopodiaceous rootstock; stems winged; capitula 3–6-flowered 3
 Shrub or treelet; stems wingless; capitula 7-flowered 4
3. Leaves decussate, obovate-orbicular to suborbicular, leaf bases broadly amplexicaul; phyllaries 5; capitula 5- or 6-flowered 1. ***L. segmentata***
 Leaves alternate, elliptic to ±obovate, leaf bases exauriculate; phyllaries 3 or 4; florets 3 or 4 2. ***L. trianthema***
4. Leaves (at least lower) distinctly petiolate, leaf bases broadly amplexicaul; phyllaries 5; inflorescence a rounded panicle 3. ***L. brickellioides***
 Leaves bases long-attenuate to pseudopetiolate; phyllaries 3 or 4; inflorescence a dense corymb 4. ***L. festiva***
5. Capitula always associated with 2 or 3 enveloping, foliaceous bracts, these often long-decurrent on peduncle; leaves always distinctly decurrent on stem 6
 Capitula never associated with 2 or 3 enveloping bracts though sometimes with many much-reduced bract-like leaves similar to phyllaries; leaves seldom decurrent along stems 8
6. Leaves densely spiralled (on large shrubs) or alternate (on young plants) and laxly spiralled, but never in distinct rows 5. ***L. platyphylla***
 Leaves distichous 7
7. Leaves suborbicular, to 70 mm long × 90 mm wide, broadly- and long-decurrent on stem 6. ***L. decurrens***
 Leaves elliptic or oblong-elliptic, to 40 mm long × 35 mm wide, very narrowly- and short-decurrent on stem 7. ***L. disticha***
8. Phyllaries with a wide dorsal erect median wing or crest 8. ***L. dregeana***
 Phyllaries never with a prominent erect median wing or crest, although sometimes with an obsolete ridge 9
9. Leaves prominently 3–5-veined from base 10
 Leaves prominently 1-veined (never more) from base upwards 15
10. Phyllaries abaxially pubescent 11

- Phyllaries glabrous 12
11. Florets c. 10 – 13 per capitulum; leaf bases long-decurrent (usually the length of internode) 9. **L. deltombei**
- Florets c. 35 per capitulum; leaf bases short-decurrent (markedly shorter than internode) 10. **L. phyllodes**
12. Leaf bases decurrent on stem as distinct wing 13
- Leaf bases not obviously decurrent on stem and wingless 14
13. Pedicels conspicuously bracteolate, with numerous bracteoles beneath involucre; herbaceous perennial; leaves elliptical to lanceolate, apices acute, 90 – 120 mm long × 20 – 45 mm wide 11. **L. acutifolia**
- Pedicels ebracteolate; shrub; leaves broad oblong-elliptic to suborbicular, apices obtuse or rounded, to 60 mm long × to 50 mm wide 12. **L. ussanguensis**
14. Leaves elliptic, apices markedly tapering and acute, venation subparallel, eventually converging towards apex 13. **L. glaucescens**
- Leaves obovate, apices always rounded; venation diverging from base upwards 14. **L. coriifolia**
15. Pedicels usually much shorter than (rarely subequal to) subtending leaves and then lacking subulate bracteoles; capitula 4 – 8-flowered 16
- Pedicels always exceeding to much-exceeding subtending leaves, usually with 1 or 2 (or more) subulate, or much-reduced leaf-like bracteoles; capitula 20+-flowered 17
16. Capitula terminating short axillary or terminal ebracteolate (or sometimes with 1 or 2 scale-like bracteoles) pedicels; capitula 4 – 6-flowered; subshrub or perennial herb with a woody rootstock 15. **L. whyteana**
- Capitula aggregated in clusters at apices of branches pedicels with few scale-like bracteoles, rarely ebracteolate; capitula 7- or 8-flowered; erect shrub 16. **L. cneorifolia**
17. Pedicels just exceeding upper leaves (at anthesis but probably increasing in length towards fruiting stage), conspicuously bracteolate beneath involucre; well-branched shrubs; leaves short-decurrent on stem (although young stems not conspicuously winged), obovate, 18 – 60 mm long × 13 – 37 mm wide 17. **L. phippii**
- Pedicels much exceeding upper leaves, ebracteolate; well-branched dwarf shrubs (or treelet), with a single lower main stem/trunk; leaves not decurrent on stem, obovate-oblongate, to 38 mm long × 6 mm wide 18. **L. longipes**

1. *Lopholaena segmentata* (Oliv.) S.Moore (1904: 1021). *Senecio segmentatus* Oliv. (Oliver 1885: 65 – 66, Tab. 1483).

Type: [South Africa:] ‘Hab. Natal, 1,000 ft., J. M. Wood, No. 1935.’ Holotype: K(000307221 — ‘No. 1935/Yellow/Fields Hill 1000’/Feb. 1884’, with an accompanying sheet of pencilled dissections and the original pencilled plate used in the Hooker’s *Icones Plantarum* article on *Senecio segmentatus*). Note: Phillips & Smith (1933: 229) incorrectly stated that Medley Wood 704, K(000307222 — the second, totally superfluous, barcode on the sheet, provided under the API Digitisation Project, should be ignored!) was the type collection of this species; it was clearly not mentioned in the protologue, and was collected three years after the species was described. It is the following collection in their list, Wood 1935, that is the type collection.

DISTRIBUTION. Eswatini, South Africa (KwaZulu Natal, Mpumalanga).

HABITAT & ECOLOGY. Grassland.

ALTITUDINAL RANGE. 300 – 1800 m.

HABIT. Perennial herb or suffrutex with xylopodiaceous rootstock.

CONSERVATION STATUS. LC (Least Concern) — Foden & Potter (2005e), Raimondo *et al.* (2009).

PHENOLOGY. December – April.

VERNACULAR NAME. CUP-LEAVED FLUFF-BUSH (Foden & Potter 2005e).

2. *Lopholaena trianthema* (O.Hoffm.) B.L.Burt (Hilliard & Burt 1975: 85).

Senecio trianthemos O.Hoffm. (Hoffmann 1901: 437), as ‘S. (§ Kleinia) trianthemos’. Type: [Tanzania:] ‘Unyika: Umalila, auf welligem Hochplateau, um 1900 m ([Goetze] n. 1352. — Blühend am 21. Oct. 1899).’ Type material: B†, BR(6423353), E(00239833), K(000307179 — ex E), P(00111799). Lectotype (selected here): E(00239833). Note: The E duplicate has been selected as it is a markedly leafy stem apex with a large inflorescence, well-representing the species.

DISTRIBUTION. Democratic Republic of the Congo, Malawi, Tanzania, Zambia.

HABITAT & ECOLOGY. Pyrophyte in upland grassland, dry grassland, *Protea* bushland, open areas in light woodland, Miombo woodland, rocky hillsides, old cultivated areas, sandy soil.

ALTITUDINAL RANGE. 1400 – 2150 m.

HABIT. Perennial herb, suffrutex or subshrub with xylopodiaceous rootstock.

CONSERVATION STATUS. A widespread species best considered as LC (Least Concern).

PHENOLOGY. July – November.

VERNACULAR NAME. MWELAMINZI (Safwa/Kisawfa – a Bantu language) (Lovett & Kayombo 3331).

3. *Lopholaena brickellioides* S.Moore (1911: 118). Types: [Zimbabwe:] ‘Hab. In crags of the Chimanimani Mountains, 7000 ft.; Mt. Pene, 7000 ft.; in fl. Sept., Oct.; [Swynnerton] nos. 1802, 6133.’ Lectotype (first-step lectotypification by Phillips & Smith 1933: 229) as Swynnerton 1802, citing ‘Type (BM, K)’; (second-step, selected here): Chimanimani Mts, at 7000 feet. 26 Sept. 1906. Swynnerton 1802, BM(000924557); isoelectotypes: K(000307177), SRGH(0028757-0).

DISTRIBUTION. Zimbabwe and Mozambique. Endemic to the Chimanimani (Sussundenga) and Nyanga (Melsetter) Districts of the Chimanimani Mountain range on Mt Peza.

HABITAT AND ECOLOGY. Forest margins, on quartzitic soils, and amongst rocks.

ALTITUDINAL RANGE. 1565 – 2133 m.

HABIT. Small woody shrub to treelet.

CONSERVATION STATUS. Darbyshire *et al.* (2019) recorded the species as ‘NE2+3’ — with a ‘global range < 10,000 km² and ‘known from five sites or fewer’, although not providing a provisional conservation status statement for this ‘near endemic’ (NE) species in the Supplementary material 1; a global assessment is still required.

PHENOLOGY. June – October.

4. *Lopholaena festiva* Brusse (1991: 79). Type: [South Africa: Limpopo]. ‘South Africa. Transvaal. Northern Drakensberg. Legalametse Nature Reserve near Trichardsdal. Farm Cyprus 68 KT. Wolfspuit Kloof, west of Legalametse Peak, at level of major fault. Grid 2430AB. Alt. 1300 m, 30 Jul 1989. F. Brusse 5622 (PRE holotypus, AD, B, BH, BM, BOL, BR, BRI, C, CANB, E, G, GH, GRA, HBG, J, K, LD, LG, LISU, LMA, M, MO, NBG, NH, NSW, NU, P, S, SRGH, UPS, US, W, WAG, WIND, Z, isotypi).’ Holotype: PRE(0775831-0); isotypes: A(00038345), AD(99251218), B(10 0094265), BH, BM(000924545), BOL, BR(9208902), BRI-AQ(0560011), C(10000362), CANB, E, G(00022759), GH(see A), GRA, HBG, J, K(000374764), LD, LG, LISC(002779), LMA, M(0105364), MO, NBG, NH, NSW, NU(0014322-0), P, S-G-1-393, SRGH, UPS, US(00386084), W, WAG, WIND, Z(000003629). Note: The presence of isotypes in several of these herbaria cannot yet be confirmed.

DISTRIBUTION. South Africa (Limpopo).

HABITAT & ECOLOGY. Amongst rocks, or in cracks in rocks, generally on northern facing slopes, quartzite or sandstone.

ALTITUDINAL RANGE. 1100 – 1600 m.

HABIT. Shrub or treelet.

CONSERVATION STATUS. LC (Least Concern) — Kamundi & Victor (2005), Raimondo *et al.* (2009).

VERNACULAR NAME. SHINY FLUFF-BUSH (Kamundi & Victor 2005).

