

# Campanula marcenoi (Campanulaceae) : a new species from Sicily

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# Campanula marcenoi (Campanulaceae), a new species from Sicily

SALVATORE BRULLO

## RÉSUMÉ

BRULLO, S. (1993). *Campanula marcenoi* (Campanulaceae), une nouvelle espèce de la Sicile. *Candollea* 48: 493-500. En anglais, résumés français et anglais.

*Campanula marcenoi* est une espèce nouvelle, décrite et illustrée, des gorges calcaires des Monts Madonie (Nord de la Sicile). Ses affinités avec *C. pollinensis* Podl. and *C. scheuchzeri* Vill. sont examinées.

## ABSTRACT

BRULLO, S. (1993). *Campanula marcenoi* (Campanulaceae), a new species from Sicily. *Candollea* 48: 493-500. In English, French and English abstracts.

*Campanula marcenoi* from calcareous gorges of Madonie Mountains (N. Sicily) is described as a species new to science and illustrated. Its relationships with *C. pollinensis* Podl. and *C. scheuchzerii* Vill. are discussed.

**KEY-WORDS:** Taxonomy — Flora — Sicily — *Campanula* — subsect. *Heterophylla*, *C. marcenoi*.

## Introduction

Aim of the present paper is the taxonomic study of a critical species of the Sicilian flora, which is attributed by major part of authors (PARLATORE, 1888; FIORI, 1927; PODLECH, 1965; FEDEROV & KOVANDA, 1976; GREUTER & al., 1984) to *Campanula scheuchzeri* Vill., while GUS-SONE (1843) referred it to *C. rotundifolia* L. and LOJACONO-POJERO (1891) to *C. linifolia* Scop. More recently, PIGNATTI (1982) emphasizes that the Sicilian populations previously referred to *C. scheuchzeri* show, on the whole, remarkable relationships with *C. pollinensis*, species described by PODLECH (1970) from M. Pollino (S Italy); but he deems that a detailed investigation is in any case necessary to clarify the taxonomical position of this plant.

Therefore, in order to verify the correlations between the Sicilian populations and the Italian ones, a lot of living material and herbarium specimens, coming from Sicily (Madonie), S Italy (M. Pollino, M. Mula, M. Cozzo del Pellegrino) and C Italy (Gran Sasso), was examined. From this investigation results that the Sicilian plant is well differentiated morphologically from those ones of Italian peninsula, so that it must be treated a distinct species. The name of this new species is in honour of Prof. Cosimo Marcenò, botanist of Palermo University, colleague and friend of the author.

**Campanula marcenoi** Brullo, spec. nov. (Fig. 1).

**Typus:** Sicily, Madonie, Vallone Canna, 30.7.1990, *Bartolo, Brullo & Spampinato* s.n. (holotypus CAT).

Planta perennis, 18-30 cm alta, rhizomatibus subtilibus, ramosis. Caules singulares, ascendentes; parce pilosi basi. Folia basalia lamina cordiformia, 5-20 × 7-22 mm, sparse pilosa, margine crenato, base cordata rare cordato-truncata, 3-7 dentibus in quoque latere, petiolis pilosis, (2-)3-6 cm longis. Folia caulina difformia, oblongo-lanceolata, lineari-lanceolata vel lineari-subulata, 10-90 × 1-7 mm, inferiora saepe leviter crenata et sparsim pilosa, superiora integerrima, glabra vel ciliata basi. Flores singulares vel 2-5(-7) in laxo racemo aggregati, pedunculis bracteolatis, 1-5 cm longis, arcuatis apice. Receptaculum turbinatum, 2-3 mm longum, glutinosum, leviter papillosum vel laeve. Dentes calycis triangulato-subulati, 4-7(-8) mm longi, corolla adpressi vel patentes. Corolla coeruleo-lilacina, campanulata vel campanulato-infundibuliformis, 13-20 mm longa, lobis triangularibus vel rotundatis, 4-6 mm longis. Stamina stylo adpressa, anthera linearia, viridiluteola, 4-5 mm longa, filamentum albo, 4-4.5 mm longo, basi dilatato, subrotundato, 2 mm lato, dense ciliato margine. Stylus albus, saepe violaceus in dimidio, 13-18 mm longus, dense lanosus in dimidio superiore. Stigma trilobum. Capsula ca. 5 mm longa. Semina brunnea, lucentia, ca. 1 mm longa.

*Specimens examined*

Sicily: Rocca di Meli, Madonie, s.d., *Tineo* (FI); Madonie, s.d., *Meli* (FI); in nemoribus eletioribus, Nebrodes, 7.1885, *Lojacono 119* (FI); Madonie, Vallone Canna, 30.7.1990, *Bartolo, Brullo & Spampinato* (CAT); ibid, Rupi calcaree di Vallone Canna, 2.8.1991, *Brullo & Spampinato* (CAT).

**Ecology**

*Campanula marcenoi* is a rare plant occurring in few mountain sites of Madonie (N Sicily) on very shady rocky walls of gorges. In these rupestrian places *C. marcenoi* grows on Mesozoic limestones together with other endemic or rare chasmophytes, as *Anthemis cupaniana* Tod. ex Lojac., *Brassica rupestris* Rafin., *Helichrysum pendulum* C. Presl, *Edraianthus siculus* Strobl, *Hieracium symphytifolium* Froelich, *Odontites bocconei* Guss., *Iberis semperflorens* L., *Hypochoeris laevigata* (L.) C., P. & G., *Poa bivonae* Parl., *Cymbalaria pubescens* (C. Presl) Cuf., etc. From the phytosociological point of view, *C. marcenoi* characterizes a mesophilous association of *Dianthion rupicola*, represented by the *Anthemido-Centauretum busambarensis*, circumscribed to inland limestone cliffs of N-W Sicily (BRULLO & MARCENO, 1979).

