

## Studies in the Ericoideae (Ericaceae). XIV. Notes on the genus *Erica*

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### ABSTRACT

Recent investigations of all the recorded southern African species of *Erica* have been undertaken to establish the characters of importance in generic delimitation in the subfamily Ericoideae. As a result several anomalies have been found in the circumscription and identification of certain species and in the nomenclature of others. The corrections and alterations are published here.

### UITTREKSEL

Ondersoeke van al die bekende Suider-Afrikaanse *Erica*-spesies is onlangs onderneem om die kenmerke wat belangrik is vir generiese afbakening in die subfamilie Ericoideae te bepaal. Verskeie ongerÿmdhede het in die omskrywing en identifikasie van sekere spesies en in die nomenklatuur van ander aan die lig gekom. Die aanpassings en veranderinge word hier gepubliseer.

### INTRODUCTION

The last full revision of the southern African members of the genus *Erica* was provided in *Flora capensis* by Guthrie & Bolus (1905). Subsequently numerous new species have been added by many workers with a major contribution being the abbreviated revision of the genus by Dulfer in 1965. In this work Dulfer did much to sort out the nomenclature and references to our species in the literature. Unfortunately he did not examine the complete collections in any of the major herbaria housing material from southern Africa, namely BM, BOL, K, NBG, PRE and STE. His revision also lacked descriptions of the species.

Since the revision by Guthrie & Bolus (1905) some 180 additional species have been added which has made it increasingly difficult to gain an overall view of the genus. Within recent years we have come across anomalies in the circumscription of certain species, in the application of names and in the identification of certain collections. These records and observations are rationalized and published in this paper.

### OVARY COMPLEMENT

The genus *Erica* is generally characterized by having a 4-locular, many ovuled ovary that forms a dehiscent capsule. Guthrie & Bolus (1905) recorded that the ovary was mostly 4-celled, very rarely 8-celled. They noted under the species treatments that the 8-celled condition occurred in only *E. perspicua* Wendl. and *E. verticillata* Berg. and 4–8 in *E. propendens* Andrews.

During our detailed examination of all 657 species of *Erica*, several additions to this list of species having non-standard ovaries have been recorded:

#### *E. macowanii* Cufino

This species is very closely related to *E. perspicua*, but was distinguished by Guthrie & Bolus as having a 4-locular ovary. Examination of an isotype in BOL and numerous recent collections has shown that the ovary is always 8-locular. The species is, in fact, very difficult to distinguish from *E. perspicua*.

#### *E. colorans* Andrews

This species is also closely related to *E. perspicua* and has been found to have 4–6-locular ovaries.

#### *E. annectens* Guthrie & Bolus

This species, which is endemic to the Cape Peninsula, was not recorded by either Guthrie & Bolus (1905) or Salter (1950) as having an 8-locular ovary.

#### *E. pinea* Thunb.

The ovary complement of this species was never mentioned by Guthrie & Bolus so we presume they regarded it as having the standard 4-locular ovary. We have found the species has 8-locular ovaries, but some collections from the Hermanus area exhibit 6-locular ovaries.

#### *E. trichophora* Benth./*E. octonaria* L. Bolus/*E. dulcis* L. Bolus

This group of species which forms a complex with *E. perspicua* Wendl. and *E. propendens* Andrews, all possess 8-locular ovaries. Esterhuysen (1963) placed *E. dulcis* in synonymy under *E. propendens* and Dulfer (1965) discussed most of the above species as very closely related under *E. perspicua*.

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## CORRECTIONS AND ALTERATIONS OF NAMES

*Erica alexandri*

Until recently this species was known from only three collections from sandy flats in the Paarl area: the type collection by Alexander-Prior of 1847, a second collection of his in K, not cited in Guthrie & Bolus (1905) and a third one by F.H. Cooper in 1922. The spread of farms and pine plantations has destroyed almost all natural vegetation on sandy flats in the area. Searches for the species in likely places in the Paarl area have not met with success.

The species was, however, recently found growing in a wetland near the Wemmershoek sawmill east of Groot Drakenstein towards Fransch Hoek. These plants match those of Alexander-Prior and Cooper exactly and are the only known surviving population of the species.