5. *Lopholaena platyphylla* Benth. (Bentham 1876: 12 & Plate 1113). Type: ‘Hab. South Africa; in the highlands of Natal and Zulu, ‘the leaves resembling those of a cabbage,’ Gerrard and McKen, n. 2023 (Herb. Kew from Herb. Trin. Coll. Dublin).’ Holotype: K(000307224 — ‘Compositae/ Shubby 6–8 ft./large leaves Cabbage-like/2023 High lands/Natal & Zulu’, a capsule on the sheet contains a phyllary, and three florets, and alongside the specimen are three pencilled dissections — of the anther cylinder and style, a section of pappus seta, and a floret and accompanying phyllary, just as reproduced on the Fitch lithograph in the protologue, although the apex of the style and style arms are separate from the opened out anther cylinder; isotype: ?TCD. Note: It is highly likely that although printed as ‘*McKen*’, it should be ‘*M^cKen*’ (Mark Johnston McKen 1823 – 1872). The holotype sheet has an annotated type label suggesting that this is a ‘Co-TYPE’. This is incorrect, as Bentham was quite clear about the material he examined being at K, regardless of where it had originated.

DISTRIBUTION. Eswatini, South Africa (KwaZulu Natal).

HABITAT & ECOLOGY. Gently sloping to steep grassy, stony hillsides, sometimes on *Protea* covered slopes.

ALTITUDINAL RANGE. 300 – 1200 m.

HABIT. Shrub.

CONSERVATION STATUS. LC (Least Concern) — Foden & Potter (2005d), Raimondo *et al.* (2009).

PHENOLOGY. April (in cultivation) June – October.

VERNACULAR NAME. BROAD-LEAVED FLUFF-BUSH (Foden & Potter 2005d).

6. *Lopholaena decurrens* (Hutch.) E.Phillips & C.A.Sm. (Phillips & Smith 1933: 229).

Othonna decurrens Hutch. (Hutchinson 1907: 50). Type: ‘Angola. Bailundo District, [(5000 ft.)] Benguella, Wellman [s.n.].’ Holotype: K(000307237).

DISTRIBUTION. Endemic to Angola (Huila and Namibe Provinces).

HABITAT & ECOLOGY. Scattered in open grassland, sometimes on rocky soils.

ALTITUDINAL RANGE. 1500 – 2230 m.

HABIT. Suffrutex, most probably with a xylopodiaceous rootstock.

CONSERVATION STATUS. *Lopholaena decurrens* appears to have been rarely collected since described. It is best recorded as DD (Data Deficient). Habitat photographs suggest it is locally common when found, and appears ‘resistant’ to both fire and local cattle grazing.

PHENOLOGY. February – May, and sometimes between July – September.

VERNACULAR NAME. LUBANGO FLUFF-BUSH.

7. *Lopholaena disticha* (N.E.Br.) S.Moore (1904: 1021).

Othonna disticha N.E.Br. (Brown 1895: 16). Types: [South Africa: Mpumalanga]. ‘Habitat. -South Africa: Transvaal, near Lydenburg [sic! = Lydenburg], Atherstone, Makwongwa Mountains, near Barberton, 4500 feet, April, Galpin, 902; no locality, Mrs. Saunders (Wood, 3915).’ Syntype: *Atherstone* s.n., K(000307228 — mounted with Saunders 3915). Syntype: Galpin 902, K(000307229), PRE(0205969-0, 0587075-0). Syntype: Mrs. Saunders 3915, K(000307227 — ex Herb. Woodianum, the sheet annotated as ‘Probably Barberton T’vaal’, mounted with *Atherstone* s.n.). Lectotype (second-step, selected here): Galpin 902, K(000307229); isolecotypes: PRE(0205969-0, 0587075-0). Note: Oddly, both the duplicates of Galpin 902 in PRE are databased as lectotype. C. A. Smith (April 1930) noted, on PRE(0205969-0), that ‘Three different specimens are cited by N.E.Brown in the original description of the species. (Kew Bull 1895, 16), but Galpin 902 has been labelled “Type” in herb. Kew. by Mr. N.E.Brown himself.’ This is incorrect, as Brown also annotated the sheet (with ‘Type! N. E. Brown’) with both the *Atherstone* and *Saunders*’ collections on it — beneath the *Atherstone* collection — and provided the same annotation above the label under the Galpin collection on the other sheet. However, Phillips & Smith (1933: 230), in citing the Galpin 902 collection as the type (with a footnote corresponding to the PRE sheet annotation), effectively provided first-step lectotypification.

‘*Lopholaena disticha* S.Moore (1903: 134)’ appears in IK/IPNI, as well as in Phillips & Smith (1933: 230), but it is quite clear that whilst Moore considered *Othonna disticha* would represent the fourth species in *Lopholaena*, he did not associate the specific epithet with the generic name. The correct entry was later supplied by Prain (1908), although post-dating Moore’s earlier valid combination (Moore 1904: 1021).

Lopholaena disticha (N.E.Br.) Prain (1908: 106), nom. illeg., isonym

DISTRIBUTION. Eswatini, South Africa (KwaZulu Natal, Limpopo, Mpumalanga).

HABITAT & ECOLOGY. Open, often stony grassland.

ALTITUDINAL RANGE. 550 – 1500 m.

HABIT. Suffrutex or subshrub with a xylopodiaceous rootstock.

CONSERVATION STATUS. LC (Least Concern) — von Staden (2020), Raimondo *et al.* (2009).

PHENOLOGY. March – August, but clearly flowering sporadically at other times during the year.

VERNACULAR NAME. WHITE FLUFF-BUSH (von Staden 2020).

8. *Lopholaena dregeana* DC. (de Candolle 1838: 336).

Type: [South Africa:] ‘... in Africâ australi ad Omsamculo et Omtenda [sic!] vix suprâ maris altitudinem legit cl. Drege... (v. s.).’ Note: Now known as the Umzimkulu River and Mtentu River. Holotype: G-DC(G00471437 — consisting of the fully labelled and barcoded sheet, marked as ‘2’ in pencil, taken as the holotype, and a second sheet, marked ‘1’, with minimal labelling and unbarcoded, taken as the isotype; ‘5028. Zw: Omsamculo und Omtendo R I/ Mr. Drege 1835.’); isotypes: B (according to Phillips & Smith 1933: 232)†, BM(000924548 — s.n., mounted with Dimock-Brown 511), K(000307225 — s.n., mounted with Medley-Wood 3050), P(00111787 — with a small label reading ‘*Lopholaena dregeana* DC. (Oculo/Otendo) 62./336.’; 00111788 — ‘6/532. Auf Grashöhen ___ Omsamculo u. Omtendo, unter 500’ (V. C).’; 00111789 — s.n., but with a small det. label written by de Candolle). Note: Drège (1843: 155), listed the collection locality as ‘V, c. 15’, and collected in May, towards the end of Drège’s itinerary.

DISTRIBUTION. South Africa (Eastern Cape, KwaZulu Natal).

HABITAT & ECOLOGY. Hillsides, on grassy and wooded slopes.

ALTITUDINAL RANGE. 30 – 550 m.

HABIT. Subshrub or suffrutex with a xylopodiaceous rootstock.

CONSERVATION STATUS. LC (Least Concern) – Foden & Potter (2005c), Raimondo *et al.* (2009).

PHENOLOGY. March – July (– August).

VERNACULAR NAMES. BLUBOS, BLUE FLUFF-BUSH (Foden & Potter 2005c).

NOTE. de Candolle (1838: 336) referred to the account he provided in Delessert’s *Icones selectae plantarum* (de Candolle 1840: 26, Tab. 59), clearly the latter taking some time to take to print.

NOTE. Amongst material from Natal in K, is Melville 70/305, which is clearly a specimen of *Lopholaena dregeana* DC., but Melville’s determination as ‘*Lopholaena haageana*’ (without an authority), is strange; the name is certainly unpublished and may well have been a *lapsus calamus* for ‘*dregeana*’.

9. *Lopholaena deltombei* P.A.Duvign. (Duvigneaud & Timperman 1959: 147). Type: [Democratic Republic of the Congo:] ‘Kasonta Nord, steppe à *Tristachya* sur auréole de contamination entourant le gisement

de cuivre, *DUVIGNEAUD* 3435 D, 7-VI-57 (Holotype, BRLU);...’ Holotype: BRLU(90020339); isotype: BR(8876805 — marked on the label as ‘3435 D₁’).

DISTRIBUTION. Democratic Republic of the Congo (Katanga).

HABITAT & ECOLOGY. Stony *Tristachya* grassland on copper-rich deposits.

ALTITUDINAL RANGE. 900 – c. 1300 (–1500) m.

HABIT. Perennial herb, most probably with a xylopo-diaceous rootstock.

CONSERVATION STATUS. *Lopholaena deltombei* was recorded as VU (Vulnerable) — VU B1 ab(i, ii, iii, iv, v) + 2ab(i, ii, iii, iv, v) — by Meersseman *et al.* (2014), from eight localities. The species, recorded as a cuprophyte (an absolute metallophyte), is a ‘copper endemic’ in the Congolese flora (Faucon *et al.* 2010), and subject to habitat destruction from ‘surface mining activities’. However, Faucon *et al.* (2010: 8) recorded the species as CR (Critically Endangered) B2a+b(i, ii, iii, iv), from nine localities. One or two collections in BR suggest that the deposits are also rich in cobalt (e.g. *Parmentier & Kisimba* 4535, 4585, 4635, *Malaisse et al.* 414 — all from BR and wrongly determined as *L. alata* (= *L. acutifolia* — a completely glabrous species with distinctive multi-bracteolate pedicels). However, *Parmentier & Kisimba* 4441 appears to have a spicate, pubescent apical portion to the flowering stem, but the lower leaves are glabrous/glabrescent — the label indicating it was collected ‘sur colline cuprifère et cobaltifère’. *Parmentier & Kisimba* 4472, also from the copper and cobalt rich area is completely glabrous. It is clear that detailed studies (herbarium and field) are required to determine the relationship between *L. acutifolia* (where *L. alata* is now synonymized) and *L. deltombei*.

PHENOLOGY. May – July.

10. *Lopholaena phyllodes* (Hiern) S.Moore (1929: 274, 275 (in key)).

Vernonia phyllodes Hiern (1898: 525). Type: [Angola:] ‘Pungo Andongo [= Malange]. –In wooded thickets by hilly places at the river Cuanza near Sange, abundant; fl. and young fr. 1 May 1857. [Welwitsch] No. 3993.’ Holotype: BM(000924556); isotypes: K(000307235), LISU(218443, 218444).

DISTRIBUTION. Angola (Malanje Province).

HABITAT & ECOLOGY. ‘Wooded thickets by hilly places’ (Hiern 1898: 525).

ALTITUDINAL RANGE. c. 1400 m (based on *Baum* 927, K).

