

CAMPANULACEAE

A NEW SPECIES OF *MERCIERA* FROM WESTERN CAPE, SOUTH AFRICA

INTRODUCTION

Merciera A.DC. is one of five Campanulaceae genera endemic to Western Cape. It is a genus of four dwarf shrub species, occurring in sandy, rocky or clayey habitats. Complex morphological variation render *Merciera* taxonomically challenging at the species level. Detailed morphometric analysis in *Merciera* (Cupido 2000) revealed the existence of a well-defined group of specimens, which did not match any previously recognized taxon. This group of specimens was identified as *M. brevifolia* A.DC. The first known specimen was collected by Drège during the mid 1820s on the Du Toitskloof Mountains and was considered to be a member of *Roella* L., a genus closely related to *Merciera*. Floral characters of these plants display a clear interval in the morphological variation pattern within *M. brevifolia*. In addition to the distinct morphological characters, the plants also occupy a distinct geographical range, west of the Hottentots Holland Mountains in Western Cape. All the other species in the genus occur east of these mountains. This discrete group of specimens is described here as a new species.

Merciera tetraloba C.N.Cupido, sp. nov., ex affiniat *M. brevifolia* A.DC. et specierum affinum folia glabra in pagina abaxiale, calyx 4 lobis et ciliatis marginibus, corolla alba, interdum purpureus apice, lobis 4 ovatis, stamina 4 distinguenda.

TYPE.—Western Cape, 3418 (Simonstown): Strand, Harmony Flats, Tortoise Nature Reserve, off Disa Road, (-BB), 17 January 2000, C.N. Cupido 77 (NBG, holo.; BM, K, MO, NY, PRE).

Subshrubs, hispidulous to hispid. Stems decumbent, slender, branched, occasionally with groups of branches at the end of a year's growth. Leaves alternate, linear, less than 8 mm long, subulate, entire, scattered, ascending, the older spreading, sessile, glabrous on abaxial surface, margins ciliate; axillary cluster of smaller leaves present. Inflorescence 3-flowered, 1 terminal, lateral 2 rudimentary, on highly reduced lateral branches with bract-like leaves, aggregated into spike-like synflorescences towards ends of main branches. Flowers sessile, axillary, actinomorphic. Bract-like leaves 2, succulent, subtending each of rudimentary flowers, absent in terminal flower, 1–4 mm long. Hypanthium obconical, 1–2 mm long, hispid with uncinat or circinate trichomes. Calyx: lobes 4, 0.6–1.2 mm long, fused at base to form short tube, hairs often on hyaline tips and margins. Corolla narrowly funnel-shaped, white, occasionally with purple tips, or very rarely pale blue; tube 4–6 mm long; lobes 4, ovate, glabrous or hairy on back, 2–3 mm long. Stamens 4, free, inserted at base of corolla tube; filaments flattened, wider and pilose about the middle, narrower towards apex, 3.0–4.5 mm long; anthers linear, basifixed. Ovary inferior, 1-locular, containing 4 erect ovules situated at base of ovary; style filiform, exserted, glabrous, swollen at base, 6–10 mm long; stigma bifid, glabrescent, bluish purple. Fruit a hispid capsule, crowned with persistent calyx, 1-seeded, indehiscent.

Flowering time: November to January, flowering most profusely in recently burnt veld (Figures 13 & 14).

Diagnostic features: the reduction in the number of calyx lobes, corolla lobes and stamens make *M. tetraloba* unique in the genus. This species differs from the other two white-flowered species, *Merciera leptoloba* A.DC. and *M. brevifolia*, in tetramerous flowers and calyx lobes often with marginal hairs. Furthermore, in *M. leptoloba* the corolla lobes are linear-lanceolate and the lower leaves are more than 8 mm long, whereas in *M. tetraloba* the corolla lobes are broadly ovate and the lower leaves less than 8 mm long. The other species in the genus, *Merciera tenuifolia* (L.f.) A.DC. and *Merciera eckloniana* Buek ex Ecklon & Zeyher, differ from *M. tetraloba* in having violet-blue flowers and corolla tubes of more than 7 mm long. The species is closely related to *M. brevifolia* from which it differs in floral characters and geographical distribution. The two species occur allopatrically. *M. brevifolia* is confined to mountains in Bot River, Houwhoek and Caledon, whereas *M. tetraloba* occurs west of the Hottentots Holland Mountains.