*E. alexandri* is strikingly similar to *E. acockii*, which is known only from a few collections made in the 1930's from the Brackenfell/Kraaifontein area and is listed as extinct in the South African Red Data Book (Hall & Veldhuis 1988). It has not been found since, in spite of searches of the area, including the type locality, pointed out to one of us (EGHO) by Acocks in 1965. It must be assumed that the species has been destroyed by housing development and alien acacias.

*E. acockii* grew in very similar conditions to *E. alexandri*, namely sandy flats with some indication of water seepage just below the surface. This factor may be relevant to the fact that both species flower(ed) in the driest months of the year, February through to early May. The localities of the current and former populations of the two species are only about 40 km apart.

Morphologically the two species are very similar despite the fact that they were placed in two different sections in the genus, *E. alexandri* in section *Pachysa* and *E. acockii* in Section *Pseuderemia*. Both have heads of mauvish pink sticky flowers with manifest dark anthers, long gland-tipped hairs on the leaves, stems, pedicels, bracts, bracteoles and sepals. There are only some slight differences between the collections from the two areas. The only clear difference lies in the leaves of *E. acockii* which are shorter and more rounded than those of *E. alexandri*. Surprisingly the type collection of *E. acockii* has obovoid-obconical corollas with more erect lobes as opposed to the urceolate corollas with spreading to reflexed lobes in the other collections of *E. acockii* and of *E. alexandri*.

With only one measurable difference between the two species coupled to the spatial separation of the populations, we believe that recognition of *E. acockii* at subspecific level is warranted.

***Erica alexandri* Guthrie & Bolus** in *Flora capensis* 4: 195 (1905); Dulfer: 98 (1965).

subsp. ***alexandri***. Type: Paarl Div.; sandy flats below Paarl Mountain, *Alexander 17* (K, holo.; BOL fragm.).

subsp. ***acockii* (Compton) E.G.H. Oliv., stat. et comb. nov.**

*E. acockii* Compton: 43 (1934); Dulfer: 111 (1965). Type: Stellenbosch Dist.; Brackenfell, *Acocks [Acock] 1319* (BOL, holo.; K!, S!, STE!).

*Erica auriculata*/*E. greyi*

Both these species were based on a single specimen and published in the same work (Guthrie & Bolus 1905). The type of *E. auriculata* had only a few flowers which were still in bud, and according to the authors, anther appendages unlike any other species. On account of its puberulous flowers Guthrie & Bolus (1905) placed the species in Section *Ephebus*. The type of *E. greyi* had numerous flowers in 6–8-flowered heads, and the authors made no reference to any distinctive feature of the anthers. They placed it in Section *Pseuderemia*.

Comparison of the two types showed that their anthers are identical. Other characters of flowers and vegetative parts also matched, and there is no doubt that the two collections belong to the same species.

No other collections of these two species have been made and a search for them in the more exact locality given by Schlechter has not produced any plants. Unfortunately the whole area was burnt in 1991 and thus it will be several years before further searches will be worth undertaking as it would appear that the plants are reseeds.

***Erica greyi* Guthrie & Bolus** in *Flora capensis* 4: 231 (1905); Dulfer: 110 (1965). Type: Ceres Div.; Cold Bokkeveld, *Grey 658* (K, holo.; BOL, fragm.).

*E. auriculata* Guthrie & Bolus: 119 (1905); Dulfer: 68 (1965). Type: Ceres Div.; on the Skurpde Bergen near Klein Valley, 5800 ft, *Schlechter 10207* (BOL, holo.).

*Erica cerviciflora*/*E. sphenanthera*

Both of these species have been known only from the type collections. They were both placed in Section *Didymanthera* on their possession of long tubular flowers with exerted anthers. An examination of these collections has shown characters not previously noted in assessing their true relationships, namely the shape of the anthers with minute decurrent appendages and fringed corolla lobes. These characters allied the two species to *E. grandiflora* which is highly variable in the position of its anthers which may be included to exerted even further than other species of Section *Didymanthera*.

There are clearly no characters to separate the above two species from the older *E. grandiflora* and so they are here reduced to synonymy under the older epithet.