HABIT. Perennial herb, most probably with a xylopo-diaceous rootstock.

CONSERVATION STATUS. *Lopholaena phyllodes*, only known from a handful of collections, is best recorded

as DD (Data Deficient), Insufficient Information. *Gossweiler* 4548 is effectively unlocalised (merely to ‘Angola: Loanda: Cazengo’ on an empty preprinted label), *Welwitsch* 3993 similarly so, and *Baum* 927 is given simply as ‘bei Mundango’. Welwitsch suggested that the species was abundant at the type locality, and information is wanting on the other collections. The general area of the *Baum* collection suggests that agriculture, and local fires, may pose some threat.

PHENOLOGY. April – June.

11. *Lopholaena acutifolia* R.E.Fr. (Fries 1916: 341).

Type: [Zambia:] ‘Northwest-Rhodesia: Bwana Mkubwa, auf mit Gräsern und Kräutern reichlich bewachsener Lichtung in dem Trockenwald (blühend 16. Aug. – [R. E. Fries] n. 365).’ Holotype: UPS(V-046495 — ‘Rhodesia bor.-occid.: Bwana Mkubwa/19¹⁶/₈11’); isotype: B (according to Phillips & Smith 1933: 233) †. Figs 2, 3.

Lopholaena alata P.A.Duvign. (Duvigneaud & Timperman 1959: 148), **synon. nov.** Type: [Democratic Republic of the Congo:] ‘Entre Shinkolobwe et Swambo, forêt à *Brachystegia* sur sol rouge sure calcaire de Kakontwe, *Duvigneaud* 2034 D[1 – see Note below], VII-1956 (Holotype, BRLU).’ Holotype: BRLU(90020780 — ‘Entre Shinko et Mindingi...’, and only dated to ‘1956’); isotype: BR(8877468 — ‘Entre Shinko et Mindingi...’, and only dated to ‘1956’). Note: Duvigneaud’s original label determination (from 1957) was ‘*Derriksia alata* n. sp.’, the holotype with a handwritten description (in blue ink) for the ined. genus ‘*Derriksia*’ (comparing it with ‘Diffère de certains *Notonia* africains, ...’), and a second label (in black ink) with Duvigneaud’s diagnoses as to where the new genus belonged (‘Genre à la limite des *Vernoniae* ...’). Both the holotype and isotype were ‘2034 D1’, not simply 2034 D’ as in the protologue, the ‘D1’ written with a much thicker pen. The label annotation suggests that this may have been a *Duvigneaud & Timperman* collection.

DISTRIBUTION. Democratic Republic of the Congo (Haut-Katanga Province), Zambia (Copperbelt Province).

HABITAT & ECOLOGY. Dry forest clearings, *Brachystegia* woodland, ‘red soil’ over limestone.

ALTITUDINAL RANGE. 1200 – 1400 m.

HABIT. Perennial herb.

CONSERVATION STATUS. Although *Lopholaena acutifolia* appeared not to have been collected since it was described, the author’s original determinations of two *Fanshawe* collections, F1383 and F3316, as *Lopholaena alata* (see Fig. 3, based on both these collections, cf. Fig. 2, an image of the holotype of *L. acutifolia*), were ample justification to synonymize the two taxa — the



Fig. 2. Image of the holotype collection of *Lopholaena acutifolia* R.E.Fr. – UPS(V-046495). Image courtesy of Mats Hjertson (UPS).

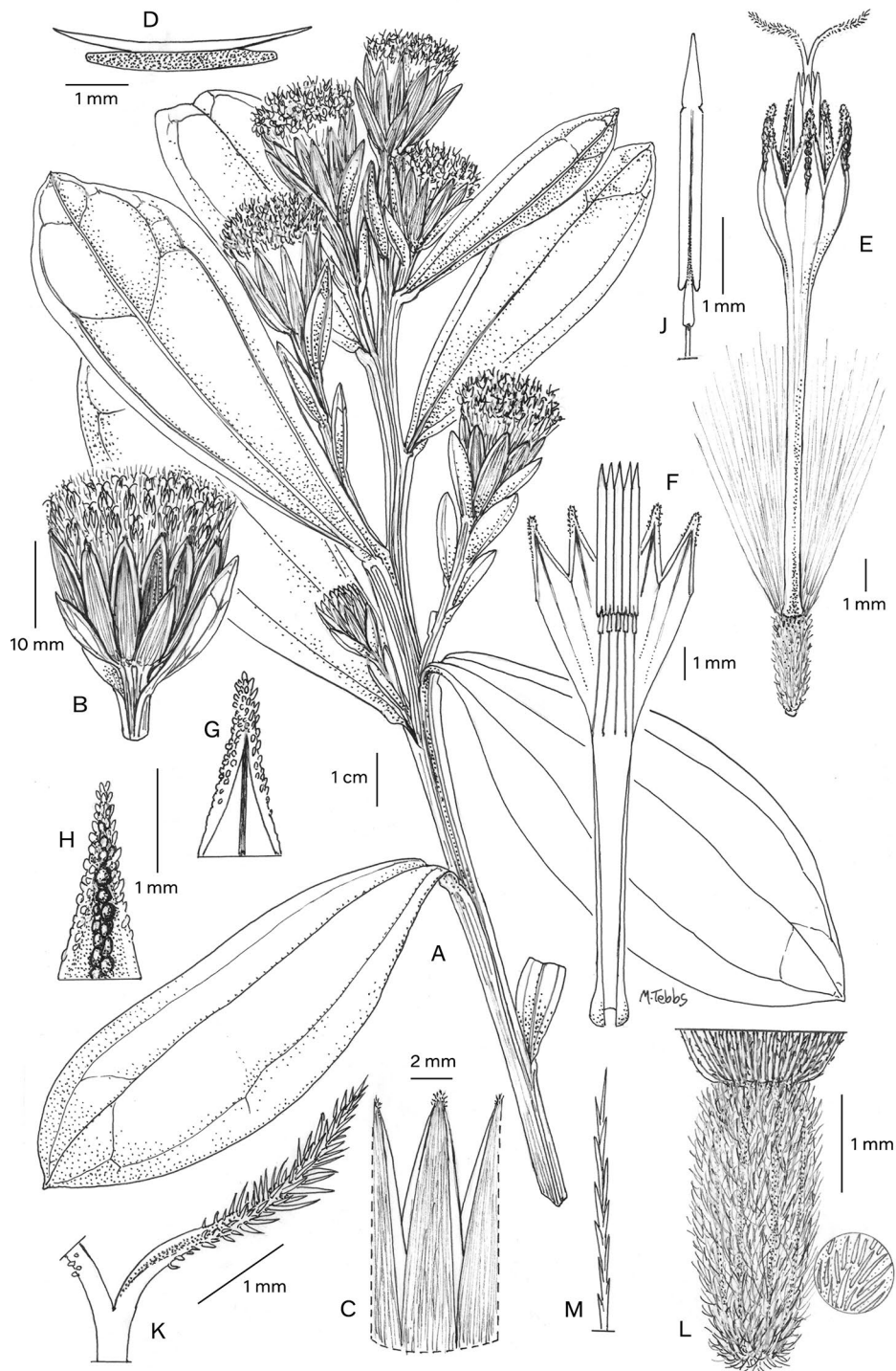


Fig. 3. *Lopholaena acutifolia*. **A** apex of flowering stem showing conspicuously bracteolate pedicels, and narrowly winged stem from decurrent leaf bases, the leaves conspicuously 3-veined from base in herbarium material; **B** capitulum, with uppermost pedicel bracteoles subtending involucre; **C** detail of interlocking bases of adjacent phyllaries; **D** t.s. of phyllary showing broad median portion and interlocking slots for margins of adjacent phyllaries; **E** floret; **F** corolla, opened out to show attachment point of anther filaments; **G** adaxial surface of apex of corolla lobe; **H** abaxial surface of apex of corolla lobe; **J** anther, showing balusterform anther collar; **K** detail of style arm; **L** achene and base of pappus setae, with a detail of setuliferous surface of achene; **M** detail of apex of pappus seta. **B, C, E – H, L, M** from *Fanshawe F1383*, **K, A, D, J, K** from *Fanshawe F3316*, **K**. DRAWN BY MARGARET TEBBS.

leaves with characteristic decurrent bases and winged stems, together with solitary large terminal capitula the pedicels bearing many bracteoles. The *Fanshawe* collections were made relatively close to the type locality of *L. acutifolia*. However, although this has considerably enlarged the extent of occurrence, it is clearly under threat in the Democratic Republic of the Congo (DRC). Based on herbarium records, whilst the species has a sporadic occurrence in the Democratic Republic of the Congo (usually on the copper and cobalt deposits) and the Copperbelt Province in Zambia, it is clear that many collecting sites in DRC have now been destroyed by mining activities. Every effort should be made to re-find *L. acutifolia* in the type locality and assess any population/s found, if extant, and to reassess its former sites in the DRC. Until adequate fieldwork can be carried out, the species is best recorded as DD (Data Deficient), rather than consider it VU (Vulnerable) (and no further ground-truthing invested in assessing the species).

PHENOLOGY. June – August.

NOTE. If Phillips & Smith's concept of infrageneric division is followed, *Lopholaena acutifolia* would fall into their sect. *Simplices* E. Phillips & C.A.Sm. subsect. *Multicaules* E. Phillips & C.A.Sm., but this, and their further subdivision is not followed here.

Duvigneaud's protologue is supplemented by a small sketch of a single capitulum (with numerous subinvolucral bracts or bracteoles) subtended by a solitary leaf (Duvigneaud & Timperman 1959: 148, Fig. 5). The leaf venation is not accurately depicted as both the type material and the *Fanshawe* collections mentioned above are trinervate from near the base (see Fig. 3 in the present paper). The leaves are very distinctly 3-veined to the base (with a prominent midrib) and the leaf apex apiculate, together with very distinctly winged stems and pedicels, which are far from clear in the figure.

12. *Lopholaena ussanguensis* (O. Hoffm.) S. Moore (1929: 275).

Senecio ussanguensis O. Hoffm. (Hoffmann 1901: 438), as 'S. (Kleinia) ussanguensis'. Type: [Tanzania] 'Ussangu: Pikurugwe-Rücken, mit Felsblöcken übersäte Abhänge, um 2900 m ([Goetze] n. 1257. – Blühend und mit jungen Früchten am 16. Sept. 1899). Type material: B (according to Phillips & Smith 1933: 233)† (listed as the holotype by Jeffrey 1986: 932), E(00239832), K(000307178 – ex E). Lectotype (selected here): K(000307178). Note: Since the originally selected lectotype was already non-existent when selected, a re-lectotypification has been carried out here based on one of two of the known remaining type collections.

