Studies in the Ericoideae (Ericaceae). XII. The placing of the genus *Blaeria* into synonymy under *Erica*; nomenclatural and taxonomic changes for the southern African region

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Keywords: Blaeria, Erica, nomenclature, southern Africa, taxonomy

ABSTRACT

The reduction of the genus *Blaeria* to synonymy under *Erica* requires the publication of six new combinations and three new names for the nine taxa occurring in southern Africa. Four species are reduced to synonymy. Diagnostic features and distribution maps are provided.

UITTREKSEL

Die plasing van die genus *Blaeria* in sinonimie onder *Erica* vereis die publisering van ses nuwe kombinasies en drie nuwe name vir die nege taksons wat in suidelike Afrika voorkom. Vier spesies word in sinonimie geplaas. Diagnostiese kenmerke en verspreidingskaarte word voorsien.

INTRODUCTION

In a forthcoming paper (Oliver in press A) the generic relationship between *Blaeria* L. and *Erica* L. will be discussed in detail. The former genus has been maintained separate from *Erica* since 1753 on the single character difference of four as opposed to eight stamens.

Problems arose with several species in both genera having a variable number of stamens or even numbers not included within the circumscription of their genera. Depending on the stamen complement found in the flowers examined, one could identify some material as either belonging to *Blaeria* or to *Erica*. Problem species in this respect are *Erica filiformis* Salisb., *E. esterhuyseniae* Compton and *E. pleiotricha* S. Moore in which 8- and 4-stamened flowers exist. In several other species the stamen number varies from 5 to 8.

With the sinking of the genus *Philippia* into *Erica* (Oliver 1987a, 1988, 1989) several additional species from tropical Africa having variable numbers of stamens were introduced into the problem. These are: *E. nyassana* (Alm & Fries) E.G.H. Oliver with only 4 stamens, very occasionally 5; *E. hexandra* (S. Moore) E.G.H. Oliver with 6, but 7 or 8 in some or all flowers; *E. mannii* (Hook. f.) Beentje has 6 stamens but with 5, 7 or 8 in some flowers. Several Madagascan species, not yet transferred to *Erica*, have also compounded the problem; *Philippia humbertii* H. Perrier with 3 or 4 stamens, sometimes 6 and *P. gracilis* (Benth.) H. Perrier with 4–8 stamens.

The genus *Blaeria* contains approximately 16 species, all occurring in Africa. In the southern African region the nine species are confined to the Cape. They can be placed in several groups of related species, with each group showing more affinities to different sections within *Erica* than to the other groups within *Blaeria*, including those from tropical Africa.

It is postulated (Oliver in press A) that *Blaeria* is an unnatural genus with clear indications of being polyphyletic. On the grounds of polyphylesis and the complete transition between the two genera in the only differentiating character in certain species, it was decided to reduce the genus *Blaeria* to synonymy under *Erica*. This decision is formalised in this paper for the species occurring in the southern African region. At this stage it is not possible to deal with the nomenclatural changes necessary for the tropical African species because of the instability of their taxonomy and of several nomenclatural synonyms within *Erica*.

1. Erica barbigeroides E.G.H. Oliver, nom. nov.

Blaeria revoluta Bartl.: 650 (1832), non Erica revoluta (H. Bol.) L.E. Davidson (1985); Klotzsch: 663 (1833); Klotzsch: 222 (1838); Benth.: 698 (1839); N.E. Br.: 326 (1905). Blairia revoluta (Bartl.) Dietr.: 444 (1839). Type: Kleinriviersbergen, Ecklon s.n. (B⁺, holo.; S!). Lectotype chosen here: Ecklon s.n. [det. Bartl.] (S).

Blaeria barbigera sensu Alm & Fries: 235 (1924); Bond & Goldblatt: 239 (1984); Oliver: 145 (1987b).

This very distinct species was referred to as *Blaeria* barbigera based only on the assumption that the material fitted the description of Salisbury's *Erica barbigera* (1802), there being no extant type specimen. For further details see below under Insufficiently known species.

The new name is an adaptation of the name by which this well-known species of the coastal regions of the Caledon District has been known for many years.

The species is confined to sandy level areas that are often wet in winter in the coastal region of the southwestern Cape from Rooi Els in the west to Sondagskloof (Sandies Glen) near Napier in the east (Figure 1). In this region it may be found from just above the spray zone near the sea up to an altitude of 760 m on the nearby mountains.