***Erica grandiflora* L. f.**, *Supplementum plantarum*: 223 (1782); Benth.: 628 (1839); Guthrie & Bolus: 57 (1905). *E. exurgens* Andr. var. *grandiflora* (L. f.) Dulfer: 35 (1965). Type: Cape, *Thunberg s.n.* (UPS!).

*E. cerviciflora* Salisb.: 362 (1802); Benth.: 664 (1839); Guthrie & Bolus: 53 (1905); Dulfer: 33 (1965). Type: Hottentots Holland, *Mulder s.n.* (K, holo.).

*E. sphenanthera* Tausch: 626 (1834); Guthrie & Bolus: 52 (1905); Dulfer: 33 (1965). Type: without locality or collector (PRAG, holo.).



*Erica esterhuyseniae*

When Compton described this species he provided a Latin diagnosis and full English description, but did not cite a type. However, he stated that there were clearly two distinct varieties, var. a *tetramera* and var. b *trimeria*, for which he provided the diagnoses and holotypes. According to the current Code this would automatically imply that there was a typical variety var. *esterhuyseniae* with the same type as the species name.

Compton's application of the term 'Var. a' would suggest that he intended this variety to be the typical variety but that he supplied the incorrect epithet for it. We are therefore replacing Compton's name with the correct autonym and regarding the holotype of his var. *tetramera* as the type of the species name.

***Erica esterhuyseniae* Compton** in Journal of South African Botany 7: 193 (1941); Dulfer: 75 (1965). Type: Uniondale Div., Kamanassieberg (Mannetjieberg), 1 700 m, 1 Feb. 1941, *Compton 10557* (NBG!).

var. *esterhuyseniae* [as var. a *tetramera*]

var. *trimeria* Compton: 193 (1941); Dulfer: 75 (1965). Type: Oudtshoorn Div., Swartberg Pass, 2 000 m, 28 Jan. 1941, *Bond 866* (NBG!).

*Erica filiformis*

Guthrie & Bolus (1905) recorded the species as having a variable number of stamens, namely usually 8 but often 7–4. They noted that 4-stamened specimens were 'technically *Blaeria* and not *Erica*'. In a recent paper (Oliver 1993) this species was discussed in detail in connection with the relationship between *Erica* and *Blaeria*. An examination of all the available collections of *E. filiformis* showed that some collections have 4-stamened flowers, others 8-stamened flowers, with only one collection showing any intermediate numbers.

In the same work Bolus (1905) described the variety, var. *maritima* Bolus, from a single collection made in the Agulhas area. An examination of the type showed that the 4-stamened flowers look superficially very similar to those of *E. filiformis*, but do not possess the 4-locular, multi-ovuled ovary typical of *Erica*. Instead the flowers have 2-, rarely 1-locular ovaries with a single ovule per locule, a feature characteristic of certain minor genera. The material was in fact an isosyntype of *Acrostemon schlechteri* N.E. Br.!

The synonymy is therefore as follows:

***Acrostemon schlechteri* N.E. Br.** in Flora capensis 4: 353 (1906). Types: Bredasdorp Div.; Rhenosterkop, 50 ft., *Schlechter 10576* (BM!, BOL!, G!, GRA!, K!, Z!); Cape Agulhas, 250 ft., *Schlechter 10559* (BM!, BOL!, G!, GRA!, K!, MO!, P!, PRE!, S!, W!, Z!); lectotype still to be chosen.

*Erica filiformis* Salisb. var. *maritima* Bolus: 150 (1905). Type: Bredasdorp Div.; hills near Cape Agulhas, 250 ft., *Schlechter 10559* (BOL, holo.).

*Erica gillii*

Until recently the type at Kew was the only known collection of this species with none apparently occurring in southern African herbaria. Various recent collections, *Oliver 4127*, *Schumann 793* and *Vlok 2499*, made in the Attaquas Kloof area have turned out to be this species when compared with the type. Also an investigation of the type sheet of *Erica rhodantha* Guthrie & Bolus in Section *Polycodon* showed that two collections were mounted on the sheet, one being the type, *Galpin 3706*, from Garcia's Pass and the other being a collection of *E. gillii*, *Bolus 11339*, also from Garcia's Pass. A duplicate of the Bolus collection turned out to be included with *E. rhodantha* in STE. The two species are superficially very similar, but may be distinguished on their anthers, black with a large apical ridge in *E. gillii*, typical of the Section *Melastemon*, versus brown and not ridged in *E. rhodantha*. This latter species was also poorly represented in herbaria with, surprisingly, only a few old collections from the Garcia's Pass, an area which has been very well collected. It has also recently been turned up on the lowest northern slopes of the Langeberg west of Garcia's Pass (*Oliver 10242*).