DISTRIBUTION. Probably endemic to Tanzania.

HABITAT & ECOLOGY. Rocky slopes.

ALTITUDINAL RANGE. 2900 m.

HABIT. Shrub.

CONSERVATION STATUS. Jeffrey & Beentje (2005: 570) noted that the species should at least be considered 'vulnerable (VU-D2) and possibly extinct, as it has not been collected for over a hundred years', although no formal assessment is available — it is still only known from the type collection. Clearly, every attempt should be made to re-find the species and carry out population assessments.

PHENOLOGY. August – September.

NOTE. Jeffrey & Beentje (2005: 570) commented on the decurrent leaf bases not being as long as described in the protologue, suggesting that the 3 cm should in fact be 3 mm; Hoffmann actually indicated 'und laufen ausserdem auf 2-3 cm am Stengel herab'. Whilst the shorter wing may be the appearance of the material in K, the isotype in E shows the decurrent bases between 15 and 25 mm long, suggesting Hoffmann's description was correct, but the lower limit may be closer to 5 – 10 mm based on the K isotype and the internode length.

NOTE. Goetze's label indicated that the collecting locality was from Ussangu in the 'Kinga Berge', which is clearly in what is now called Tanzania, the Kinga Mts forming part of S Tanzanian Kingupira/Livingstone Massif. The material in E has been databased as being from the Democratic Republic of the Congo, which is incorrect.

13. *Lopholaena glaucescens* E. Phillips & C.A.Sm. (Phillips & Smith 1933: 233), nom. nov. pro *Lopholaena bainesii* S. Moore, 'quad descr. tanti., sed non *Othonna bainesii* Oliv. and Hiern.' Types: 'SOUTH TROPICAL AFRICA. – Angola, Huilla Div.: In rocky thickets near Mumpulla, 1200–1350 m., Oct., Welwitsch 3991! Type (K, BM). Syntypes: BM(000924555), BR(9863835), K(000307236). Lectotype (selected here): Welwitsch 3991, BM(000924555). Note: Hiern (1898: 603) provided the following based on the Welwitsch collection: 'An undershrub or shrublet, with the habit of a *Lactuca*; stems erect, 1 to 2 ft. high, several from the same rootstock; leaves coriaceous, the blade vertical; flowers tubular, yellow. In rocky thickets near Mumpulla, at an elevation of from 4000 to 4500 ft., sporadic; fr. and few fl. Oct. 1859. No. 3991.'; this being a translation of the Latin on the label.

DISTRIBUTION. Angola (Huambo Province).

HABITAT & ECOLOGY. Thickets, amongst rocks.

ALTITUDINAL RANGE. 1200 – 1350 m.

HABIT. Subshrub or suffrutex with a xylopodiaceous rootstock.

CONSERVATION STATUS. *Lopholaena glaucescens* appears to have been rarely collected since it was described.

It is best recorded as DD (Data Deficient) with every effort made to re-find it in the type locality and assess any populations found.

PHENOLOGY. September – October.

NOTE. Smith (on a sheet annotation dated '9/4/1930') determined the K isolectotype of *Welwitsch* 3991 using the manuscript name of '*Lopholaena petrophila* Phill. & C.A.Sm.' evidently originally wanting to name it as such in their revision.

14. *Lopholaena coriifolia* (Sond.) E.Phillips & C.A.Sm. (Phillips & Smith 1933: 234).

Othonna? *coriifolia* Sond. (Sonder in Harvey & Sonder 1865: 333). Type/s: [South Africa:] 'Hab. Magalisberg, Burke & Zeyer. Zey.[her] 944 [sic! = '994']. (Herb. Hk, Sd.)'. Note: 'Magalisberg' is now known as Magaliesberg. Syntype: Burke s.n., K(000307233 — the label annotated in ink in two different hands, 'Othonna?', 'Juli Macalisberg' [presumably by Burke], and in pencil as 'A. 36', 'coriifolia Sd' and 'Magalies Berg' in a different hand, the sheet further annotated as 'nr. Pretoria West.'). Syntype: Zeyher '944' [= '994'], BM(000924546 — as '994'), S08-6737 ('994/Othonna coriifolia Sond/Magaliesberg/Juli/Zeyher', 'Nur 1 kl. Ex. vorhanden' — in Sonder's hand). Lectotype (selected here): Zeyher 994, S(08-6737).

Othonna bainesii Oliv. & Hiern 1877: 423). Type: 'South Central? South African Gold Fields, Baines!'. Holotype: K(000307176 — coll. '1870'). Note: The non-specific collection locality (typical of many plant collections made by Baines, and simply based on the title of the expedition) has led to speculation on the sheet as to where it might have been collected. The pencilled suggestion of 'Transvaal, probably' was met with a counter comment, in black ink, of '(NO!)'. The collection was most probably made in Zimbabwe. Phillips & Smith (1933: 235) indicated Mashonaland, a region in northeastern Zimbabwe, bordering Zambia and Mozambique.

Lopholaena randii S.Moore (1903: 133). Type: [South Africa: Gauteng] 'Hab. Rocky places in the neighbourhood of Johannesburg. [Rand] No. 746.' Holotype: BM(000924547).

Lopholaena randii S.Moore var. *brachycephala* S.Moore (1929: 275). Type: [Zimbabwe:] 'Hab. Rhodesia, Makoni, on exposed summit of mountain; F. Eyles, 741, in Herb. Mus. Brit.' Holotype: BM(000924554); isotypes: K(002655507), SAM.

Lopholaena dehniae Merxm. (Merxmüller 1951: 66). Type: [Zimbabwe:] 'Southern Rhodesia: Marandellas; on a kopje, low bush between rocks. leg. G. Dehn 17.8.1941, D.n.345.' Holotype: M(0105366). Merxmüller (1951: 67) also added the following

note concerning the coloured painting and drawing of dissections on the sheet: 'The drawing shows a plant in fruit, too, but it is doubtful whether it is the same plant.' The citation of 'D.n.' [= Dehn number] was provided by Mrs Dehn.

DISTRIBUTION. Angola, Eswatini, South Africa (Gauteng, KwaZulu Natal, Limpopo, Mpulalanga, North West Province), Zimbabwe.

HABITAT & ECOLOGY. Often forming dense colonies on dry, stony to rocky hillsides, or in open, rocky grassland, often on sandy or gravelly soils.

ALTITUDINAL RANGE. 760 – 1950 m.

HABIT. Much-branched shrub.

CONSERVATION STATUS. LC (Least Concern) — Foden & Potter (2005b), Raimondo *et al.* (2009).

PHENOLOGY. June – November.

VERNACULAR NAMES. LEATHER-LEAVED FLUFF-BUSH, PLUISIESBOS (Foden & Potter 2005b), SMALL-LEAVED FLUFF-BUSH, CHIGUNGURU (Shona), MUGAKATOMBO (Shona), MUKWIRADUNDU (Shona), NYAKATONDO (Shona).

NOTE. On the basis of a single record, Johannsmeier (2016: 182) listed the species as a nectar ('poor or minor') and pollen ('minor to medium') source, in the Northern Provinces of South Africa, for the honeybee, *Apis mellifera* (Linnaeus, 1758), albeit using some strange terminology to describe the capitula and pappus!

15. *Lopholaena whyteana* (Britten) E.Phillips & C.A.Sm. (Phillips & Smith 1933: 236).

Othonna whyteana Britten (1894: 21 & Pl. IV, Figs 1 & 2). Type: [Malawi:] 'Hab. Milanji, 6000 ft. [Whyte] No. 62.' Holotype: BM(000924553 — 'Oct. 1891'); isotype: K(000307234 — s.n., mounted with *Clonnie* 21). Note: 'Milanji' = Mt Mlanje.

Senecio (§ *Kleinia*) *dolichopappus* O.Hoffm. (Hoffmann 1901: 438, Taf. XVIII), **synon. nov.** Types: [Malawi:] 'Usafua: Beya-Berg, auf trockenen Abhängen mit kurzem Gras, um 2700 m ([Goetze] n. 1075. — Blühend am 28. Juni 1899). Umalila: Uwurungu-Berg, auf rasigen Abhängen, um 2200 m ([Goetze] n. 1462. — Mit jungen Früchten am 18. Nov. 1899).' Note: 'Beya-Berg' = Mbeya. Syntype: Goetze 1075, B (according to Phillips & Smith 1933: 237)†, BM(000924552), BR(8877130), E(00239835), P(00122001). Syntype: Goetze 1462, B (according to Phillips & Smith 1933: 237) †, BM(000924551), BR(8876454), E(00239834), L(3654794), P(00122002). Note: Phillips & Smith (1933: 237) discussed the differences between the two Goetze collections, eventually (Phillips & Smith 1933: 236) choosing Goetze 1075 as the type collection of *L. brevipes*, q.v. Lectotype (effectively first-step, Phillips & Smith 1933: 237): 'Be [= B], BM'. Lectotype (effectively second-step, by Jeffrey

1986: 932): ‘lectotype B†; isoelectotype BM! – chosen here’. Note: Jeffrey & Beentje (2005: 570) repeated Jeffrey’s earlier statement. Choosing a destroyed specimen as lectotype is considered contrary to the Code, since it must be an extant specimen, effectively permitting a repeated second-step lectotypification, which is done here. Lectotype (second-step, re-selected here): *Goetze* 1462, BM(000924551); isoelectotypes: BR(8876454), E(00239834), L(3654794), P(00122002).

‘*Lopholaena dolichopappa* (O.Hoffm.) S.Moore, *J. Bot.* 41 (No. 484): 134 (Apr. 1903)’. Note: Although this record appeared in *Index Kewensis* (see Prain 1908: 106), Moore made no such combination in the *Journal of Botany*, not even mentioning the basionym, *Senecio dolichopappus*. The combination was effectively made by Prain, albeit an isonym; the name also appeared in Phillips & Smith (1933: 236).