Stellenbosch Herbarium, National Botanical Institute, P.O. Box 471, Stellenbosch 7599.
 MS. received: 1992-06-09.





FIGURE 1.- The known distribution of Erica barbigeroides.

E. barbigeroides forms sparsely branched, virgate shrublets up to 400 mm tall, is covered with numerous long hairs and has up to 24 flowers grouped together in closely packed heads at ends of branches. Heads often partially pendent. Flowers somewhat sticky due to secretion of viscid matter from sessile glands on margins of sepals.

It is allied to two other species mentioned here, *E. ericoides* and *E. russakiana*, both of which occur in the same area near Hermanus, but never grow together. Both of the latter species form many-branched shrublets and are smaller in all parts of the inflorescence and flower.

Vouchers: Ecklon & Zeyher 260 [loc. 58.8] (BOL, G, MO, S, SAM, W); Ecklon & Zeyher s.n. [loc. 58.8] (K, LD, P, UPS, W, Z); Oliver & Palser 83 (E, MEL, NY, PRE, STE); Schlechter 9511 (BM, BOL, G, K, MO, PRE, STE, W, Z). 70 other collections examined.

2. Erica equisetifolia Salisb. in Transactions of the Linnean Society 6: 342 (1802). Type: locality & collector unknown, Herb. Salisb. (K, holo.!).

Blaeria equisetifolia (Salisb.) G. Don: 805 (1834); Alm & Fries: 239 (1924); Salter: 658 (1950); Bond & Goldblatt: 239 (1984); Oliver: 145 (1987).

B. purpurea L. f.: 122 (1782) nom. illegit. non Berg. (1767) [= *Simocheilus purpureus* (Berg.) Druce]; Thunb.: 8 (1802); Klotzsch: 221 (1838); N.E. Br.: 323 (1905); Alm & Fries: 239 (1924) pro parte. Type: *Thunberg s.n.* (UPS, holo.!).

B. dumosa Wendl.: t.38 (1808); Roem. & Schult.: 170 (1818); G. Don: 805 (1834); N.E. Br.: 323 (1905), synon. nov. Type: Wendl.: t.38.

B. dumosa var. *breviflora* N.E. Br.: 323 (1905), synon. nov. Syntypes: Caledon Div., mountains near Genadendal, *Bolus 5419* (BOL!, K!, PRE!) and in *Herb. Norm 613* (K!); ibid. *Guthrie 3140* (?); without locality, *Drège s.n.* (K!).

B. campanulata Benth.: 698 (1839); N.E. Br.: 324 (1905), synon. nov. Syntypes: Cape, Drège s.n. (?); Burchell 7693 (K!); Burchell 7773 (K!, P!, W!).

B. flava H. Bol.: 239 (1894); N.E. Br.: 322 (1905), synon. nov. Syntypes: Zwartberg near Caledon, Jan. 1885, 800 m, *Bolus 5147* (BOL!,

K!, PRE!, STE!) & sub Herb. Norm. 611 (BM!, BOL!, G!, NH!, P!, PRE!, SAM!, UPS!, W!).

Erica parvula Guth. & Bol.: 171 (1904), synon. nov. Type: Stellenbosch Div.; on a rock near the mouth of the Steenbrass River, 20–30 ft. above the sea, *Guthrie 3710* (BOL, holo.!).

Blaeria oppositifolia L. Guthrie: 21 (1928), synon. nov. Type: Hottentots Holland Mountains, Jan. 1924, Stokoe in BOL 17674 (BOL, holo.!, K!).

Common and widespread in mountains of southwestern Cape from Cape Peninsula to Bain's Kloof in north to western part of Bredasdorp District in south and occurs from sea level to summits of mountains at 1 600 m (Figure 2). Highly variable species in habit, flower size and shape, anther form and in having some collections with more than usual number of four stamens.

Basic type forms rounded low shrublet with deep pink, narrowly tubular flowers with four dark brown, exserted anthers. In some cases, mainly at lower altitudes, plants can be erect and reach 500 mm in height when growing in old fynbos. Flowers may be short with corolla 2.5 mm long and open campanulate to large with corolla 4 mm long and tubular.