***Erica gillii* Benth.** in De Candolle, Prodrumus 7: 684 (1839); Guthrie & Bolus: 302 (1905); Dulfer: 136 (1965). Type: Attaquaskloof, *Gill s.n.* (K, holo.).

*Erica leptostachya*

The type and only authentic material attributable to this name came from the cultivated collections of William MacNab. Many of MacNab's collections of heaths cultivated in Edinburgh in the early 1800's were known to have originated from material collected at the Cape, particularly through the efforts of James Niven. So when describing this species Guthrie & Bolus noted 'though its origin is somewhat uncertain, it is most probably South African'. A close examination of the fragment of the type in BOL showed that the material identified in herbaria as *E. leptostachya* did not match the type which was recognized as being identical to specimens in STE of the European species, *Erica scoparia* L. This species is characterized by small, creamish green, wind-pollinated flowers with large red stigmas. The flowers are borne on absolute brachyblasts in the axils of foliage leaves up the main branches, thus giving the appearance of a pseudoraceme.

Dulfer (1965) identified two sheets of unlocalized material in W as clearly belonging to this species, but also did not realise the European connection.

Therefore *E. leptostachya* Guthrie & Bolus becomes a taxonomic synonym of *E. scoparia* L.

***Erica scoparia* L.**, Species plantarum edn 1, 1: 353 (1753); Benth.: 692 (1839); Dulfer: 149 (1965); D.A. Webb & Rix: 8 (1972); D.C. McClint.: 286 (1989) et auct. mult. Type: species still to be lectotypified.

*E. leptostachya* Guthrie & Bolus: 217 (1905); Dulfer: 105 (1965). Type: South Africa?, without note of origin, *Herb. MacNab 405a*, 109 (K, holo.).



Dulfer (1963) described a variety of Guthrie & Bolus' species as var. *glabra* Dulfer, based on a recent collection from Mariepskop in the Transvaal. He noted that his type material had originally been identified as *E. leucopelta* Tausch var. *ephebioides* Bolus. Bolus' type also came from Mariepskop, as do the type and paratype of another species described by Dulfer, *E. merxmuelleri* Dulfer. The specimens of the latter species appear to us to be *E. natalitia* Bolus.

Dulfer's taxon can clearly not be part of the European *E. scoparia*. Until such time as we can sort out the taxonomic problems of the *E. leucopelta/natalitia/merxmuelleri* complex this variety must be left unplaced, if indeed it is a sound taxon.

### *Erica longisepala*

When describing *E. longisepala*, Guthrie & Bolus (1905) placed it in the long-tubed Section *Pleurocallis* and allied it to *E. grandiflora*. They commented that the species was a link between the Sections *Pleurocallis* and *Hermes*. Both of these sections are characterised by a pseudospicate inflorescence and are separated only on the size of the flowers. Guthrie & Bolus noted that their species was related to *E. parilis* Salisb. in Section *Hermes*.

Since their publication much material of *E. parilis* and *E. longisepala* has been collected which shows a considerable amount of variability in the size of the flowers from as short as 5 mm up to 25 mm. There is no clear demarcation of a boundary between the two species. Esterhuysen (1963) noted that these two species were synonymous, but Dulfer (1965) did not follow this. We confirm Esterhuysen's opinion with the following synonymy.

***Erica parilis* Salisb.** in Transactions of the Linnean Society 6: 371 (1802); Benth.: 664 (1839); Guthrie & Bolus: 209 (1905); Dulfer: 102 (1965); Esterhuysen: 57 (1963). Type: Hottentots Holland, *Masson s.n.* (BM, holo.).

*E. longisepala* Guthrie & Bolus: 57 (1905); Dulfer: 36 (1965). Type: Clanwilliam Div.; without precise locality, *Mader s.n.* (SAM, holo.).