Lopholaena dolichopappa (O.Hoffm.) S.Moore (1904: 1021), **synon. nov.**

Lopholaena dolichopappa (O.Hoffm.) Prain (1908: 106), nom. illeg., isonym, **synon. nov.**

Lopholaena pauciflora Thell. (Thellung 1921: 242), **synon. nov.** Type: [Tanzania:] ‘TROPISCHES AFRIKA: Nyassa-Hochland, Station Kyimbila, 1913, A. Stolz 2267.’ Type material: HBG(504804), L(3654793), M(0105365), WAG(0000615), Z(000003630 — annotated by Thellung on a det. label as ‘Orig.’, det. by C. Jeffrey as the holotype; 000003631 — det. as an isotype by C. Jeffrey, but databased as the holotype). Note: It can be argued that Thellung described the species based on the material in Z, where there are two sheets, both of which may well have been used in writing the protologue. It is clear Thellung annotated both sheets, one on the main label, and the other with a separate det. slip. Phillips & Smith (1933: 238), whilst specifying the type was in ‘Herb. Mus. Bot. Univ. Zurich’, stated they had not been able to ‘examine the type’ and were clearly unaware that there were two sheets. This is taken as first-step lectotypification bearing in mind the presence of other syntype material. Second-step lectotypification is carried out here, and is based on the material labelled as the holotype by Jeffrey (in late August 1984): Z(000003630).

Lopholaena brevipes E.Phillips & C.A.Sm. (Phillips & Smith 1933: 236), **synon. nov.** Type: [Tanzania:] ‘South Tropical Africa.–Tanganyika: Usafua, on dry slopes covered with short grass on Beya Mountain, 2700 m., June, *Goetze* 1075! Type (Be[= B], BM).’ Syntypes: B(according to Phillips & Smith 1933: 236)†, BM(000924552), BR(8877130), E(00239835), K(000307180), P(00122001). Note: Although Jeffrey (1986: 932) stated ‘(syntypes B† BM!; isosyntypes K).’, this is not considered as

any form of lectotypification, and would still be incorrect, especially as there is only one duplicate of *Goetze* 1075 in K. Lectotype (selected here): BM(000924552).

DISTRIBUTION. Malawi, Tanzania, Zambia.

HABITAT & ECOLOGY. Lateritic soil on rocky slopes, rocky grassland and bushland, with *Protea* and *Tarchonanthus*, and often with other xerophytic plants.

ALTITUDINAL RANGE. 1600 – 2750 m.

HABIT. Subshrub or perennial herb, most probably with a xylopodiaceous rootstock.

CONSERVATION STATUS. A widespread species, and moderately common throughout its range; it is best considered as LC (Least Concern) — see also Jeffrey & Beentje (2005: 572).

PHENOLOGY. Flowering sporadically throughout the year.

NOTE. The modified synonymy of this species is the result of examining type and much other material. The significant overlap of characters and variable leaf shape suggest a widespread variable species that should no longer be split.

A species and name strangely absent in APD (2022).

16. *Lopholaena cneorifolia* (DC.) S.Moore (1904: 1021).

Doria cneorifolia DC. (de Candolle 1838: 470). Type: [South Africa:] ‘... in Africâ australi ad Camisbergen legit cl. Drege alt. 3-400 ped.!... (v. s.).’ Holotype: G-DC(G00473706 — ‘2888. Camisbergen/R. V. Mr. Drege 1835’); isotypes: P(0001569 — s.n., labelled with two labels as ‘*Doria cneorifolia* DC. (Camisb.). 2’ and ‘5/11 30 _____ Len_glu_ bei Kranskeelkraal, 3500-4000’/(III, A, a).’, although this was indexed by Drège [1843] as ‘III, A, a, 4’, the locality information does not match at all; 0001570 — s.n.; 0001571 — s.n.), S-G-2134 (s.n., fragments in a capsule). Note: De Candolle’s protologue indicated an altitude that is far too low for any material in this section of Drège’s itinerary in the ‘Camisbergen’ — by at least 3000’. Material in K(000307231 — mounted with *Scully* ‘49’) pertaining to be this species may be a further unnumbered isotype.

Hertia cneorifolia (DC.) Kuntze (1891: 344).

Othonnopsis cneorifolia (DC.) B.D.Jacks. (Jackson 1894: 789). Note: Jackson (1894: 384) cited ‘*Othonnopsis cneorifolia*, Benth. & Hook., [Gen. Pl. 2 (1): 451 (1873)]’, which gave rise to a spurious record for Bentham & Hooker f. having provided the combination in *Genera Plantarum*; mention was only made of *Doria cneorifolia*, and the epithet never combined with the generic name. The IPNI record for publication in *Genera Plantarum*, based on Jackson’s entry in *Index Kewensis*, is a ‘non-record’ and not a ‘nom. inval.’ as proposed in the IPNI record. <https://www.>

biodiversitylibrary.org/item/134368#page/400/mode/1up

Senecio avasimontanus Dinter (1923: 141). Types: [Namibia:] ‘Hereroland: Auasgebirge: Regenstein, 23. April, 1913, steril, K. Dinter Nr. 2946; Langer Rücken, auf quartzitisches Gestein in 2100 m. Blühend 12. Mai 1922. – Großnamaland: Aus, auf Granitflachbergen in Vollblüte Juli 1922, K. Dinter 3573’. Syntype: Dinter 2946, B†. Syntype: Dinter 3573, B(10 0094266 — dated ‘5.6.1922’ in Dinter’s hand; 10 0094267 — a full label dated ‘5.VI.1922’ in Dinter’s hand with a full Latin description in pencil, in Dinter’s hand, on the sheet alongside the right hand specimen, the sheet is determined as ‘*Lopholaena cneorifolia*’, but lacks a signature or other ascription), HBG(504905 — ‘Aus 5.6.1922’, det. Merxmüller ‘München 1966’, as *L. cneorifolia*), K(000306984), PRE(0207620-0; 0587527-0). Note: Since Dinter made no indication in this paper as to where type material was deposited, and because two syntypes were cited, it would be sensible to anchor the name to one collection, thus helping to clarify where this species belongs — in *Lopholaena cneorifolia* and certainly not in *Curio* P.V.Heath. Lectotype (selected here): Dinter 3573, B(10 0094267), but noting that the collection date was ‘5th June 1922’ and not ‘July 1922’ as suggested in the protologue, and was collected at ‘1500 m.’. Note: All duplicates of Dinter 3573 were identified as ‘*Othonna avasimontana*’ on the labels, by Dinter, even though he provided the name as *Senecio avasimontanus*.

Othonna avasimontana [(Dinter)] Dinter (1928: 112). Note: At worst this is taken as a combination, based on the labelling issue noted above, although as it stands in the text it is a *nom. nud.* since Dinter certainly hadn’t described an *Othonna* by that name before 1928.

Curio avasimontanus (Dinter) P.V.Heath (1997: 136), **synon. nov.**

DISTRIBUTION. Namibia, South Africa (Northern Cape Province).

HABITAT & ECOLOGY. Granite and quartzite koppies (Afrikaans) (= small hills), amongst rocks, on stony soils, or cracks on koppies.

ALTITUDINAL RANGE. 900 – 2400 m.

HABIT. Bushy shrub.

CONSERVATION STATUS. LC (Least Concern) — Foden & Potter (2005a), Raimondo *et al.* (2009).

PHENOLOGY. August – November, but clearly flowering sporadically throughout the year.

VERNACULAR NAME. GARIEP FLUFF-BUSH (Foden & Potter 2005a).

NOTE. Merxmüller (1967: 119) appears to have been the first author to synonymize *Senecio avasimontanus* and *Othonna avasimontana*, and certainly cited type material of the former amongst the material of *Lopholaena cneorifolia* examined. The binomials *Senecio*

avasimontanus, *Othonna avasimontana* and *Curio avasimontanus* have been synonymized under *Kleinia longiflora* DC., this possibly originating from their placement by Rowley (2002: 36), albeit with doubt. This synonymy is also promoted in POWO (2022) and WCVP (2022), although in Hassler (2019) they are found under the synonymy of *Curio avasimontanus* — apparently the ‘accepted scientific name’. APD (2022) does not currently list *Curio avasimontanus*, but otherwise repeats Merxmüller’s proposed synonymy. *Kleinia longiflora* is well-known for flowering with clusters of capitula at the tips of leafless fleshy succulent stems, quite unlike the few capitula on leafy stem apices seen in the shrubby *Lopholaena cneorifolia*. Technical characters of the corollas, certainly the style arms apices (acute, short and marginally short-papillose at apex in the *Kleinia*, subulate, long and long-papillose to below the mid-point in the *Lopholaena*), and the achene indumentum (papillose between the ribs in the *Kleinia*, densely setuliferous throughout in the *Lopholaena*), should easily tell the taxa apart.

17. *Lopholaena phippsii* D.J.N.Hind. Type: [Zimbabwe. E]. ‘Melsetter. Chimanimani. Point 71. Crevices of rock pavement, at summit. Shrub 2’ to 4’ high. Leaves glaucous, involucae green, corolla off-white, A sepia, Quite common. 8000’. 16.3.1957. J.B.Phipps 646.’ Holotype K(000374763); isotype SRGH (see Fig. 1).

DISTRIBUTION. Currently only known from Mt Binga, on the border between Zimbabwe and Mozambique.

HABITAT & ECOLOGY. In crevices of rock pavement on mountain summit.

ALTITUDINAL RANGE. c. 2436 m.

HABIT. Well-branched shrub.

CONSERVATION STATUS. DD (Data Deficient) until further fieldwork can be undertaken in the type locality, on both sides of the border between Zimbabwe and Mozambique, to determine the population size, recruitment and potential threats, if any. Whilst the type locality is within protected areas: on the Mozambican side within the Parque Nacional de Chimanimani, and on the Zimbabwe side in the Chimanimani National Park, which together the two form the Chimanimani Trans-Frontier Conservation Area. Timberlake *et al.* (2016) have listed threats and the conservation status of habitats within the trans-frontier park, but appear to suggest that the peak itself is threat-free.

PHENOLOGY. March – April.

18. *Lopholaena longipes* (Harv.) Thell. (Thellung 1921: 243).

Doria longipes Harv. (Harvey & Sonder 1865: 322). Type: [South Africa:] ‘Hab. Modderfontein, Rev.



Fig. 4. Image of the holotype collection of *Doria longipes* Harv. — TCD(0019178). Image courtesy of Jackie Stone (TCD).

H. Whitehead! (Herb. D.). Holotype: TCD(0019178) – ‘Modderfontyn, Namaqualand, Rev. H. Whitehead’, s.dat., s.n.). Fig. 4.

DISTRIBUTION. South Africa (Gauteng). Note: Raimondo *et al.* (2009: 262) listed the distribution as ‘NC WC’ [= North Cape and Western Cape, citing Kamiesberg and Knersvlakte, and a collection by Compton in the 1940s].

HABITAT & ECOLOGY. ‘Shrubland/Karoo?’ (Helme & Desmet 2006), ‘Namaqualand Klipkoppe Shrubland’

(Helme *et al.* 2017), which is typified by the granitic or gneissic domes and broken boulder koppies.