Several species formerly recognised as distinct have been reduced to synonymy under *E. equisetifolia* on the grounds of overlap in characters caused by the variation found in the numerous collections of this complex. *E. equisetifolia* and *Blaeria dumosa* were distinguished on the single character of anther shape, the former having straight-sided anthers whereas the latter had anthers that were obtriangular in outline with a constriction above the decurrent appendages. The straight-sided collections come mostly from the Cape Peninsula and the other material from the inland mountains. There are collections from the mainland which fit equally well in either of the two species.

Salisbury's type is a small branchlet with 'Equisetifolia MS' written in his own hand. It possesses six flowers with only a single stamen remaining. From this stamen it is



FIGURE 2.- The known distribution of Erica equisetifolia.

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seen that the anther is the straight-sided form, most probably from the Cape Peninsula, and that there is only one small awn on one side.

Blaeria flava was described by Bolus on the grounds of the yellow colour of the corolla. This would appear to be the only character showing any discontinuity in this complex which has only pink or white flowers. The species is known only from the original collection from the Swartberg at Caledon where no pink- or white-flowered collections have been made. A thorough investigation of the Swartberg may produce more evidence for assigning this material some taxonomic status.

The problem of the similarity between *E. equisetifolia*, *Blaeria campanulata* and *E. parvula* is mentioned (Oliver in press A) as a case for reducing *Blaeria* to synonymy under *Erica*.

B. campanulata was based on material collected from rock ledges on the cool, southeast side of the top of the mountains of Baviaanskloof above Genadendal from where it is known through only a few collections. Plants are small and very compact, the white flowers have exserted dark stamens which range from 5-8 per flower and mostly 3-locular ovaries (Oliver 8978 & 9081). A recent collection (Oliver 8813) with only 8-stamened flowers has been made on the lowest dry northern slopes near McGregor. This material, in turn, was found to be morphologically inseparable from E. parvula which is confined to the Elgin/Betty's Bay area near the coast. This latter species also forms compact woody shrublets with white flowers. It grows mostly on rocks in streambeds. Apart from the more variable number of stamens and ovary locules the material of these two species is indistinguishable. There could, however, be some purpose in recognizing the high altitude form from Baviaanskloof as a subspecies. This will need some further investigations and assessment.

Several new species from the Kogelberg and Hermanus areas that are closely allied to this species are being described separately (Oliver 1993). One of these is recorded as producing a putative natural hybrid with *E. equisetifolia*.

An anomalous form with mostly opposite leaves was collected by Stokoe somewhere in the Hottentots-Holland Mountains. Sometimes one can find an occasional 2-nate arrangement of leaves on a branchlet in *E. equisetifolia*, and in other species, such as the *E. tenuifolia* L./*E. lutea* Berg. complex, whole branchlets or even branches can have 2-nate leaves. This condition alone is not regarded as sufficiently distinct to warrant taxonomic recognition, especially as it is known only from a single small collection that cannot be relocated in the field.

Vouchers: *Bolus 5420* (BOL, K, LD, NBG, PRE, STE, W); *Burchell* 7773 (K, P, W); *Oliver 8813* (BM, BOL, E, G, MO, MEL, NY, P, PRE, S, STE, UPS, W); *Oliver 9081* (E, MEL, PRE, STE); *Schlechter 9639* (BM, BOL, E, G, K, MO, P, PRE, STE, W); *Schlechter 10265* (BM, E, K, MO, P, PRE, S, STE, W); *Schlechter 10339* (BM, G, K, MO, P, PRE, S, W); *Sieber 165* (G, G-DC, K, LD, M, MO, P, PRE, S, W). 200 other collections studied.

3. Erica ericoides (L.) E.G.H. Oliver, comb. nov.

Blaeria ericoides L., Species plantarum 1: 112 (1753); L.: 331 (1771); Willd.: 629 (1798); Thunb.: 7 (1802); Wendl.: 73 (1808); Ait.: 248 (1810); Roem. & Schult.: 168 (1818); Bartl.: 649 (1832); Klotzsch: 663 (1833); G. Don: 804 (1834); Klotzsch: 222 (1838); Benth.: 698 (1839); Rach: 788 (1853); N.E. Br.: 325 (1905); Alm & Fries: 233 (1924); Salter: 658 (1950); Bond & Goldblatt: 239 (1984); Oliver: 145 (1987). *E. blaeria* Thunb.: 72 (1794); Thunb.: 358 (1823). *E. dumosa* Salisb.: 296 (1796); Salisb.: 341 (1802). Lectotype: *Hermann s.n.* in Hermann Herbarium vol. 4 fol. 61 (BM, STE, photo!), selected by Oliver (in press B).

