

Nomenclatural adjustments in African plants 2

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Background: Ongoing systematic studies in the African flora necessitate periodic nomenclatural adjustments and corrections.

Objectives: To effect requisite nomenclatural changes.

Method: Relevant literature was surveyed and type material located and examined.

Results: Nomenclatural corrections are published in *Mairia* Nees (Asteraceae) and *Psilosiphon* Welw. ex Goldblatt & J.C.Manning, nom illeg. (Iridaceae).

Conclusions: *Cineraria purpurata* L. (1771) (Asteraceae) is recognised as the earliest name for *Mairia hirsuta* DC. (1836) and the new combination *M. purpurata* (L.) J.C.Manning is provided for the species. *Psilosiphon* Welw. ex Goldblatt & J.C.Manning (2015) (Iridaceae) is a later homonym for *Psilosiphon* Entwisle (1989). The replacement name *Afrosolen* Goldblatt & J.C.Manning is proposed and the necessary new combinations for the 16 taxa currently recognised in the genus are provided.

1. *Cineraria purpurata* L. is an earlier name for *Mairia hirsuta* DC. (Asteraceae: Astereae)

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Introduction

The identity of *Cineraria purpurata* L. (1771) has remained uncertain until now. It was described by Linnaeus from one of over 200 specimens of Cape plants sent to him by the Governor at the Cape, Rijk Tulbagh (1699–1771), appointed to the post in 1751. Tulbagh had an abiding interest in natural history, and letters in the Cape Archives attest that he regularly sent staff members of the Company's garden into the interior 'ter opsoeking en versameling van Planten, gewassen, kruidjen en Insecten' ['to search for and collect plants, crops, herbs and insects'] (Glenn & Germishuizen 2010). Although relatively detailed for the time, the description provided by Linnaeus (1771) was certainly not enough to identify the species on its own, and the name was subsequently included by De Candolle (1836) amongst the 11 species of *Cineraria* that were inadequately known to him. The name then disappeared from the botanical literature, and it is not cited by Harvey (1865) in his treatment of the family for the *Flora capensis*. It reappears as one of the species excluded from *Cineraria* L. by Cron *et al.* (2006) in their revision of the genus, where they lectotypify it against *Tulbagh 44* in the Linnean Herbarium (LINN) but without further comment as to its identity. Although now linked to a specimen, the application of the name remained uncertain (Jarvis 2007) until we examined the type and recognised it as the species currently known as *Mairia hirsuta* DC.

The description of *C. purpurata* L. is relatively complete, including the habit [herbaceous with simple, sulcate stems] and foliage, with details of the leaf shape, margins and vestiture [alternate and basally congested, petiolate and obovate with revolute and subserrate or serrulate margins, the blade pubescent above and tomentose beneath], and comparative size [as large as those of *Chrysanthemum leucanthum*], the nature and approximate size of the inflorescence [pedunculate with a solitary head as large as that in *Amellus*] and the involucre [phyllaries free, subequal and pubescent], the colour of the rays [purple], and the observation that the pappus bristles are plumose (Figure 1). The combination of herbaceous habit, moderately large capitula with purple rays, and

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FIGURE 1: Lectotype of *Cineraria purpurata* L. South Africa, 'Cap. B. spei', Tulbagh 44, Herb. Linn. No. 1000.26 (LINN).

plumose pappus bristles is diagnostic of the genus *Mairia* Nees amongst southern African Asteraceae, and this identification is confirmed by examination of the lectotype (Figure 2). This small genus of six species endemic to the Cape Floristic Region of southern Africa is defined by its geophytic,

scapose habit with mostly broad, leathery leaves, female-fertile ray florets with white or pink to purple limb, and ribbed cypselas with a biseriate pappus, the outer series of reduced barbellate or plumose bristles and the inner of plumose bristles (Herman & Zinnecker-Wiegand 2016).