ALTITUDINAL RANGE. c. 776 m (for the present-day Modderfontein Farm campsite), rising to c. 1135 m on the rocky hillsides close by.

HABIT. Well-branched dwarf shrub (or treelet).

CONSERVATION STATUS. *Lopholaena longipes* has been recorded as DD (Data Deficient — Insufficient Information) (Raimondo *et al.* 2009: 262), as it is still apparently only known from the type collection —

see Helme *et al.* (2017) — and one other collection. It is currently on the *Red List of South African Plants* (Raimondo *et al.* 2009). In an earlier report (Helme & Desmet 2006: 47) it was considered a ‘near endemic’ of the Kamiesberg, suggesting that it was known from at least one other collection (presumably that of *Compton* — see Raimondo *et al.* 2009: 262). The species also appears as a ‘Protected Species’ in the Northern Cape Nature Conservation Act, No. 9 of 2009, Schedule 2 (Anon. 2009). The type locality is in the Pretoria-Johannesburg urban conurbation and, based on satellite imagery, its type locality is likely destroyed, with little of the original karoo extant. Whilst the only post 1940 collection suggests a second location, it has apparently not been collected since.

PHENOLOGY. Unknown.

VERNACULAR NAME. STALKED FLUFF-BUSH (Helme *et al.* 2017).

NOTE. The current author, having had access to an image of the holotype in TCD, notes that it is quite clear that Phillips & Smith (1933: 238) made a complete guess at the number of florets per capitulum — ‘5-6(?)-flowered’ (having declared they never saw the type specimen) — a figure never mentioned by Harvey & Sonder (1865: 322) in his protologue; there are over 20 florets per capitulum. Harvey merely mentioned the number of phyllaries (as 5 – 6), and the rather long pedicels (‘3 – 4 inches’), and proposed it was probably close to *Doria cneorifolia* (= *L. cneorifolia*), but clearly differed in the inflorescence, etc. The pedicels are conspicuously ebracteolate. Whitehead’s collection is from ‘farm Modderfontein’ (c. 29°39′51.89″S, 17°48′46.90″E) near the mission station about 10 km west of Springbok, and most probably made within the first year he was in Namaqualand — 1856.

Acknowledgements

The author would like to thank Margaret Tebbs for the black and white line drawings. He would also like to thank curatorial/digitisation staff in TCD (Jackie Stone) for supplying a digitized image of the holotype of *Doria longipes*, and John Parnell for making this happen; similar thanks are due to Mats Hjertson (UPS) for providing a digitized image of the holotype of *Lopholaena acutifolia*. Fiammetta Genovesi is thanked for providing images of *Pearson* 7926 at K — the syntype and ‘clepto’ syntype of *Pentzia lanata*. Provision of these images helped immensely in recognising each of the relevant species, added key characters, and helped with the synonymy of the latter. The author would also like to convey his thanks to two anonymous reviewers for their useful comments on an earlier draft of the script, as well as to the Editor and Editorial Board, essentially giving me two papers from the original one I had proposed.

Declarations

Funding No funding, grants, or other support was received.

Conflicts of interest/Competing interests The author has no conflict of interest, financial or non-financial, to declare that are relevant to the content of this paper.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article’s Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article’s Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

- Anon. (2009). *Northern Cape Nature Conservation Act No. 2 of 2009*. [Assented to 15 Dec. 2009; date of commencement 1 Jan. 2012; updated to *Provincial Gazette* No. 1566, 19 Dec. 2011]. [Schedule 2 included the ‘Protected Species’].
- APD (2022). *African Plant Database* (vers. 4.0.0). Conservatoire et Jardin Botaniques de la Ville de Genève & South African National Biodiversity Institute, Pretoria. <http://africanplantdatabase.ch> [Accessed 3 Oct. 2022].
- Bentham, G. (1876). *Lopholaena platyphylla*, Benth. Compositae, Tribe Senecionideae. *Hooker’s Icon. Pl.*, ser. 3, 2 [= 12 of whole work]: 12 & Plate 1113. <https://www.biodiversitylibrary.org/item/54255#page/14/mode/1up>
- Britten, J. (1894). Monopetalae. In: The plants of Milanji, Nyasa-land, collected by Mr. Alexander Whyte, F.L.S., and described by Messrs. Britten, E. G. Baker, Rendle, Gepp, and others; with an Introduction by William Carruthers, F.R.S., F.L.S. *Trans. Linn. Soc. London, Bot.*, ser. 2, 4 (1): 16 – 37. <https://www.biodiversitylibrary.org/item/13685#page/21/mode/1up>
- Brown, N. E. (1895). In: *Decades Kewenses. Plantarum novarum in Herbario Horti Regii Conservatorium. Decas XII. Bull. Misc. Inform., Kew* 1895 (97): 15 – 18. <https://www.jstor.org/stable/4111415>

- Brusse, F. (1991). *Lopholaena festiva*, a new species from the Transvaal, South Africa (Asteraceae). *Nordic J. Bot.* 11 (1): 79 – 83. <https://doi.org/10.1111/j.1756-1051.1991.tb01796.x>
- de Candolle, A. P. (early Jan. 1838). *Prodromus systematis naturalis regni vegetabilis, sive enumeratio contracta ordinum, generum, specierumque plantarum huc usque cognitarum, juxta methodi naturalis normas digesta*. Pars Sexta: Sistens Compositarum continuationem. Treuttel & Würtz, Parisiis. <https://www.biodiversitylibrary.org/item/7155#page/340/mode/1up>
- (5 Feb. 1840). In: J. P. B. Delessert (ed.), *Icones selectae plantarum quas in systemate universali ex herbariis Parisiensibus, praesertim ex Lessertiano descriptis Augustin Pyramus de Candolle*. Vol. IV. Exhibens Compositas. Fortin, Parisiis. <https://www.biodiversitylibrary.org/item/10262#page/39/mode/1up>
- Darbyshire, I., Timberlake, J., Osborne, J., Rokni, S., Matimele, H., Langa, C., Datizua, C., de Sousa, C., Alves, T., Massingue, A., Hadj-Hammou, J., Dhanda, S., Shah, T. & Wursten, B. (2019). The endemic plants of Mozambique: diversity and conservation status. *PhytoKeys* 136: 45 – 96. <https://doi.org/10.3897/phytokeys.136.39020>
- Dinter, K. (1923). XXVII. K. Dinter, Beiträge zur Flora von Südwestafrika. 1. I Mesembrianthema nova. I. *Repert. Spec. Nov. Regni Veg.* 19 (8 – 10): 122 – 160. [Note: This paper was not only describing new species of *Mesembryanthemum*, but taxa from several other families]. <https://www.biodiversitylibrary.org/item/340086#page/146/mode/1up>
- (1928). Sukkulantenforschung in Südwestafrika. II. Teil. Erlebnisse und Ergebnisse meiner Reise in den Jahren 1923 by 1925. *Repert. Spec. Nov. Regni Veg. Beih.* 53: 1 – 145. Note: The mention of ‘*Othonna avasimontana* Dtr’ is within the section ‘XIV. Sammelreise nach Otavi, Weihnachten 1924 bis Ende März 1925.’, pp. 108 – 124.
- Drège, J. F. (1843). III. Standörter-Verzeichniss der con J. F. Drège in Südafrika gesammelten Pflanzen. *Flora* 26 (2): 44 – 230 & ‘Karte von Süd=Africa nach J. Arrowsmith’s new map from the Cape of Good Hope 1834 entworfen von J.F. Drège’. <https://www.biodiversitylibrary.org/item/940#page/892/mode/1up>
- Duvigneaud, P.[A.] & Timperman, J. (1959). Études sur la vegetation du Katanga et de ses sols metalliferes. Réalisées sous l’égide du Fonds National de la Recherche Scientifique avec l’aide de l’Union Minière du Haut-Katanga. Communication No 3. Études sur le genre *Crotalaria*. *Bull. Soc. Roy. Bot. Belgique* 91 (2): 135 – 176. [Note: *Lopholaena deltombei* P.A. Duvign. and *L. alata* P.A. Duvign. were described in footnotes on p. 147 & 148 in this paper].
- Faucon, M.-P., Meersseman, A., Shutcha, M. N., Mahy, G., Luhembwe, M. N., Malaisse, F. & Meerts, P. (2010). Copper endemism in the Congolese flora: a database of copper affinity and conservational value of cuprophytes. *Pl. Ecol. Evol.* 143 (1): 5 – 18. <https://doi.org/10.5091/plecevo.2010.411>
- Foden, W. & Potter, L. (2005a). *Lopholaena cneorifolia* (DC.) S.Moore. *National Assessment: Red List of South African Plants version 2020.1*. <http://redlist.sanbi.org/species.php?species=3021-2> [Accessed 29 Sept. 2022].
- (2005b). *Lopholaena coriifolia* (Sond.) E.Phillips & C.A.Sm. *National Assessment: Red List of South African Plants version 2020.1*. <http://redlist.sanbi.org/species.php?species=3021-3> [Accessed 20 Sept. 2022].
- (2005c). *Lopholaena dregeana* DC. *National Assessment: Red List of South African Plants version 2020.1*. <http://redlist.sanbi.org/species.php?species=3021-5> [Accessed 29 Sept. 2022].
- (2005d). *Lopholaena platyphylla* Benth. *National Assessment: Red List of South African Plants version 2020.1*. <http://redlist.sanbi.org/species.php?species=3021-8> [Accessed 29 Sept. 2022].
- (2005e). *Lopholaena segmentata* (Oliv.) S.Moore. *National Assessment: Red List of South African Plants version 2020.1*. <http://redlist.sanbi.org/species.php?species=3021-10> [Accessed 29 Sept. 2022].
- Fries, R. E. (1916). Botanische Untersuchungen. Heft II. Monocotyledones und Sympetalae. *Wissenschaftliche Ergebnisse der Schwedischen Rhodesia-Kongo-Expedition 1911-1912 unter Leitung von Eric Graf von Rosen*. Aftonbladet’s Druckeri, Stockholm. Band 1: [185 –]– 354 & Tafel 14 – 22.
- Harvey W. H. & Sonder, O. W. (1865). *Flora Capensis: being a systematic description of the plants of the Cape Colony, Caffraria, & Port Natal*. Vol. 3. Rubiaceae to Campanulaceae. Hodges, Smith, & Co., Dublin; I.C. Juta, Capetown. [Compositae: 44 – 530]. <https://www.biodiversitylibrary.org/item/15235#page/50/mode/1up>
- Hassler, M. (2019). World Plants: Synonymic Checklists of the Vascular Plants of the World (vers. Nov. 2018). In: Y. Roskov, G. Ower, T. Orrell, D. Nicolson, N. Bailly, P. M. Kirk, T. Bourgoin, R. E. DeWalt, W. Decock, E. van Nieukerken, J. Zarucchi & L. Penev (eds), *Species 2000 & ITIS Catalogue of Life, 2019 Annual Checklist*. Digital resource at <https://www.catalogueoflife.org/annual-checklist/2019>. Species 2000: Naturalis, Leiden, Netherlands. ISSN 2405-884X.
- Heath, P. V. (1997). Three new generic names in Asteraceae (part 1). *Calyx* 5 (4): 136. [Note: Only one genus, *Curio*, was treated, without introduction, in this short paper].
- Helme, N. [A.] & Desmet, P. [G.] (2006). *A description of the endemic flora and vegetation of the Kamiesberg Uplands, Namaqualand, South Africa*. A report funded by the Critical Ecosystem Partnership Fund of Conservation International, Washington, DC.
- , Raimondo, D. & von Staden, L. (2017). *Lopholaena longipes* (Harv.) Thell. *National Assessment:*