Blaeria affinis N.E. Br.: 325 (1905). Type: Caledon Div., mountains near Vogel Gat, near the mouth of the Klein River, 1500 ft., Schlechter 10418 (K, holo.!; BM!, BOL!, P!, PRE!).

This species, the type of Linnaeus' genus *Blaeria*, is very common in dry rocky areas on flats or in the mountains from the Cape Peninsula eastwards along the coast to just beyond Stanford (Figure 3). In some areas it forms dominant stands which are very evident due to the strong honeylike scent emitted by the flowers.

E. ericoides is a very distinct species which is often confused with species from some of the minor genera, namely *Sympieza labialis* (Salisb.) Druce, *Simocheilus purpureus* (Berg.) Druce and *Syndesmanthus articulatus* (L.) Klotzsch, all of which have similar looking heads of pale pink tubular flowers with exserted dark brown anthers. The *Erica* can be easily identified by its 4-celled multi-ovuled ovary which produces a dehiscent capsular fruit.

Alm & Fries correctly placed Brown's *B. affinis* in synonymy under this species. The species was based on the smaller flowerheads and finer branches of a single collection from the Hermanus area. The numerous collections of *E. ericoides* show a range of variation which includes this slighter form.

E. ericoides is allied to E. russakiana and to a lesser extent E. barbigeroides (q.v.).

The typification of E. *ericoides* is being formalised in conjunction with R.F. Barrie (BM) for the programme on the typification of Linnaean taxa (Oliver in press B).

Vouchers: Schlechter 7554 (BM, E, G, K, MO, P, PRE, STE, UPS, W, Z); Schlechter 10401 (BM, BOL, E, G, K, MO, P, PRE, S, STE,



FIGURE 3.- The known distribution of Erica ericoides.



FIGURE 4.—The known distribution of Erica fuscescens, •; E. klotzschii, O; and E. multiflexuosa, A

UPS, W); Sieber 172 (G-DC, K, LD, M, MO, P, S, STE, W). 170 other collections examined.

4. Erica fuscescens (Klotzsch) E.G.H. Oliver, comb. nov.

Blaeria fuscescens Klotzsch: 657 (1833); Benth.: 697 (1839); N.E. Br.: 321 (1905) pro parte excl. synonym Erica sagittata Klotzsch ex Benth.; Alm & Fries: 239 (1924). Blairia fuscescens Dietr.: 443 (1839). Type: Cape of Good Hope, Mundt & Maire s.n. (B⁺, holo.; E!, G!, K!, P!, W!). Lectotype chosen here: Mundt & Maire s.n. [det. Klotzsch] (P!).

This species is common on the southern slopes of the Outeniqua and Tzitzikama Mountains in the southern Cape (Figure 4). It has also been recorded from the Van Stadens Mountains where it is sympatric with the closely related *E. sagittata* (see below), but does not, as far as I am aware, grow together with it. The numerous white flowers with exserted black anthers make this a very striking plant. The plants are bushy and fairly large, up to 1.5 m tall, whereas in *E. sagittata* they are much smaller and sparser with more crowded flowers due to the different inflorescence type.

Vouchers: Burchell 5910 (BOL, K, P, UPS); Fourcade 831 (BOL, K, STE, Z); Galpin 3717 (BOL, K, PRE, SAM); Mundt & Maire s.n. (E, G, K, P, W) [ex B, det. Klotzsch]; Oliver 9250 (PRE, STE). 65 other collections examined.

5. Erica klotzschii (Alm & Fries) E.G.H. Oliver, comb. nov.

Blaeria klotzschii Alm & Fries: 237 (1924). Type: Cape of Good Hope Lichtenstein s.n. (B⁺, holo.; S fragm.!). B pusilla Klotzsch: 659 (1833) nom. illegit. non Blaeria pusilla L.: 39 (1767) [= Simocheilus purpureus (Berg.) Druce], non Erica pusilla Thunb.: 70 (1794), non Erica pusilla Salisb.: 374 (1802); Benth.: 698 (1839); N.E. Br.: 322 (1905). Lecto-type chosen here: Lichtenstein s.n. (S!).