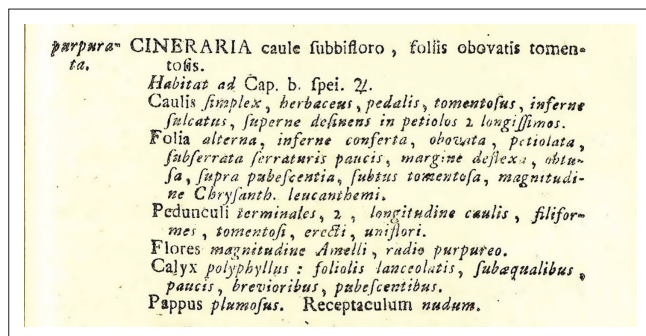


FIGURE 2: Protologue of *Cineraria purpurata* L., *Mantissa plantarum altera*: 285 (1771).

The recent publication of a detailed revision of the genus *Mairia* by Herman and Zinnecker-Wiegand (2016) enables us to identify *C. purpurata* as conspecific with *M. hirsuta*. This Langeberg endemic is unique in the genus in having the alternately inserted leaves rather more loosely aggregated towards the base of the stem than in the other species, in which they are strictly rosulate. The margins are revolute and regularly crenate or crenate-serrate, and the blades are elliptic to obovate, and glabrous to loosely lanate above and densely or more sparsely lanate beneath. As the earlier name *C. purpurata* takes priority over *M. hirsuta* (McNeil *et al.* 2012:Art. 11.3), we provide the necessary new combination and synonymy below.

The date and collector of Tulbagh's *C. purpurata* remain unknown. Tulbagh sent a major expedition from Cape Town to the Eastern Cape in 1752, during which plants were collected by Hendrik Beenke of Celle, overseer of the Company's 'Schoor' [barn], and which would have passed along the foothills of the Langeberg, where the species is endemic. Alternatively, and in our opinion more likely, the species was collected by Johann Auge (1711–1805) on a more strictly botanical expedition. Auge was promoted to superintendent of the Company's Garden by Tulbagh, and given ample opportunity to visit distant parts of the colony in search of plants. His selection by the Swedish botanist Carl Thunberg (1743–1828) as guide on the latter's journey to the Eastern Cape in 1772–1773 presupposes Auge's familiarity with the route, indicating that he had travelled it before then, on which occasion/s he too would have had opportunity of collecting *C. purpurata* on the Langeberg. By this time Auge had accumulated a significant herbarium, part of which was purchased in 1764 and formed the basis of Bergius's *Descriptiones plantarum ex Capite Bonae Spei* (1767). At least some of these species were also described by Linnaeus in his *Mantissa plantarum* (1767).

Taxonomic treatment

Mairia purpurata (L.) J.C.Manning, *comb. nov.* *Cineraria purpurata* L., *Mant. Pl. altera*: 285 (1771). Type: South Africa, 'Cap. B. spei.', Tulbagh 44, Herb. Linn. No. 1000.26 [LINN, lecto.-image!, designated by Cron *et al.* (2006:529)].

Mairia hirsuta DC., *Prodr.* 5: 217 (1836), *syn. nov.* *Zyrphelis hirsuta* (DC.) Kuntze, *Revis. Gen. pl.* 1: 374 (1891). Type: South Africa, Western Cape, 'Zwellendam, am Berge bei

Puspasvlei, Voormansbosch, Duivelsbosch und am Fuss Keureboomrivier, Oct., Ecklon & Zeyher 3071 (G-DC, holo.-image!, K-image!, M, P-image!, NBG!, PRE!, S, SAM!, iso.).

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Paul Herman confirmed the identification of *Cineraria purpurata* and suggested valuable corrections to the manuscript.

Competing interests

The author declares that he has no financial or personal relationships which may have inappropriately influenced him in writing this article.