### *Erica minutissima*

An examination of a portion of the type which Bolus fortunately acquired from Berlin has revealed that the specimen is a monstrosity having a double calyx, no corolla and no stamens. Bolus noted on his sheet that there were two sheets of this 'species' in Berlin, labelled as locality 83, 'Stellenbosch Umgebuung Somerset West'. In BOL there is a collection of Zeyher (?Ecklon) which matches the Berlin fragment exactly, but is labelled as moist places at Bloemendal. The material in our opinion is referable to *E. quadrangularis* which occurs sporadically in the area and which must have been very common before the spread of housing and farms.

***Erica quadrangularis* Salisb.**, Prodrum 297 (1796); Guthrie & Bolus: 182 (1905); Dulfer: 93 (1965). *E. quadraeflora* Salisb.: 375 (1802); Benth.: 679 (1839), nom. illegit. Type: in Promontorio Cap, *Jac. Mulder s.n.* (K, holo.).

*E. minutissima* Klotzsch ex Benth.: 691 (1839); Guthrie & Bolus: 223 (1905); Dulfer: 107 (1965). Type: in montibus Hottentots Holland, *Ecklon & Zeyher s.n.* (B, holo.†; BOL, fragm.!).

### *Erica monadelphia*

The name of this species is problematic in having no relevance to the species. The anthers of the species are not joined together into one unit as they so clearly are in the anomalous *E. embothriifolia* Salisb.

There has been much confusion with the publication dates of Andrews' species, particularly those in the first volume of his folio edition, *Coloured engravings of heaths*, which appeared in the four bound volumes published from 1802 onwards. This led Dulfer (1965) to change the authorship, as given by Bentham (1839) and Guthrie & Bolus (1905), from Andrews (1802) to Willdenow (1799).

Andrews produced his first drawings in separate parts of three loose plates each, before he had them bound as the first volume. Some, but unfortunately not all, of the plates in the first volume of his work are dated. Recently an excellent set of the first 22 parts of his *Coloured engravings* was found in the library of the Farm Vergelegen, Somerset West. From this set the publication date of *E. monadelphia* was June 1, 1797 in part 8. A note on the Andrews' publications on heaths is being prepared for publication.

***Erica monadelphia* Andrews**, Coloured engravings of heaths, part 8 (1797); Willd.: 396 (1799); Benth.: 622 (1839); Guthrie & Bolus: 51 (1905); Dulfer: 32 (1965). Type: Andrews: t. 38 (1797).

### *Erica newdigatei*

Due to an earlier homonym, the name of this species had to be changed. Dulfer chose to commemorate one of the collectors mentioned by Guthrie & Bolus (1905), Miss Caroline Newdigate (1857–1937) of Forest Hall, Plettenberg Bay. Thus Dulfer's use of the masculine ending 'newdigatei' must be corrected.

***Erica newdigateae* Dulfer** in Annalen des Naturhistorischen Museums Wien 68: 138 (1965). *E. longipes* Klotzsch ex Benth.: 684 (1839), non Bartl. (1832) [= *E. coarctata* Wendl. var. *longipes* (Bartl.) Bolus]; Guthrie & Bolus: 306 (1905). Type: in hills at Grasrugg [Grasrug?], Uitenhage, *Ecklon & Zeyher s.n.* (B, holo.†; ?iso.).

### *Erica priorii*

Until recently this species was known only from the type collection in Kew, collected by Alexander-Prior near George in 1847. Some recent collections, *Vlok 1120 & Schumann 590* from Karatara Forest Reserve, were compared with the type and found to be this species. Subsequently a collection made by Keet in 1920 from Spitzkop, Knysna and placed under *incertae* and one by Taylor from the Outeniqua Pass in 1962 placed under *E. coarctata* Wendl., have been found to be this species.



The fresh material from Vlok has shown us that the species is a distinct one favouring moist, humic, conditions on steep, southern slopes of the Outeniqua Mountains. The shrubs grow to 1.2 m tall and bear bright pink flowers in dense pseudospikes towards the ends of the branches.