E. klotzschii was rather anomalous in the genus *Blaeria* as it had no close relatives and possessed only a superficial resemblance to *E. longimontana* [= *B. coccinea*]. The flowers are very small and are borne at the ends of most lateral branches on the plant thus producing plants almost completely covered by pale pink to dull cream flowers. The anthers are relatively large, exserted and slightly versatile. This fact coupled with the dull colour of the corolla, the small size of the flower and the far-exserted cyathiform stigma strongly suggest wind pollination in this species. This was substantiated in populations near

Swellendam in which plants gave off clouds of pollen when disturbed early in the morning.

The species occurs on dry shaley hills and slopes at the base of mountains from Elim to Swellendam and eastwards as far as Albertinia often associated with Renosterveld vegetation (Figure 4).

Vouchers: *Bolus 8461* (BM, BOL, K, UPS); *Oliver 4297* (BM, PRE, STE); *Zeyher 3331* (BOL, GRA, K, P, PRE, S, SAM, W, Z). 40 other collections examined.

6. Erica longimontana E.G.H. Oliver, nom. nov.

Blaeria coccinea Klotzsch: 657 (1833), non Erica coccinea L. (1753); Benth.: 697 (1839); N.E. Br.: 321 (1905); Alm & Fries: 236 (1924). Type: Cape of Good Hope, Mundt & Maire s.n. (B[†], holo.; K!-BOL, fragm.!, S!, W!). Lectotype chosen here: Mundt & Maire s.n. [ex B & det. Klotzsch] (K!).

B. fastigiata Benth.: 697 (1839), non *E. fastigiata* L. (1771); N.E. Br.: 321 (1905). Type: Cape Colony, *Burchell* 7331 (K, holo.!; S!).

This species is common along the southern slopes of the Langeberg from Swellendam to the western Outeniqua Mountains at the Robinson's Pass (Figure 5) where it is often dominant in seepage zones, hence the new name chosen for the species.

Alm & Fries were correct in reducing Bentham's *B. fastigiata* to synonymy. This latter species was separated off on the grounds of having only finely puberulous parts. This form is found in the Swellendam area were it co-exists with the form with longer hairs.

Vouchers: Oliver 9106 (BM, E, K, MEL, MO, NY, P, PRE, STE); Schlechter 2055 (BM, BOL, G, K, PRE, S, UPS). 42 other collections examined.

7. Erica multiflexuosa E.G.H. Oliver, nom. nov.

Blaeria flexuosa Benth.: 698 (1839), non E. flexuosa Andr. (1798); N.E. Br.: 324 (1905). Type: at Steenbrass River, prov. Stellenbosch, Niven s.n. (Herb Lambert; G-DC!). Lectotype chosen here: Niven 6 (Herb. Lambert in K!).

B. purpurea Alm & Fries: 239 (1924) pro parte.

This species is confined to a small area on the lower northern slopes of the Kogelberg complex around the Steenbras Dam (Figure 4) where it grows in open sandy areas between low restiad clumps. It forms low rounded but sparse shrublets with very intertwined branches which are sparsely leafy. The flowers are a dull cream colour and, hanging downwards, are rather inconspicuous.

E. multiflexuosa belongs to the *E. equisetifolia* complex but can be distinguished by its intertwined branches, its obovoid, dull cream, pendent flowers and included muticous yellow-brown anthers. Like other species of the complex it can have opposite leaves on some branches.

Brown (1905) was somewhat confused about this species because he cited Niven 6 & 7, both from the Steenbrass River, under Blaeria flava and Niven 6 also under Blaeria flexuosa.

Specimens examined

CAPE. — 3418 (Cape Town): Kogelberg Forest Reserve, E foothills of Spinnekopsnes Range, 854 m, (-BB), 2-05-1970, Boucher 1285 (K, STE); Steenbrass Reservoir valley, (-BB), 14-12-1933, Galpin 12405 (K, PRE); Steenbrass area, (-BB), 1-05-1948, Levyns 8879 (BOL); ibid., Levyns 11533 (BOL); ibid., 7-12-1926, Middlemost 122 (BOL); ibid., Niven 6 (G-DC, K-BOL fragm.); ibid., Niven 7 (K); NE end of Kogelberg range, 450 m, (-BB), 20-03-1983, Oliver 8824 (PRE, STE); Steenbrass, Wolvern Kloof, (-BB), 28-02-1931, Stokoe 2563 (BOL, PRE, STE); Steenbrass plateau & vlakte, (-BB), 18-02-1921, Stokoe 8917 (BOL); ibid., 1931, Stokoe 8889 (BOL, PRE); near Steenbrass Reservoir, (-BB), 14-12-1933, Salter 4207 (BM, K, SAM).

