

South African Species of *Satureia*

by

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SATUREIA

Linn., Sp. Pl. ed. 1: 567 (1753), Gen. Pl. ed. 5: 247 (1754); Briquet in Engl. and Prantl. Nat. Pflanzenfam. 4, 3a: 296 (1896). *Micromeria* Benth. in Bot. Reg. 15: sub t. 1282 (1829).

The genus *Micromeria* was described by Bentham (1829), who distinguished it from *Satureia* on the grounds that the calyx was 13–15 instead of 10-nerved. Baker in Flora of Tropical Africa 5, 453 (1900) and Skan in Flora Capensis 5, 1: 306 (1912) in their treatments of Labiatae both upheld *Micromeria*. Briquet, however, reduced *Micromeria* to a synonym of *Satureia* explaining that the calyx nerves very often divide and that intermediate species made delimitation of the two genera impossible. Later taxonomists, for example Thonner, Flowering Plants of Africa, 479 (1915), Brenan in Mem. N. Y. Bot. Gard. 9, 1: 45–53 (1954) and now Hedberg, Afroalpine Vascular Plants, 160–164 and 317–318 (1957) have followed Briquet's classification. Until a critical revision of *Satureia* and related genera is undertaken, it seems desirable for the sake of uniformity in Africa, to follow recent workers and place our species under *Satureia*. The necessary name changes are made in this paper.

The generic name was originally spelled *Satureja* by Linnaeus, but the spelling *Satureia* is more correct philologically and is used here in accordance with Art. 74 (2) of the International Code of Botanical Nomenclature (1956).

- Bracts foliose..... 1. *S. grandibracteata*.
 Bracts linear:
 Calyx tubular..... 2. *S. biflora*.
 Calyx campanulate:
 Lower lip of corolla longer than upper..... 3. *S. reptans*.
 Lower lip equal or shorter than upper..... 4. *S. compacta*.

1. *S. grandibracteata* Killick, nom. nov.

Micromeria grandiflora Killick in Bothalia 6, 2: 439–440 (1954). Type: Cathedral Peak Forest Influences Research Station, Killick 1684 (PRE, holo.).

The epithet *grandiflora* cannot be used, because it is pre-occupied in *S. grandiflora* Scheele (1843).

For a description of *S. grandibracteata* see Killick (l.c.). No additional specimens of this species have been received since it was first described.

NATAL.—Bergville: Cathedral Peak Forest Influences Research Station Codd and Dyer 6241; Killick 1102, 1600, 1684.

2. *S. biflora* (Buch. Hamilt. ex D. Don) Briq. in Engl. and Prantl., Nat. Pflanzenfam. 4, 3a: 299 (1896). Type: Upper Nepal, Suemba, Hamilton s.n. (not located).

Thymus biflorus Buch. Hamilt. ex D. Don, Prodr. Fl. Nepal, 112 (1825). *Micromeria biflora* (Buch. Hamilt. ex D. Don) Benth., Lab. Gen. et Sp. 378 (1834).

A shrubby herb with numerous ascending branches, 20–60 cm high, pubescent, glandular-punctate; internodes 0.5–3 cm long. *Leaves* subsessile, narrowly elliptic to broadly ovate, 5–15 mm long, 1.5–10 mm wide, apex acute to obtuse, base broadly cuneate to round, entire. *Cymes* 1–9 flowered; peduncles 2–7 mm long, bibracteate; bracts linear, 1.5–2 mm long. *Calyx* tubular, 15-nerved; tube 2–3 mm long; teeth subequal, elongate-triangular, acuminate, somewhat spinous and reflexed. *Corolla* white or mauve; tube 5–6 mm long; upper lip emarginate, 1.5 mm long, 2 mm wide; lower lip 3-lobed, 4 mm long, 4–5 mm wide, lateral lobes rounded, middle lobe emarginate. *Stamens* didynamous, arcuate, upper 1 mm long, lower 2 mm long; anthers 2-celled, divaricate. *Disc* slightly lobed. *Style* included, 5 mm long; stigma bifid, lobes subequal. *Nutlets* oblong, 1 mm long, 0.5 mm wide.