Distribution and habitat: this species is found in Faure, Gordon's Bay, Sir Lowry's Pass, Somerset West, Strand, Dal Josaphat, Du Toitskloof and Stellenbosch (Figure 15) on flats and lower mountain slopes at altitudes between 30 m and 350 m. It grows in open clayey soil, often in disturbed habitats.

Large areas of the habitat of this species in the Helderberg and Stellenbosch areas have been destroyed because lower mountain slopes and lowland areas are sought after for urban development. On the Harmony



FIGURE 13.—*Merciera tetraloba*, inflorescences, $\times 0.75$. Photograph by J.C. Manning.



FIGURE 14.—*Merciera tetraloba*. A, portion of plant, life size; B, flowering branch; C, leaf; D, bract-like leaf with rudimentary flower; E, flower with two bract-like leaves; F, stamen; G, base of flower longitudinally opened, showing ovary and basal part of style; H, seed. Drawn from *Cupido 77* by Inge Oliver. Scale bars: B, 4 mm; C–G, 2 mm; H, 1 mm.

Flats in Strand, the few existing populations are under serious threat of extinction.

Etymology: the name of this species is derived from the respective number of lobes in the corolla and calyx (*tetra* = four, *lobi* = lobes).

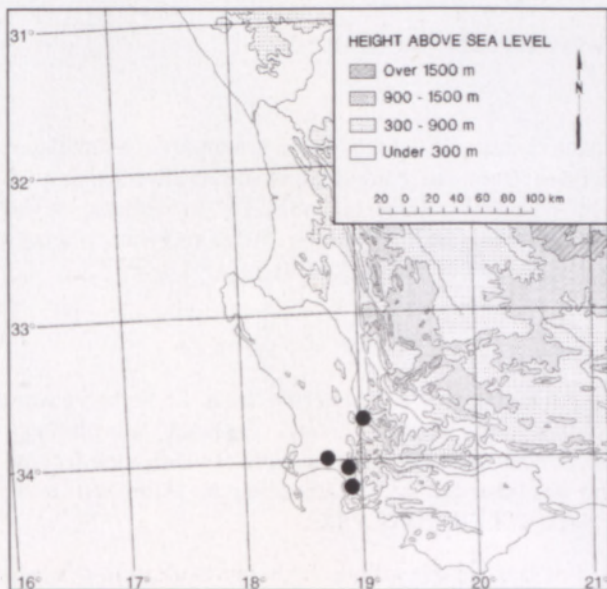


FIGURE 15.—Known distribution of *Merciera tetraloba*.

Specimens examined

WESTERN CAPE.—3318 (Cape Town): Dal Josaphat, (–DB), *Barker 8865* (NBG), on hills, *Tyson 899* (SAM); between Bottellary and Stellenbosch, (–DD), *Bolus BOL98256* (BOL); near roadside Stellenbosch, *Markotter 8639* (NBG); Stellenbosch Mountain, lower western slopes above the university farm and NE of Brandwacht suburb, *Oliver & Oliver 11866* (NBG). 3319 (Worcester): Du Toitskloof, (–CC), *Drège SAM17297* (SAM). 3418 (Simonstown): Sir Lowry’s Pass, foot of pass, (–BB), *Adamson 4895* (BOL); Sir Lowry’s Pass, foot of pass on the Somerset West side, *Cupido 117* (NBG); Sir Lowry’s Pass, *Guthrie 2792* (NBG); Faure Hills, *Compton 10372* (NBG); Gordon’s Bay, mountain slopes above, *Bayliss 4089* (NBG); flats between Strand and Gordon’s Bay, *Jordaan s.n.* (NBG); Somerset West, *Parker 3550* (NBG); Strand, upper Harmony Flats between Lwandle Township and Strand Foam Factory, *Boucher 3447* (NBG); Strand, Tortoise Nature Reserve, *Cupido 75, 77* (NBG).

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REFERENCE

- CUPIDO, C.N. 2000. *A re-assessment of the species boundaries in Merciera A.DC. (Campanulaceae)*. M.Sc. thesis (Systematics & Biodiversity Science), University of Cape Town.

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