8. Erica russakiana E.G.H. Oliver, nom. nov.

Blaeria kraussiana Klotzsch ex Walpers: 728 (1843) non E. kraussiana Klotzsch ex Walpers: 728 (1843); Klotzsch ex Walpers: 824 (1844); N.E. Br.: 326 (1905); Alm & Fries: 235 (1924); Oliver: 267 (1984). Type: Babylon's Tower, Hemel en Aarde, Krauss 973 (B⁺, holo.; BOL!, K!, M!, S!, UPS!, W!, Z!). Lectotype chosen here: Krauss 973 (K!-BOL fragm.!).

Acrostemon concinnus N.E. Br.: 351 (1905). Type: Swartberg, Caledon, Bodkin sub Bolus 9228 (BOL, holo.!; K!).

It is surprising that Brown overlooked the similarity between his species and that of Klotzsch which he included in his revision, especially seeing that his taxon was the only one in *Acrostemon* with a 4-locular ovary.

The species, of which only four collections exist, is confined to the northern slopes of the Klein River Mountains north of Hermanus with one collection from the Swartberg at Caledon (Figure 5). It forms a sparsely branched low compact shrublet up to 300 mm tall which becomes erect and more sparse when very old. The flowers are superficially similar to those of the common *E. ericoides* which occurs in the same area but forms a large, woody spreading shrub up to 1.0×1.5 m. The other species with similar heads of flowers, *E. barbigeroides*, from the same area but near the southern base of the mountains, forms a sparsely branched erect shrublet with much larger and more numerous flowers per head.

The name chosen above continues to commemorate the original collector, Ferdinand Krauss, but in anagrammatic form.

Specimens examined

CAPE. --3419 (Caledon): Swartberg, Caledon, (-AB), 01-1901, *Bodkin sub Bolus 9228* (BOL, K); Babylon's Tower near Hemel-en-Aarde, 183-244 m, (-AC/AD), 08-1838, *Krauss 973* (BOL, K, M, MO, S, UPS, W, Z); Klein River Mtns above Diepgat, 610 m, (-AD), 1-02-1971, *Oliver 3246* (PRE, STE); ibid., 22-02-1985, *Oliver 8688* (STE).

9. Erica sagittata Klotzsch ex Benth. in DC., Prodromus 6: 681 (1839). Type: in Vanstaaden mountains, Drège s.n., (B[†], holo. –BOL, sketch). Lectotype chosen here: Vanstaadesberg [Van Stadensberg], 1000 ft., 27-12-1829, Drège 7725 (P!).

Blaeria sagittata (Klotzsch ex Benth.) Alm & Fries: 238 (1924).

B. grandis N.E. Br.: 320 (1905). Syntypes: Van Stadens Mountains, Zeyher 718 (K!, BOL fragm.!); ibid. West sub MacOwan 3119 (BOL!, PRE!, SAM!).

B. fuscescens sensu N.E. Br.: 320 (1905) quoad specm. Drège s.n.

Brown (1905) noted that Bolus had examined the type of Erica sagittata in the Berlin Herbarium and had informed him that despite its poor quality 'there can be no doubt of its identity with Blaeria fuscescens Klotzsch'. Bolus himself made a sketch of the type and some dissections of the flower and noted in his herbarium that it contained three branches 12-14 inches long on one sheet and only one imperfect flower in a capsule and that the ticket labelled it as Drège 7725 from Van Stadensberg. Bentham noted the type as 'defloratum cum fl. unico delapso'. If the specimen had possessed more flowers Bolus would have seen that the axillary inflorescence on an absolute brachyblast differed from the terminal 3-flowered inflorescence on a leafy lateral branchlet in Blaeria fuscescens and that the two species cannot be confused.

The rather sparse material of *Drège 7725* in Paris, consisting of five young plants with two flowers in place on



FIGURE 5.—The known distribution of *Erica longimontana*, •; *E. russakiana*, •; and *E. sagittata*, O.

one plant, clearly matches the sketches of Bolus. It is undoubtedly from the same collection as the lost Berlin material.