2. *Afrosolen* Goldblatt & J.C.Manning, a new name for *Psilosiphon* Welw. ex Goldblatt & J.C.Manning (Iridaceae), with new combinations

Authors: Peter Goldblatt and John C. Manning

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Introduction

The name *Psilosiphon* Entwisle (1989), published for a genus of algae in the family Lemnaceae (now Batrachospermaceae) predates *Psilosiphon* Welw. ex Goldblatt & J.C.Manning (2015), established for 15 species of tropical and southern Africa Iridaceae that were segregated from *Lapeirousia* Pourr (Goldblatt & Manning 2015). Although *Psilosiphon* Welw. was cited in synonymy under *Lapeirousia* by J.G. Baker (1878), it was validated only by Goldblatt & Manning (2015) and is thus an illegitimate homonym. We propose the new name *Afrosolen* for this genus of Iridaceae subfamily Crocoideae. The generic name reflects the tubular perianth of this widespread African genus (Greek *solen* = pipe).

New combinations are provided for the species recognized by Goldblatt & Manning (2015).

Taxonomic treatment

Note: Heterotypic synonyms are not included below but are presented in full by Goldblatt (1990) and Goldblatt & Manning (2015).

Afrosolen Goldblatt & J.C.Manning, *nom. nov.* pro *Psilosiphon* Welw. ex Goldblatt & J.C.Manning in *Strelitzia* 35: 108 (2015), *nom. illeg.* [non *Psilosiphon* Entwisle (1989)]. Type: *P. sandersonii* (Baker) Goldblatt & J.C.Manning.

A. abyssinicus (R.Br. ex A.Rich.) Goldblatt & J.C.Manning, *comb. nov.* *Geissorhiza abyssinica* R.Br. ex A.Rich., *Tent. Fl. Abyss.* 2: 308 (1850). *Lapeirousia abyssinica* (R.Br. ex A.Rich.) Baker in *J. Linn. Soc., Bot.* 16: 155 (1877). *Psilosiphon abyssinicus*

(R.Br. ex A.Rich.) Goldblatt & J.C.Manning in *Strelitzia* 35: 137 (2015). Type: Ethiopia, 'Maigoigoi ad Dobre Sina', *Quartin Dillon & Petit s.n.* (P, lecto.! designated by Goldblatt: 459 (1990); P!, BR!, isolecto.).

A. avasmontanus (Dinter) Goldblatt & J.C.Manning, *comb. nov.* *Lapeirousia avasmontana* Dinter in *Repert. Spec. Nov. Regni. Veg.* 29: 256 (1931). *Psilosiphon avasmontanus* (Dinter) Goldblatt & J.C.Manning in *Strelitzia* 35: 114 (2015). Type: Namibia, Lichtenstein, Auas Mts., 20 Feb. 1923, *Dinter 4454* (B, holo.!; GH!, S!, Z! (3 sheets), iso., K!, photo of specimen at B]).

A. bainesii (Baker) Goldblatt & J.C.Manning, *comb. nov.* *Lapeirousia bainesii* Baker in *J. Bot.* 14: 338 (1876). *Psilosiphon bainesii* (Baker) Goldblatt & J.C.Manning in *Strelitzia* 35: 130 (2015). Type: Botswana, Kobe Pan [as 'inter Koobie et N Shaw valley'], *Baines s.n.* (K, lecto.!, effectively designated by N.E.Brown on specimen).

A. coeruleus (Schinz) Goldblatt & Manning, *comb. nov.* *Lapeirousia coerulea* Schinz in *Verh. Bot. Vereins Prov. Brandenburg* 31: 212–213 (1890). *Psilosiphon coeruleus* (Schinz) Goldblatt & Manning in *Strelitzia* 35: 121 (2015). Type: Namibia, (Upingtonia), Ombale, südost Ondonga, Mar. 1886, *Schinz 13* (K, lecto.!, designated by Goldblatt: 445 (1990); COI!, isolecto.).

