



Solenopsis mothiana (Campanulaceae), a new species from Sicily

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Abstract

Solenopsis mothiana (Campanulaceae) is described and illustrated as a new species from Sicily. A full description, diagnostic characters, ecological requirements, conservation status, SEM, and seed micro-morphology of this narrow endemic are provided. It is taxonomically well differentiated from the other hitherto known species of the genus, which are restricted to the Mediterranean and Macaronesian regions. Its taxonomic isolation is also confirmed by a phenetic analysis based on morphological features. The new species mainly differs from the other taxa of *Solenopsis* in having sub-caulescent habit, very short and branched stems, leaves arranged in a basal rosette and cauline, and a very small white corolla with sub-connivent lips. From an ecological viewpoint, it behaves as a hygrophyte linked to temporary submerged depressions close to coastal salt marshes.

Key words: NW Sicily, phenetic analyses, seed micromorphology, *Solenopsis*, Lobelioideae, taxonomy

Introduction

Solenopsis C. Presl (1836: 32) is a small genus of Campanulaceae Jussieu (1789: 163) occurring in the Mediterranean and Macaronesian areas. It is currently represented by 8 taxa typically linked to wet habitats such as temporary ponds, acid marshes, and damp rocky outcrops near streams and springs (Meikle 1979, Greuter *et al.* 1984, Serra & Crespo 1997, Crespo *et al.* 1998, 2007, Hand 2006). The genus includes both annual and perennial species characterized by small size (2–20, rar. 30 cm), caulescent with stem erect and cauline leaves or acaulescent with basal leaf rosette, floral pedicels axillary, much longer than leaves, with 0–3-bracts, corolla 5-lobed, bi-labiate, with divaricate to patent lips, bluish, often whitish in the throat, with unicellular papillae on the lower lip, capsula bilocular, loculicide, with several small seeds, flattened, ellipsoid, strophiolate, with testa longitudinally furrowed, and slightly longitudinally ridged.

Here we report the finding of a curious population in Sicily localized on flat depressions periodically submerged in winter by slightly brackish shallow waters. Morphologically, it appears well diverged from the other known taxa of the genus, in having some unique characters, especially concerning the habit and flowers. It is a very small therophyte, with many sub-caulescent stems, branched at the base, with short prostrate-ascending branchlets. The corolla is white, very short, with lobes sub-connivent (never divaricate-patent). Overall, none of these characters have been observed in other species of *Solenopsis*, which are always caulescent or acaulescent (never sub-caulescent), with solitary stems or stemless (never many-stemmed and branched at the base), corolla bluish, often whitish near the throat, and with lobes spreading at maturity (never white with sub-connivent lobes). Compared to other taxa of *Solenopsis*, the population at issue is also ecologically distinct, being linked to sub-salty soils.

According to literature and personal field investigations, the hitherto known species of *Solenopsis* grow exclusively on damp habitats characterized by fresh waters. They are: *S. antiphonitis* Hadjikyriakou & Hand in Hand (2006: 781), *S. balearica* (E. Wimmer, 1948: 334) Aldasoro *et al.* (2001: 173), *S. bicolor* (Battandier,

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