This species is very localized in the Van Stadens Mountains west of Port Elizabeth (Figure 5) where it is sympatric with *E. fuscescens. E. sagittata* can be distinguished from the latter species on a number of characters. Apart from the type of inflorescence mentioned above, it has larger flowers with corolla 6 mm long, not less than 4 mm, leaves open-backed and 1-2 mm broad, not sulcate and 0.5-1.0mm long, and branches glabrous and distinctly ridged, not puberulous and rounded.

E. sagittata is remarkable in being very similar to *Erica* carnea L. from Europe which also has flowers borne on absolute brachyblasts and exserted dark stamens. The two species could easily be mistaken for one another if the origin of the material were not known. This is undoubtedly a case of convergent evolution.

Specimens examined

CAPE. --3324 (Steytlerville): Elandsrivierberg area in Otterford Forest Reserve, 762 m, (-DB), 9-09-1973, Oliver 4455 (MO, PRE, STE). 3325 (Port Elizabeth): Blueberg, Loerie Plantation, 22-09-1934, (-CC), Dix 31 (BOL, GRA, K, PRE, STE); Van Stadens Gorge, Witteklip, (-CC), 09-1981, Muller s.n. (STE); Van Stadens Mtns, 305 m, (-CC/CD), 27-12-1829, Drège 7725 (P); ibid., 09-1909, West 477 (BOL, SAM); ibid., West sub MacOwan 3119 (BOL PRE); ibid., West sub MacOwan 3111 (BOL); ibid., Zeyher 718 (BOL, K); ibid., Zeyher 3266 (SAM).

INSUFFICIENTLY KNOWN SPECIES

Blaeria barbigera (Salisb.) G. Don: 805 (1834). Type: Hottentots Holland, Masson s.n. (?).

Erica barbigera Salisb.: 341 (1802).

Salisbury's type does not appear to exist, as no specimen referrable to this species collected either by Masson or labelled as 'Herb. Salisb.' nor one determined by Salisbury, has been found in Kew or the British Museum, where all the types of Salisbury's species of Cape Ericaceae are known to be housed. Salisbury's description is insufficient to be of use to ascertain the true identity of his species. No mention was made of either the distinct capitate heads of flowers (10-24) or of the glandular nature of the leaves and calyx. His description could refer to a number of species in *Blaeria* or even some other genera in the subfamily. Without an authentic specimen it is not possible to tie down Salisbury's concept '*Erica barbigera*'.

Bentham (1839) referred Salisbury's species to *Blaeria revoluta* Bartl. without having seen a type since he did not cite a Masson collection. This was taken up by most subsequent authors with Brown citing the synonymy as 'sec. Benth.'

EXCLUDED SPECIES

With the description of numerous species under the genus *Blaeria* during the late 1700's and early 1800's there are many combinations under *Blaeria* which are no longer in use for species removed to other genera. A full list of these is given by Alm & Fries (1924: 262, 263) based on

the taxonomy of the family in *Flora capensis* (Brown 1905). With a revision of the family in southern Africa currently in progress, many changes to the taxonomy and therefore nomenclature, will be necessary. For this reason a listing of all the excluded species is not published at this stage as new combinations would have to be created of which many would soon be redundant.

However, one species not covered by the listing of Alm & Fries is: *Blaeria muirii* L. Guthrie: 179 (1924) = **Thoracosperma galpinii** N.E. Br.: 330 (1905).