BASUTOLAND.—Quthing: Moyeni Mountain, Lelvaleng, *Dieterlen* 1346.

CAPE.—Engcobo: Emgwali River, *Flanagan* 2809. Herschel: Sterkspruit, *Hepburn* 5. Umtata: Baziya, *Baur* 220; Nqadu woods, *Pegler* 1575.

TRANSVAAL.—Barberton: Lomati, *Thorncroft* 2115. Heidelberg: *Mogg* 24170. Krugersdorp: *Mogg* 23161. Lydenburg: Kantoorbos, *Codd* 9787. Pietersburg: Duivelskloof, *Galpin* 10101, 11393. Pretoria: Leikenhoutskloof, *Mogg* 12433. Roodepoort: Roodepoort Ridge, *Mogg* 20254. Rustenburg: Farm Morgenzon, *Rose-Innes* 122. Soutpansberg: Louis Trichardt, *Letty* 247. District Unknown: Valdesia, *Schlechter* 4534.

S. biflora is an extremely variable species as regards leaf-shape, number of flowers and structure of calyx. It is here treated in its widest sense, following Baker (l.c. 452) who regarded the Tropical African species *S. punctata* (Benth.) Briq., *Micromeria ovata* Benth., *M. schimperi* Vatke and *M. purtschelleri* Gürke as synonyms. Subsequent workers have variously upheld these species. For example, Brenan (l.c. 45) considered *S. punctata* as distinct, likewise Hedberg (l.c. 161). Recently E. and K. Walther in Mitt. Thür. Bot. Gesell. 1, 4: 1–12 (1957) in a very detailed study of *S. biflora* and its allies upheld all the species sunk by Baker. According to these two workers typical *S. biflora* is restricted to the Himalayas and Eastern India and does not occur in Africa, but they allow for the presence in Africa of two of its varieties, namely var. *rhodesiaca* Walther and var. *villosa* Walther.

The problem was submitted to Mr. W. Marais our liaison officer at Kew who, together with Mr. P. Taylor of that institution, examined type material and specimens at Kew and the British Museum. Taking the whole range of material into consideration they decided that there was no justification whatever for upholding the species and varieties regarded by E. and K. Walther as distinct.

3. *S. reptans* Killick, nom. nov.

Micromeria pilosa Benth. in Hook. Icon. Plant. 15: t. 1522 (1886). Types: Faku's Territory, *Sutherland* s.n.; Natal, *Medley Wood* 3712 (both K).

Prostrate aromatic herb with slender branches up to 2 ft. 6 in. long, covered with numerous silvery multicellular hairs and a few unicellular gland-tipped hairs, glandular-punctate; internodes 1–5 cm long. *Leaves* ovate, 0.7–2.5 cm long, 0.6–2.0 cm wide, apex acute to rounded, base shallowly cordate to broadly cuneate, margins crenate with few teeth; petioles 1–5 mm long. *Flowers* 1–2 in axils of uppermost leaves (rarely 3, *Galpin* 11745). *Pedicels* threadlike, 0.7–3 cm long, bibracteate about the middle; bracts linear, 1–2 mm long. *Calyx* campanulate, 15-nerved; tube 2.5–4 mm long, teeth subequal, deltoid, 1–2 mm long. *Corolla* "white" (*Galpin* 11745 and 11925) to pale cobalt violet, often creamy yellow on lower side; tube 0.5–1.2 cm long, 3–7 mm wide at mouth, pilose and yellow inside on lower side; upper lip emarginate, 1–2 mm long, 3–6 mm wide; lower lip 3-lobed, middle lobe emarginate, 4–7 mm long, 3–7 mm wide, lateral lobes round, 2–3 mm diam. *Stamens* 4, didynamous, arcuate, lower 3 mm long, upper 1.5 mm long. *Disc* slightly lobed. *Style* 1 cm long, the posticous lobe the shorter. *Nutlets* oblong, 2 mm long, 1 mm wide.