A. erongoensis (Goldblatt & J.C.Manning) Goldblatt & Manning, *comb. nov.* *Psilosiphon erongoensis* Goldblatt & J.C.Manning in *Strelitzia* 35: 119 (2015). Type: Namibia, 2115 (Karibib): Erongo Mtns, western edge of the Erongo Mtns above Farm Ameib, (–DA), 27 Mar. 1976, *Craven & Craven 115* (WIND, holo.!; PRE!, iso.).

A. erythranthus (Klotzsch ex Klatt) Goldblatt & J.C.Manning, *comb. nov.* *Ovieda erythrantha* Klotzsch ex Klatt in *Peters, Naturw. Reise Mossambique* 6 (Bot., 2): 516, t. 58 (1864). *Lapeirousia erythrantha* (Klotzsch ex Klatt) Baker in *J. Linn. Soc., Bot.* 16: 155 (1877). *Psilosiphon erythranthus* (Klotzsch ex Klatt) Goldblatt & J.C.Manning in *Strelitzia* 35: 123 (2015). Type: Mozambique, Boror, Caboceira, *Peters s.n.* (B, holo.!).

A. gracilis (Vaupel) Goldblatt & J.C.Manning, *comb. nov.* *Lapeirousia gracilis* Vaupel in *Bot. Jahrb. Syst.* 48: 548 (1912). *Psilosiphon gracilis* (Vaupel) Goldblatt & J.C.Manning in *Strelitzia* 35: 117 (2015). Type: Namibia, 'Great Namaqualand, Doorns', dolomite, 1 450 m, Mar. 1907, *Range 292* (B, holo.— (K, photo!; M (fragment)!, iso.).

A. masukuensis (Vaupel & Schltr.) Goldblatt & J.C.Manning, *comb. nov.* *Lapeirousia masukuensis* Vaupel & Schltr. in *Vaupel in Bot. Jahrb. Syst.* 48: 543 (1912). *Psilosiphon masukuensis* (Vaupel & Schltr.) Goldblatt & J.C.Manning in *Strelitzia* 35: 126 (2015). Type: Mozambique, Inhambane: Masuku forest [Insilva Maseku], 10 Feb. 1898, *Schlechter 12109* (B!, holo.; BR!, COI!, G, K!, P!, PRE!, SAM!, iso.).

A. otaviensis (R.C.Foster) Goldblatt & J.C.Manning, *comb. nov.* *Lapeirousia otaviensis* R.C.Foster in *Contrib. Gray Herb.* 127: 45 (1939). *Psilosiphon otaviensis* (R.C.Foster) Goldblatt & J.C.Manning in *Strelitzia* 35: 128 (2015). Type: Namibia, Farm Auros near Otavi, 11 Feb. 1925, *Dinter 5577* (GH, holo.; B!, G, PRE!, SAM!, Z(3 sheets)!, iso.).

A. rivularis (Wanntorp) Goldblatt & J.C.Manning, *comb. nov.* *Lapeirousia rivularis* Wanntorp in *Svensk Bot. Tidsk.* 65: 53 (1971). *Psilosiphon rivularis* (Wanntorp) Goldblatt & J.C.Manning in *Strelitzia* 35: 119 (2015). Type: Namibia, Karibib, Ameib Ranch, ± 25 km NE of Usakos, granite kopje [koppie] south of track, ± 5 km east of farmhouse, 15 Apr. 1968, *Wanntorp & Wanntorp 907* (S, holo.!; M!, iso.).

A. sandersonii (Baker) Goldblatt & J.C.Manning, *comb. nov.* *Lapeirousia sandersonii* Baker, *Handb. Irid.*: 169 (1892). *Psilosiphon sandersonii* (Baker) Goldblatt & J.C.Manning in *Strelitzia* 35: 109 (2015). Type: South Africa, 'Transvaal', *Sanderson s.n.* [K, lecto.! designated by Goldblatt: 463 (1990)].