REFERENCES

- AITON, W.T. 1810. Hortus kewensis edn 2, vol. 1. London.
- ALM, C.G. & FRIES, T.C.E. 1924. Monographie der Gattung Blaeria L. Acta Horti Bergiani 8: 223-267.
- ANDREWS, H.C. 1794-1830. Coloured engravings of heaths I-IV. London.
- BARTLING, F. 1832. Plantae Ecklonianae, Ericeae. Linnaea 7: 627-652. BENTHAM, G. 1839. Ericaceae. In A.P. De Candolle, Prodromus sys-
- tematis naturalis regni vegetabilis 7: 580-733. Paris. BERGIUS, P.J. 1767. Descriptiones plantarum ex Capite Bonae Spei. Salvius, Stockholm.
- BOLUS, H. 1894. Contributions to the flora of South Africa. Journal of Botany 1894: 239.
- BOND, P. & GOLDBLATT, P. 1984. Plants of the Cape Flora, a descriptive catalogue. Journal of South African Botany, Suppl. Vol. 13.
- BROWN, N.E. 1905. Ericaceae. In W.T. Thiselton-Dyer, Flora capensis 4: 315-336.
- 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.
- DIETRICH, D.N.F. 1839. Synopsis plantarum. Vol. 1. Weimar.
- DON, G. 1834. A general system of gardening and botany. Vol. 3. London.
- GUTHRIE, L. 1924. Novitates africanae. Annals of the Bolus Herbarium 3: 179.
- GUTHRIE, L. 1928. Novitates africanae. Annals of the Bolus Herbarium 4: 21.
- GUTHRIE, L. & BOLUS, H. 1904. Erica. In W.T. Thistelton-Dyer, Flora capensis 4: 4-315. Reeve, London.
- KLOTZSCH, J.F. 1833. Ericearum a cel. Adelberto de Chamisso descriptarum. Linnaea 8: 655–669.
- KLOTZSCH, J.F. 1838. Ericearum genera et species. Linnaea 12: 211-247.
- LINNAEUS, C. 1753. Species plantarum, edn 1. Stockholm.
- LINNAEUS, C. 1767. Mantissa plantarum: 65-66. Stockholm.
- LINNAEUS, C. 1771. Mantissa plantarum alterum: 229-236. Stockholm.
- LINNAEUS, C. fil. 1782. Supplementum plantarum. Braunschweig.
- OLIVER, E.G.H. 1984. Studies in the Ericoideae. IV. New species and some taxonomic and nomenclatural changes in the Cape Flora Region. South African Journal of Botany 3: 267-284.
- OLIVER, E.G.H. 1987a. Studies in the Ericoideae. VII. The placing of the genus *Philippia* into synonymy under *Erica*; the southern African species. South African Journal of Botany 53: 455-458.
- OLIVER, E.G.H. 1987b. Ericaceae. In G.E. Gibbs Russell et al., List of species of southern African plants. Memoirs of the Botanical Survey of South Africa No. 56: 140-147.
- OLIVER, E.G.H. 1988. Studies in the Ericoideae (Ericaceae). VI. The generic relationship between Erica and Philippia in southern Africa. Bothalia 18: 1-10.
- OLIVER, E.G.H. 1989. The Ericoideae and the southern African heathers. Botanical Journal of the Linnean Society 101: 319-327.
- OLIVER, E.G.H. 1993. Studies in the Ericoideae (Ericaceae). XIII. Three new species of *Erica* from the southwestern Cape. *Bothalia* 23: 9-14.
- OLIVER, E.G.H. in press A. Studies in the Ericoideae (Ericaceae). XI. The generic relationship between *Erica* and *Blaeria*. *Kew Bulletin*.
- OLIVER, E.G.H. in press B. In C. Jarvis & F.R. Barrie, Linnaean typification. Regnum Vegetabile.
- RACH, L. 1853. Die Ericaceen der Thunberg'schen Sammlung. Linnaea 26: 788.
- ROEMER, J.J. & SCHULTES, J.A. 1818. Systema vegetabilium. Cottae, Stuttgart.

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- SALISBURY, R.A. 1796. Prodromus stirpium in horto ad Chapel Allerton vigentium. London.
- SALISBURY, R. 1802. Species of Erica. Transactions of the Linnean Society 6: 316-388.
- SALTER, T.M. 1950. Ericaceae. In R. Adamson & T.M. Salter, Flora of the Cape Peninsula. Juta, Cape Town.
- THUNBERG, C.P. 1794. Prodromus plantarum capensium Part 1: 1-83. Uppsala.
- THUNBERG, C.P. 1802. Dissertatio botanicae de Blaeria (P. Elmstedt): 1-12. Uppsala.
- THUNBERG, C.P. 1823. Flora capensis ed. J.A. Schultes: 344-373. Cotta, Stuttgart.
- WALPERS, G.G. 1843. Ericaceae. Repertorium Botanices Systematicae 2: 728.
- WALPERS, G.G. 1844. Pflanzen des Cap- und Natal-Landes, gesammelt und zusammengestellt von Dr Ferdinand Krauss. Flora 48: 824.
- WENDLAND, J.C. 1808. Collectio plantarum Vol. 1, fasc. 1. Hannover.
 WILLDENOW, C.L. 1798. Caroli a Linné species plantarum Vol. 1.
 Berlin.