- Red List of South African Plants version 2020.1*. <http://redlist.sanbi.org/species.php?species=3021-7> [Accessed 29 Sept. 2022].
- Hiern, W. P. (December 1898). Compositae. *Catalogue of the African plants collected by Dr. Friedrich Welwitsch in 1853 – 61*. Dicotyledons, Part III: pp. 512 – 624. Dipsacaceae to Scrophulariaceae. Trustees [of the British Museum (Natural History)], London. <https://www.biodiversitylibrary.org/item/117430#page/8/mode/1up>
- Hilliard, O. M. & Burt, B. L. (1975). Notes on some plants of southern Africa chiefly from Natal: IV. *Notes Roy. Bot. Gard. Edinburgh* 34 (1): 73 – 100 [Compositae: 76 – 100].
- Hoffmann, O. (19 Nov. 1901). Compositae. In: A. Engler, Berichte über die botanischen Ergebnisse der Nyassa-See- und Kinga-Gebirgs-Expedition der Hermann- und Elise-geb. Heckmann-Wentzel-Stiftung. IV. Die von W. Goetze am Ruckwa-See und Nyassa-See, sowie in den zwischen beiden Seen gelegenen Gebirgsländern, insbesondere dem Kinga-Gebirge gesammelten Pflanzen (Schluss), nebst einigen Nachträgen (durch * bezeichnet) zu Bericht III. Mit Tafel IX – XXII und 8 Figuren im Text. *Bot. Jahrb. Syst.* 30 (3–4): 421 – 445. [Note: the whole paper: 30 (2): 239 – 288 (2 July 1901); 30 (3–4): 289 – 445 (19 Nov. 1901), beginning with Engler's short introduction in *Bot. Jahrb. Syst.* 30 (2): 239 – 240]. <https://www.biodiversitylibrary.org/item/137005#page/465/mode/1up>
- Hutchinson, J. (1907). In: Diagnoses Africanæ: XIX. *Bull. Misc. Inform., Kew* 1907 (2): 45 – 55. <https://www.jstor.org/stable/4111624>
- Hyde, M. A., Wursten, B. T., Ballings, P. & Coates Palgrave, M. (2023). *Flora of Zimbabwe*. Species information of: *Lopholaena* sp.no.1. https://www.zimbabweflora.co.zw/speciesdata/species.php?species_id=160940, [retrieved 16 August 2023].
- Jackson, B. D. (27 Oct. 1894). *Index Kewensis: An enumeration of the genera and species of flowering plants from the time of Linnaeus to the year 1885 inclusive together with their authors' names, the works in which they were first published, their native countries and their synonyms*. Compiled at the expense of the late Charles Robert Darwin under the direction of Joseph D. Hooker by B. Daydon Jackson. Vol. 2 (1, fasc. 3): Kab – Ptero. Clarendon Press, Oxford. <https://www.biodiversitylibrary.org/item/134368#page/400/mode/1up>
- Jeffrey, C. (1986). The Senecioneae in East Tropical Africa: Notes on Compositae: IV. *Kew Bull.* 41 (4): 873 – 943. <https://www.jstor.org/stable/4102988>
- ____ & Beentje, H. J. (2005). Senecioneae. In: H. J. Beentje & S. A. Ghazanfar (eds), *Flora of Tropical East Africa*. Compositae (Part 3). Royal Botanic Gardens, Kew. pp. 547 – 702. [*Lopholaena*: 569 – 572].
- Johannsmeier, M. F. (2016). Beeplants of South Africa. Sources of nectar, pollen, honeydew and propolis for honeybees. *Strelitzia* 37. South African National Biodiversity Institute, Pretoria. https://www.sanbi.org/wp-content/uploads/2024/05/2016_Strelitzia37.pdf
- Kamundi, D. A. & Victor, J. E. (2005). *Lopholaena festiva* Brusse. National Assessment: Red List of South African Plants version 2020.1. <http://redlist.sanbi.org/species.php?species=3021-6> [Accessed 29 Sept. 2022].
- Kuntze, O. (1891). *Revisio generum plantarum vascularium omnium atque cellularium multarum secundum leges nomenclaturae internationales cum enumeratione plantarum exoticarum in itinere mundi collectarum*. Pars I. Mit erläuterungen von Dr. Otto Kuntze. Felix, Leipzig; Dulau & Co., London; Hoepli, Milano; Stechert, New York; Klincksieck, Paris. <https://www.biodiversitylibrary.org/item/7555#page/1/mode/1up>
- Meersseman, A., Faucon, M.-P., Meerts, P., Mahy, G., Malaisse, F. & Ngongo Luhembwe, M. (2014). *Lopholaena deltoembei*. The IUCN Red List of Threatened Species 2014: e.T195393A2381926. <https://doi.org/10.2305/IUCN.UK.2014-1.RLTS.T195393A2381926.en>. [Accessed 29 Sept. 2022].
- Merxmüller, H. (1951). Compositae. In: K. Suessenguth & H. Merxmüller, A contribution to the flora of the Marandellas district, Southern Rhodesia. Being an elaboration of the Dehn collection, with an introduction on the geography and general vegetation of the area, by H. Wild. [*Proc.*] *Trans. Rhodesia Sci. Assoc.* 43: 1 – [Compositae: 63 – 73] – 86.
- ____ (1967). 139 Asteraceae & 140 Cichoriaceae. *Prodromus: einer flora von Südwestafrika*. Cramer, Lehre. [*Lopholaena*: 110].
- Moore, S. Le M. (April 1903). Dr. Rand's Johannesburg Compositae. In: *Alabastra Diversa*. – Part X. *J. Bot.* 41 (No. 484): 131 – 139. <https://www.biodiversitylibrary.org/item/109880#page/141/mode/1up>
- ____ (30 Sept. 1904). Compositae. In: H. Schinz (ed.), Beiträge zur Kenntnis der Afrikanischen-Flora (Neue Folge.) XVI. *Bull. Herb. Boissier*, sér. 2, 4 (10): 1011 – 1025. [*Lopholaena*: 1021]. <https://www.biodiversitylibrary.org/item/104955#page/1071/mode/1up>
- ____ (1911). A contribution to our knowledge of the flora of Gazaland: being an account of collections made by C. F. M. Swynnerton, Esq., F.L.S. By Dr. A. B. Rendle, F.R.S., F.L.S., Mr. E. G. Baker, F.L.S., Mr. S. Moore, F.L.S., and Mr. A. Gepp, F.L.S.; with notes by Mr. Swynnerton. *J. Linn. Soc., Bot.* 40 (No. 275): 1 – 245. [Compositae: 103 – 124]. <https://www.biodiversitylibrary.org/item/8405#page/111/mode/1up>
- ____ (Oct. 1929). The genus *Lopholaena* DC. In: *Alabastra Diversa*. XXXVI. 2. Notes on African Compositae. *J. Bot.* 67 (No. 802): 274 – 276.
- Nordenstam, B. (2012). *Crassothonna* B. Nord., a new African genus of succulent Compositae-Senecioneae. *Compositae Newsl.* 50: 70 – 77. <https://www.biodiversitylibrary.org/item/128427#page/72/mode/1up>

- Oliver, D. (December 1885). *Senecio segmentatus*, Oliv. Compositae, Tribe Senecionideae. *Hooker's Icon. Pl.*, ser. 3, 5 (4) [or 15 (4) of the whole work]: 65 – 66, tab. 1483. <https://www.biodiversitylibrary.org/item/54716#page/66/mode/1up>
- ____ & Hiern, W. P. (1877). *Othonna* Linn. *Flora of Tropical Africa*, Vol. III. Umbelliferae to Ebenaceae. L. Reeve & Co., London. p. 423. <https://www.biodiversitylibrary.org/item/125#page/3/mode/1up>
- Pelster, P. B., Nordenstam, B., Kadereit, J. W. & Watson, L. E. (2007). An ITS phylogeny of tribe Senecioneae (Asteraceae) and a new delimitation of *Senecio* L. *Taxon* 56 (4): 1077 – 1104. <https://doi.org/10.2307/25065905>
- ____, Kennedy, A. H., Tepe, E. J., Shidler, J. B., Nordenstam, B., Kadereit, J. W. & Watson, L. E. (2010). Patterns and causes of incongruence between plastid and nuclear Senecioneae (Asteraceae) phylogenies. *Amer. J. Bot.* 97 (5) 856 – 873. <https://doi.org/10.3732/ajb.0900287>
- Phillips, E. P. & Smith, C. A. (Jan. 1933). A revision of the genus *Lopholaena* DC. *Trans. Roy. Soc. South Africa* 21 (3): 221 – 239. [Note: In several accounts the date of publication is cited as '1934', rarely '1932' (APD 2022), yet the reprint at K is clearly dated '1933' on the cover. I can only assume that the later date is for the binding of the complete, four-part, volume; 21 (1) and 21 (2) were published in 1932]. <https://doi.org/10.1080/00359193309518879>
- POWO (2022). *Plants of the World Online*. Facilitated by The Royal Botanic Gardens, Kew. Published on the Internet. <http://www.plantsoftheworldonline.org/> [Accessed 3 Oct. 2022].
- Prain, D. (20 May 1908). *Index Kewensis plantarum phanerogamarum supplementum tertium, nomina et synonyma omnium generum et specierum ab initio anni MDCCCCI usque ad finem anni MDCCCCV complectens*. Ductu et consilio D. Prain confecerunt Herbarii Horti Regii Botanici Kewensis curatores. Clarendon Press, Oxonii.
- Raimondo, D., von Staden, L., Foden, W., Victor, J. E., Helme, N. A., Turner, R. C., Kamundi, D. A. & Manyama, P. A. (2009). Red List of South African Plants. *Strelitzia* 25. South African National Biodiversity Institute, Pretoria.
- Rowley, G. D. (contributor). (2002). *Senecio*. In: U. Eggli (ed.), *Illustrated handbook of succulent plants: Dicotyledons*, pp. 29 – 43. Springer-Verlag, Berlin, Heidelberg, New York.
- von Staden, L. (2020). *Lopholaena disticha* (N.E.Br.) S.Moore. *National Assessment: Red List of South African Plants version 2020.1*. <http://redlist.sanbi.org/species.php?species=3021-4> [Accessed 29 Sept. 2022].
- Thellung, A. (1921). Compositae. In: H. Schinz (ed.), I. Beiträge zur Kenntnis der afrikanischen Flora (XXX). *Mitt. Bot. Mus. Univ. Zürich* (XCII). *Vierteljahrsschr. Naturf. Ges. Zürich* 66: 234 – 256. [Whole paper: 221 – 256].
- Thiers, B. (continuously updated). *Index Herbariorum: a global directory of public herbaria and associated staff*. <http://sweetgum.nybg.org/science/ih/> [Accessed 1 Oct. 2022].
- Timberlake, J. R., Darbyshire, I., Wursten, B., Hadj-Hammou, J., Ballings, P., Mapaura, A., Matimele, H., Banze, A., Chipanga, H., Muassinar, F., Massunde, M., Chelene, I., Osborne, J. & Shah, T. (2016). *Chimanmani Mountains: Botany and Conservation*. Report produced under CEPF Grant 63512. Royal Botanic Gardens, Kew.
- WCVP (2022). *World Checklist of Vascular Plants*, vers. 2.0. Facilitated by The Royal Botanic Gardens, Kew. Published on the Internet. <http://wcvp.science.kew.org/> [Accessed 3 Oct. 2022].