***Erica priorii* Guthrie & Bolus** in *Flora capensis* 4: 216 (1905); Dulfer: 105 (1965). Type: George Div.; near George, *Alexander s.n.* (K, holo.).

*E. recurvata*

This name has been maintained in all major revisions of the family with the citation of no collections from the wild, only material cultivated in Europe during the early 1800's. From the scraps of cultivated material available for us to examine we find that the material is clearly a lush cultivated form of *E. cumuliflora* Salisb. with its distinctive corolla lobes. These lobes are relatively long, subspatulate and suberect forming windows around the base of the corolla interstices and edged with short hairs in the window areas. Only two species of *Erica* possess these peculiar lobes, *E. cumuliflora* and *E. genistifolia* Salisb. The former has 4-nate leaves and denser heads of 5–12 flowers whereas the latter has 3-nate leaves and fewer flowers (3–4) per inflorescence.

***Erica cumuliflora* Salisb.** in *Transactions of the Linnean Society* 6: 336 (1802); Benth.: 657 (1839); Guthrie & Bolus: 237 (1905); Dulfer: 112 (1965). Type: Hottentots Holland, *Mulder s.n.* (K, holo.).

*E. recurvata* Andrews: t. 262 (1809); Lodd.: t. 1093 (1825); Bot. Mag. t. 3427 (1835); Benth.: 657 (1839); Guthrie & Bolus: 236 (1905); Dulfer: 112 (1965). Type: Andrews: t. 262 (1809).

*Erica revoluta/austroverna*

When going through the collections of *incertae* in BOL, PRE and STE, several specimens were found that matched two recently described species, the Transvaal material being *E. revoluta* in Section *Arsace* and the Natal material being *E. austroverna* in Section *Pyronium*. An additional specimen was found filed under *E. woodii* Bolus in Section *Chlorocodon*. This led to an investigation of the two species.

The material cited by Davidson (1985) under *E. revoluta* (Bolus) L.E. Davidson and Hilliard & Burt (1985) under *E. austroverna* Hilliard and the additional material clearly belong to one, variable, widespread species. There is much variation in the degree of revoluteness of the leaves and of hairiness on the branches and pedicels and in the shape of the sepals.

The collections from Natal and Swaziland tend to have the leaves more revolute and therefore narrower, whereas most of the collections from the eastern Transvaal have broad open-backed leaves. However, the type of *E. revoluta*, Wilms 908, and Keet STE 16476 have the narrow leaves of the Natal material and both come from near Lydenburg.

***Erica revoluta* (Bolus) L.E. Davidson** in *Journal of South African Botany* 51: 71 (1985). *E. subverticillaris*

Diels ex Guthrie & Bolus var. *revoluta* Bolus: 224 (1905); Dulfer: 108 (1965). Type: Spitz Kop, near Lydenburg, Wilms 908 (K, holo.; BOL!, WU).

*E. austroverna* Hilliard in Hilliard & B.L. Burt: 243 (1985). Type: Natal, Vryheid Dist., Hlobane, 10-09-1950, Johnstone 433 (NU, holo.; E, STE fragm.).

*Erica solandra/setulosa*

In 1963 Dulfer described the variety *mollis* under *E. solandra* Andrews based on a collection from Seven Weeks Poort. We subsequently found material growing on the Rooiberg in the Little Karoo and realized that the growth form and habitat were quite unlike those of *E. solandra* which is known only from the Outeniqua Mountains near George. Several other collections from the Seven Weeks Poort area matched Dulfer's material.

During an investigation of all the species in the Section *Pseuderemia*, it was found that a distinct new species could be described, *E. ingeana* E.G.H. Oliv. (Oliver & Oliver 1991) and that Dulfer's variety was not part of *E. solandra* and also constituted a distinct separate species. Later during our survey of all *Erica* species the material attributed to var. *mollis* was found to match a collection by Elsie Esterhuysen from the extreme western end of the Langeberg and which she had tentatively placed under *E. setulosa* Benth.

*E. setulosa* is known only from Bentham's type in Kew, a specimen collected without precise locality by Niven in the 1790's and fragments of which were given to H. Bolus and are now housed in BOL. A detailed examination of these fragments showed that they match the Esterhuysen collection in most respects. They also indicate that Dulfer's variety is indeed *E. setulosa*.