A. sandersonii subsp. *limpopoensis* (Goldblatt & J.C.Manning) Goldblatt & J.C.Manning, *comb. nov.* *Psilosiphon sandersonii* subsp. *limpopoensis* Goldblatt & J.C.Manning in *Strelitzia* 35: 114 (2015). Type: South Africa, Limpopo, Waterberg, between Groothoek and Vaalwater, 1 000 m, 6 Jan. 1959, *Werdermann & Oberdieck 1640* (PRE, holo.!; B!, BR!, GH!, K!, MO!, WAG!, iso.).

A. schimperi (Aschers. & Klatt) Goldblatt & J.C.Manning, *comb. nov.* *Tritonia schimperi* Aschers. & Klatt in *Klatt in Linnaea* 34: 697 (1866). *Acidanthera unicolor* Hochst. ex Baker in *J. Linn. Soc., Bot.* 16: 160 (1877), *nom. illeg. superfl.* pro *Tritonia schimperi* Aschers. & Klatt. *Lapeirousia schimperi* (Aschers. & Klatt) Milne-Redh. in *Kew Bull.* 1934: 307 (1934). *Acidanthera schimperi* (Aschers. & Klatt) R.C.Foster in *Contrib. Gray Herb.* 114: 42 (1936). *Psilosiphon schimperi* (Aschers. & Klatt) Goldblatt & J.C.Manning in *Strelitzia* 35: 133 (2015). Type: Ethiopia, Tigray: woods and thickets near Goelleb on the river Tacazze, 4000 ft [1 220 m], *Schimper 2304* (B lecto.! designated by Goldblatt: 472 [1990] B!, G!, K!, P!, isolecto.).

A. setifolius (Harms) Goldblatt & J.C.Manning, *comb. nov.* *Lapeirousia setifolia* Harms in *Engler, Bot. Jahrb. Syst.* 30: 278 (1901). *Lapeirousia erythrantha* var. *setifolia* (Harms) Geerinck *et al.* in *Bull. Soc. Roy. Bot. Belg.* 105: 337 (1972). *Psilosiphon setifolius* (Harms) Goldblatt & J.C.Manning in *Strelitzia* 35: 137 (2015). Type: Tanzania, Eastern Livingstone Mts, Ubena, Tsausingewe district, 2 100 m, March 1899, *Goetze 812* (B, holo.!; BR!, E!, iso.).

A. teretifolius (Geerinck *et al.*) Goldblatt & J.C.Manning, *comb. nov.* *Lapeirousia erythrantha* var. *teretifolia* Geerinck *et al.* in *Bull. Soc. Roy. Bot. Belg.* 105: 342 (1972). *Lapeirousia teretifolia* (Geerinck *et al.*) Goldblatt in *Ann. Miss. Bot. Gard.* 77: 457 (1990). *Psilosiphon teretifolius* (Geerinck *et al.*) Goldblatt & J.C.Manning in *Strelitzia* 35: 137 (2015). Type: Zaire, Shaba, Plateau de la Manika, env. 2 km W de Katema,

20 Jan. 1969, *Lisowski, Malaisse & Symoens 182* (LSHI, holo., BR!, BRVU, K!, POZG, iso.).

A. zambesiacus Goldblatt & J.C.Manning, *comb. nov.* *Lapeirousia zambeziaca* Goldblatt in *S. Afr. J. Bot.* 57: 226 (1991), *nom. nov.* pro *L. angolensis* Goldblatt in *Ann. Miss. Bot. Gard.* 77: 458 (1990), *nom. illeg.* [non *L. angolensis* (Baker) R.C.Foster (1899)]. Type: Angola, Moxico, a few miles west of R. Kaperu [Kapelu], boggy grassland, 10 Jan. 1938, *Milne-Redhead 4037* (K, holo.!, BM!, BR!, LISC!, P!, PRE!, iso.).

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The authors declare that they have no financial or personal relationships which may have inappropriately influenced them in writing this article.

Authors' contributions

Both authors, P.G. and J.C.M., collaborated on all aspects of the work.

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