Index to names pertinent to *Lopholaena*

- Curio avasimontanus* (Dinter) P.V.Heath, *Calyx* 5 (4): 136 (1997) = ***Lopholaena cneorifolia*** (DC.) S.Moore
- Doria cneorifolia* DC., *Prodr.* 6: 470 (de Candolle early Jan. 1838) = ***Lopholaena cneorifolia*** (DC.) S.Moore
- Doria longipes* Harv., *Fl. Cap.* (Harvey & Sonder) 3: 322 (Harvey in Harvey & Sonder 1865) = ***Lopholaena longipes*** (Harv.) Thell.
- Hertia cneorifolia* (DC.) Kuntze, *Revis. Gen. Pl.* 1: 344 (1891) = ***Lopholaena cneorifolia*** (DC.) S.Moore
- Lopholaena acutifolia*** R.E.Fr., *Wiss. Ergebn. Schwed. Rhodesia-Kongo-Exped.* 1911 – 1912 1: 341 (Fries 1916).
- Lopholaena alata* P.A.Duvign., *Bull. Soc. Roy. Bot. Belgique* 91 (2): 148 (Duvigneaud & Timperman 1959) = ***Lopholaena acutifolia*** R.E.Fr.
- Lopholaena bainesii* S.Moore, *J. Bot.* 67 (802): 275, in key (1929) = ***Lopholaena glaucescens*** E.Phillips & C.A.Sm.
- Lopholaena brevipes* E.Phillips & C.A.Sm., *Trans. Roy. Soc. South Africa* 21 (3): 236 (Phillips & Smith 1933) = ***Lopholaena whyteana*** (Britten) E.Phillips & C.A.Sm.
- Lopholaena brickellioides*** S.Moore, *J. Linn. Soc., Bot.* 40 (275): 118 (1911).
- Lopholaena cneorifolia*** (DC.) S.Moore, *Bull. Herb. Boissier*, sér. 2, 4 (10): 1021 (1904).
- Lopholaena coriifolia*** (Sond.) E.Phillips & C.A.Sm., *Trans. Roy. Soc. South Africa* 21 (3): 234 (Phillips & Smith 1933).
- Lopholaena decurrens*** (Hutch.) E.Phillips & C.A.Sm., *Trans. Roy. Soc. South Africa* 21 (3): 229 (Phillips & Smith 1933).
- Lopholaena dehniae* Merxm., [Proc.] *Trans. Rhodesia Sci. Assoc.* 43: 66 (Merxmüller 1951) = ***Lopholaena coriifolia*** (Sond.) E.Phillips & C.A.Sm.
- Lopholaena deltombei*** P.A.Duvign., *Bull. Soc. Roy. Bot. Belgique* 91 (2): 147 (Duvigneaud & Timperman 1959)
- Lopholaena disticha*** (N.E.Br.) S.Moore, *Bull. Herb. Boissier*, sér. 2, 4 (10): 1021 (1904)
- Lopholaena disticha* (N.E.Br.) Prain, *Index Kew.*, Suppl. 3: 106 (1908), nom. illeg., isonym = ***Lopholaena disticha*** (N.E.Br.) S.Moore
- Lopholaena dolichopappa* (O.Hoffm.) S.Moore, *Bull. Herb. Boissier*, sér. 2, 4 (10): 1021 (30 Sept. 1904) = ***Lopholaena whyteana*** (Britten) E.Phillips & C.A.Sm.

- ‘*Lopholaena dolichopappa* (O.Hoffm.) S.Moore, *J. Bot.* 41 (484): 134 (Apr. 1903)’ = ***Lopholaena whyteana* (Britten) E.Phillips & C.A.Sm.**
- Lopholaena dolichopappa* (O.Hoffm.) Prain, *Index Kew., Suppl.* 3: 106 (1908), nom. illeg., isonym. = ***Lopholaena whyteana* (Britten) E.Phillips & C.A.Sm.**
- Lopholaena dregeana* DC., *Prodr.* 6: 336 (early Jan. 1838).**
- Lopholaena festiva* Brusse, *Nordic J. Bot.* 11 (1): 79 (1991).**
- Lopholaena glaucescens* E.Phillips & C.A.Sm., *Trans. Roy. Soc. South Africa* 21 (3): 233 (Phillips & Smith 1933).**
- Lopholaena longipes* (Harv.) Thell., *Vierteljahrsschr. Naturf. Ges. Zürich* 66: 243 (Thellung 1921).**
- Lopholaena pauciflora* Thell., *Vierteljahrsschr. Naturf. Ges. Zürich* 66: 242 (Thellung 1921) = ***Lopholaena whyteana* (Britten) E.Phillips & C.A.Sm.**
- Lopholaena phippsii* D.J.N.Hind**
- Lopholaena phyllodes* (Hiern) S.Moore, *J. Bot.* 67 (802): 274, 275 (1929).**
- Lopholaena platyphylla* Benth., *Hooker's Icon. Pl.* 12: 12, Plate 1113 (Bentham Aug. 1876).**
- Lopholaena randii* S.Moore, *J. Bot.* 41 (484): 133 (1903) = ***Lopholaena coriifolia* (Sond.) E.Phillips & C.A.Sm.**
- Lopholaena randii* S.Moore var. *brachycephala* S.Moore, *J. Bot.* 67 (802): 275 (1929) = ***Lopholaena coriifolia* (Sond.) E.Phillips & C.A.Sm.**
- Lopholaena segmentata* (Oliv.) S.Moore, *Bull. Herb. Boissier*, sér. 2, 4 (10): 1021 (1904).**
- Lopholaena trianthema* (O.Hoffm.) B.L.Burt, *Notes Roy. Bot. Gard. Edinburgh* 34 (1): 85 (Hilliard & Burt 1975).**
- Lopholaena ussanguensis* (O.Hoffm.) S.Moore, *J. Bot.* 67 (802): 275 (1929).**
- Lopholaena whyteana* (Britten) E.Phillips & C.A.Sm., *Trans. Roy. Soc. South Africa* 21 (3): 236 (Phillips & Smith 1933).**
- Othonna avasimontana* [(Dinter)] Dinter, *Repert. Spec. Nov. Regni Veg. Beih.* 53: 112 (1928) = ***Lopholaena cneorifolia* (DC.) S.Moore**
- Othonna bainesii* Oliv. & Hiern, *Fl. Trop. Afr.* 3: 423 (Oliver & Hiern 1877) = ***Lopholaena coriifolia* (Sond.) E.Phillips & C.A.Sm.**
- Othonna? coriifolia* Sond., *Fl. Cap.* (Harvey & Sonder) 3: 333 (Sonder in Harvey & Sonder 1865) = ***Lopholaena coriifolia* (Sond.) E.Phillips & C.A.Sm.**
- Othonna decurrens* Hutch., *Bull. Misc. Inform., Kew* 1907 (2): 50 (Hutchinson 1907) = ***Lopholaena decurrens* (Hutch.) E.Phillips & C.A.Sm.**
- Othonna disticha* N.E.Br., *Bull. Misc. Inform., Kew* 1895 (97): 16 (Brown 1895) = ***Lopholaena disticha* (N.E.Br.) S.Moore**
- Othonna whyteana* Britten, *Trans. Linn. Soc. London, Bot.* 4 (1): 21 (1894) = ***Lopholaena whyteana* (Britten) E.Phillips & C.A.Sm.**
- Othonnopsis cneorifolia* (DC.) B.D.Jacks., *Index Kew.* 2 (1 fasc. 3): 789 (Jackson 1894) = ***Lopholaena cneorifolia* (DC.) S.Moore**
- Senecio avasimontanus* Dinter, *Repert. Spec. Nov. Regni Veg.* 19 (8 – 10): 141 (1923) = ***Lopholaena cneorifolia* (DC.) S.Moore**
- Senecio dolichopappus* O.Hoffm., *Bot. Jahrb. Syst.* 30 (3): 438, t. 18 (Hoffmann 1901) = ***Lopholaena whyteana* (Britten) E.Phillips & C.A.Sm.**
- Senecio segmentatus* Oliv., *Hooker's Icon. Pl.*, ser. 3, 15 (4): 65 – 66, tab. 1483 (Oliver 1885) = ***Lopholaena segmentata* (Oliv.) S.Moore**
- ‘*Senecio trianthemos* O.Hoffm., *Bot. Jahrb. Syst.* 30 (3): 437 ([Hoffmann] 1901)’, as ‘S. (§ Kleinia) trianthemos)’ = ***Lopholaena trianthema* (O.Hoffm.) B.L.Burt**
- Vernonia phyllodes* Hiern, *Cat. Afr. Pl.* (Hiern) 1 (3): 525 (1898) = ***Lopholaena phyllodes* (Hiern) S.Moore**

Publisher's Note

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.