The placing of *E. setulosa* under the Section *Ephebus* must have been based solely on the possession of the hairy corolla which fact overlooked the head of flowers similar to those found in *Pseuderemia* which also has some species in which the corolla is hairy. This clearly indicates a rather tenuous distinction between the two sections.

***Erica setulosa* Benth.** in De Candolle, *Prodromus* 7: 682 (1839); Guthrie & Bolus: 123 (1905); Dulfer: 69 (1965). Type: Cape Colony, Niven s.n. (K, holo.; BOL, fragm.).

*E. solandra* Andrews var. *mollis* Dulfer: 33 (1963); Dulfer: 69 (1965). Type: Prince Albert Div., Seven Weeks Poort Berg, rocky S. slopes, 5000 ft, 13-10-1955, Esterhuysen 24820 (W, holo.; BOL!, STE!).

*Erica turmalis*

Salisbury based his *E. turmalis* on one of the many collections supposedly made by the enigmatic I. Mulder. Salisbury is the only botanist to have cited this collector, as Jac. Mulder (Salisbury 1796) and I. Mulder (Salisbury 1802), but nowhere is there a collection of his labelled as such. There is no Salisbury material bearing the name 'turmalis' in either K or BM. Salisbury described his species as 4–5-anthered and noted that it had the facies of his *E. brunifolia*. A collection by Mund in K with a fragment in BOL, determined as this species by Bentham, is clearly part of the *E. cordata* Andrews complex. Until such time as an authentic specimen can be located we are



removing this name from the list of currently accepted southern African species and placing it in the list of '*species non satis cognitae*'.

*Erica turmalis* Salisb. in Transactions of the Linnean Society 6: 342 (1802); Benth.: 616 (1839); Guthrie & Bolus: 234 (1905); Dulfer: 111 (1965). Type: in Hottentots-Holland, *Mulder s.n.* (? , holo.).

### *Erica umbelliflora*

This species has remained uncollected since it was described in 1839. An examination of the material cited by Bentham revealed that *E. umbelliflora* is, in fact, a distinct and well-known species in the southern Cape and that all the collections assignable to this species were filed under two recently described species.

The current sectional subdivision of the genus *Erica* is a complex and unfortunately unnatural system which has led to a number of irrelevant new species being described (see several cases cited above). The circumscription of some of the sections has been rather vague and with the arbitrary placing of species in these sections true relationships have inevitably been overlooked in the describing of new taxa. This has been the case with two species, *E. manifesta* Compton and *E. ionii* H.A. Baker.

*E. umbelliflora* was placed by Guthrie & Bolus in the Section *Pachysa* because they assumed that the flowers were viscid. Compton looked in the Section *Gypsocallis* for species allied to his *E. manifesta* on the grounds of slightly exerted stamens and a pseudospicate inflorescence. Baker placed his *E. ionii* in Section *Pyronium* on account of the exerted stamens and terminal flowers. In all three cases the true relationship of the taxa was not possible to ascertain because of their diverse placement in the genus.

The variability of the flowers is such that they may be viscid because of the glands on the calyx, may have included to exerted stamens and have the flowers arranged from terminal on short lateral branchlets to aggregated in a pseudospicate arrangement.

Later Baker (1970) recognized that his species was synonymous with Compton's species, but overlooked the relationship with *E. umbelliflora*. The synonymy of the species is thus:

***Erica umbelliflora* Klotzsch ex Benth.** in De Candolle, *Prodromus* 7: 659 (1839); Guthrie & Bolus: 197 (1905); Dulfer: 98 (1965). Types: in monte Zwartberg ad Attaquaskloof et flumen Calutso, *Masson s.n.* et *Drège s.n.* (lectotype still to be chosen).

*E. manifesta* Compton: 37 (1935); Dulfer: 84 (1965). Type: Uniondale Dist.; hills northeast of Avontuur, 3100 ft, Sept. 1932, *Fourcade 4606* (BOL, holo.).

*E. ionii* H.A. Baker: 148 (1965); Dulfer: 86 (1965). Type: Uniondale Div. On sandy slopes on Potjieskloof Pass beside the National Road from George to Uniondale at about 900 m (3000 ft), *Baker 2330* (BOL, holo.).