NATAL.—Bergville: Cathedral Peak Forest Station, *Killick* 1272, 1429. Estcourt: Cathkin Peak, *Galpin* 11745; Bushmans River, *Medley Wood* 10894. Lions River: Lidgetton, *Mogg* 6890. Richmond: Byrne, *Galpin* 11925. Underberg: Bamboo Mountain, *McLean* 709.

A new name is necessary in *Satureia*, because of the existence of *S. pilosa* Velen. (1899) described from Bulgaria.

4. *S. compacta* *Killick*, sp. nov., *S. reptanti* *Killick* et *S. grandibracteatae* *Killick* affinis, ab ambabus habitu multo compactiore corollae labio antico quam posticum aequilongo vel brevioris facile distinguitur.

Herba prostrata compacta multo ramosa glanduloso-punctata pilis multicellularibus induta, internodiis 5–15 mm longis. *Folia* late ovata vel rotunda 0.5–1.1 cm longa, 0.4–1.0 cm lata, apice et basi rotunda, marginibus breviter crenatis, petiolis 2–4 mm longis. *Flores* in axillis foliorum solitarii. *Pedicelli* 3 mm longi infra medium bibracteati; bractee lineari-lanceolatae 1.5 mm longae carinatae. *Calyx* campanulatus 15-nervis, tubo ad 2 mm longo, lobis aequalibus triangulari-lanceolatis c.2 mm longis. *Corolla* cobalto-violacea intus glabra; tubus anguste campanulatus 5 mm longus, labio antico 3-lobato lobis lateralibus rotundis 2 mm diam. lobo medio emarginato 2 mm longo 2–5 mm lato, labio postico emarginato 2 mm longo 3 mm lato. *Stamina* didynama, antica 3 mm longa, postica 2 mm longa. antheris 2-ocularibus divaricatis. *Discus* leviter lobatus. *Stylus* inclusus 6 mm longus, stigmatibus bifido. *Nucellae* oblongae 1–8 mm longae 1–2 mm latae minute pubescentes.

NATAL.—Bergville: below the Amphletts, Cathkin Peak Area, *Killick* 1866 (PRE, holo.).

Prostrate, mat-forming, much-branched herb, covered with multicellular hairs (especially dense on stems), gland-dotted; internodes 0.5–1.5 cm long. *Leaves* broadly ovate to round, 0.5–1.1 cm long, 0.4–1.0 cm wide, round at base and apex, margins shallowly crenate; petioles 2–4 mm long. *Flowers* solitary in axils of leaves. *Pedicels* 3 mm long, bibracteate below middle; bracts linear-lanceolate, 1.5 cm long, keeled. *Calyx* campanulate, 15-nerved; tube just under 2 mm long; lobes equal, triangular-lanceolate, 2 mm long. *Corolla* cobalt-violet, glabrous inside except for few hairs at base of lower lip; tube narrowly campanulate, 5 mm long; lower lip 3-lobed, lateral lobes round, 2 mm diam., middle lobe emarginate 2 mm long, 2–5 mm wide; upper lip emarginate, 2 mm long, 3 mm wide. *Stamens* didynamous, somewhat arcuate, lower 3 mm long, upper 2 mm long; anthers 2-celled, cells divaricate. *Disc* slightly lobed. *Style* included, 6 mm long; stigma bifid, the posticous lobe the shorter. *Nutlets* oblong, 1.8 mm long, 1.2 mm wide, minutely pubescent.

This species was found growing at the side of a bridle path in *Festuca costata* Grassveld at 6,800 feet just below the Amphletts in the Cathkin Peak Area of the Natal Drakensberg. Although the author has spent nearly three years in the Drakensberg doing botanical survey work, he has seen *S. compacta* growing in only the one locality.

S. compacta is related to *S. reptans* and *S. grandibracteata*, but can be readily distinguished from these species. Vegetatively it differs in being denser and much more compact in habit; it forms mats about 45 cm in diameter. Florally it differs mainly in that the flowers are smaller and the lower lip of the corolla is equal or shorter than the upper lip.