### REFERENCES

- ANDREWS, H.C. 1794–?1830. *Coloured engravings of heaths*. London.
- BAKER, H.A. 1965. Notes on some species of *Erica*, with descriptions of three new species and two new species and two new varieties. *Journal of South African Botany* 31: 145–161.
- BAKER, H.A. 1970. Taxonomic notes on *Erica*. *Journal of South African Botany* 36: 267–270.
- BARTLING, T.F. 1832. *Plantae Ecklonianae*, Ericaceae. *Linnaea* 7: 627–652.
- BENTHAM, G. 1839. Ericaceae. In A.P. De Candolle, *Prodromus systematis naturalis regni vegetabilis* 7: 580–733. Paris.
- BOLUS, H. 1905. *Erica. Flora capensis* 4,1: 4–315. Reeve, London.
- BROWN, N.E. 1906. Ericaceae. *Flora capensis* 4,1: 315–336. Reeve, London.
- COMPTON, R.H. 1934. *Erica acockii*. *Journal of Botany* 72: 43.
- COMPTON, R.H. 1935. *Plantae novae africanae*. Series IV. *Journal of South African Botany* 1: 37–39.
- COMPTON, R.H. 1941. *Plantae novae africanae*. Series XVII. *Journal of South African Botany* 7: 193–207.
- DAVIDSON, L.E. 1985. A change in status for *Erica subverticillaris* var. *revoluta* from the eastern Transvaal. *South African Journal of Botany* 51: 71–73.
- DULFER, H. 1963. Neue Arten und Varietäten der Gattung *Erica* L. aus Südafrika. *Annalen des Naturhistorischen Museums Wien* 66: 19–33.
- DULFER, H. 1965. Revision der südafrikanischen Arten der Gattung *Erica* L. 2. *Annalen des Naturhistorischen Museums Wien* 68: 25–177.
- ESTERHUYSEN, E. 1963. Notes on South African species of *Erica*. *Journal of South African Botany* 29: 51–58.
- GUTHRIE, F. & BOLUS, H. 1905. *Erica. Flora capensis* 4,1: 4–315. Reeve, London.
- HALL, A.V. & VELDHIJS, H.A. 1988. *South African Red Data Book: plants—Fynbos and Karoo Biomes*. South African National Scientific Programmes Report No. 117. CSIR, Pretoria.
- HILLIARD, O.M. & BURTT, B.L. 1985. Notes on some plants of southern Africa chiefly from Natal: XI. *Notes from the Royal Botanic Gardens Edinburgh* 42,2: 227–260.
- LINNAEUS, C. 1753. *Species plantarum* edn 1, 1: 352–356.
- LINNAEUS, C. fil. 1782. *Supplementum plantarum*. Braunschweig.
- LODDIGES, C. 1825. *The botanical cabinet*: t. 1093.
- MCCLINTOCK, D. 1989. The heathers of Europe and adjacent areas. *Botanical Journal of the Linnean Society* 101: 279–289.
- OLIVER, E.G.H. & OLIVER, I.M. 1991. Studies in the Ericoideae (Ericaceae). VIII. New species in *Erica*, section *Pseuderemia*, from southern Africa. *Bothalia* 21: 137–142.
- OLIVER, E.G.H. 1993. Studies in the Ericoideae (Ericaceae). XI. The generic relationship between *Erica* and *Blaeria*. *Kew Bulletin* 48: 771–780.
- SALISBURY, R.A. 1796. *Erica. Prodromus*: 292–298.
- SALISBURY, R.A. 1802. Species of *Erica*. *Transactions of the Linnean Society* 6: 316–388.
- SALTER, T.M. 1950. Ericaceae. In R.S. Adamson & T.M. Salter, *Flora of the Cape Peninsula*: 627–657. Juta, Cape Town.
- TAUSCH, J.F. 1834. Bemerkungen über *Erica*. *Flora* 17: 615–622.
- WEBB, D.A. & RIX, E.M. 1972. *Erica*. In V.H. Heywood, *Flora europaea* 3: 5–8.
- WILLDENOW, C.L. 1799. *Caroli a Linné species plantarum* 2: 396. Berlin.