**Relationships**

*Campanula marcenoi* is a species belonging to subsect. *Heterophylla* (Wit.) Fed., having close relations with *C. scheuchzeri* and *C. pollinensis*; but it differs from both especially in the crenate margin of the basal leaves, which have a blade with a cordiform outline, always pilose and with up to 7 teeth for each side, as well in the smaller calyx teeth (4-7 mm long) and glutinous receptacle (Fig. 1-4).

In particular, *C. marcenoi* for the leaves (mainly the basal and lower cauline) sparsely pilose and ciliate at least at the base, as well as for the scape often many-flowered, resembles to *C. scheuchzeri*; however the latter is well distinguished from the former in numerous differential characters, concerning in particular the shape and size of the basal leaves, which are provided with a shorter petiole, the longer calyx teeth and the receptacle always smooth (Fig. 3, 4).

Besides, *C. marcenoi* appears closely related to *C. pollinensis* for the occurrence of a receptacle papillose or sometimes smooth. This is a very important character since it took in consideration by PODLECH (1970) to discriminate *C. pollinensis* from *C. scheuchzeri*. However, *C. pollinensis*



Fig. 1. — *Campanula marcenoi* Brullo (from type locality).  
 A, habit; B, flower; C, flower without corolla; D, stamen; E, capsule; F, seed; G, leaves.



Fig. 2. — *Campanula pollinensis* Podl. (from M. Pollino).  
 A, habit; B, flower; C, flower without corolla; D, stamen; E, leaves.

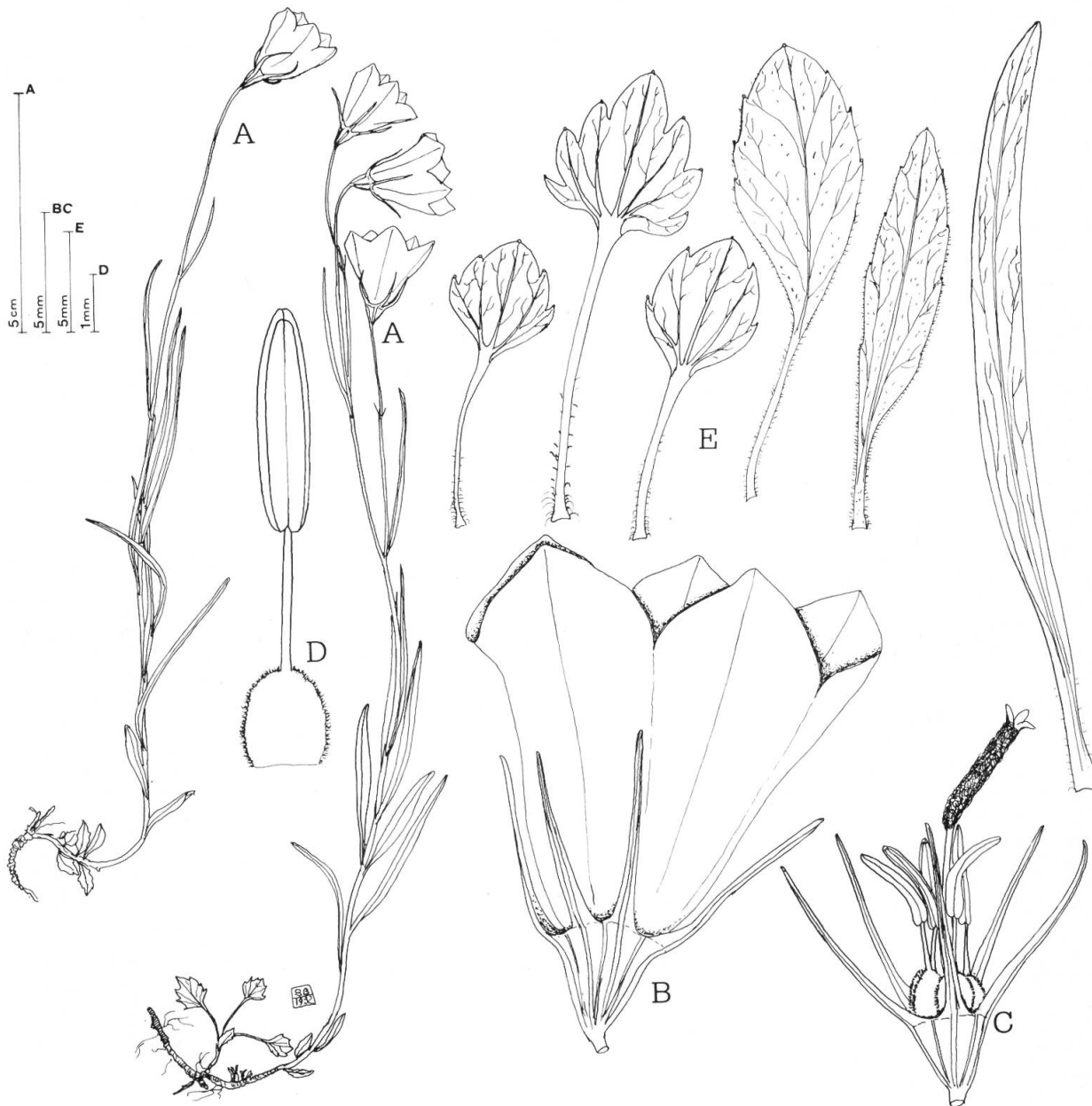


Fig. 3. — *Campanula scheuchzeri* Vill. (from M. Gran Sasso).  
**A**, habit; **B**, flower; **C**, flower without corolla; **D**, stamen; **E**, leaves.

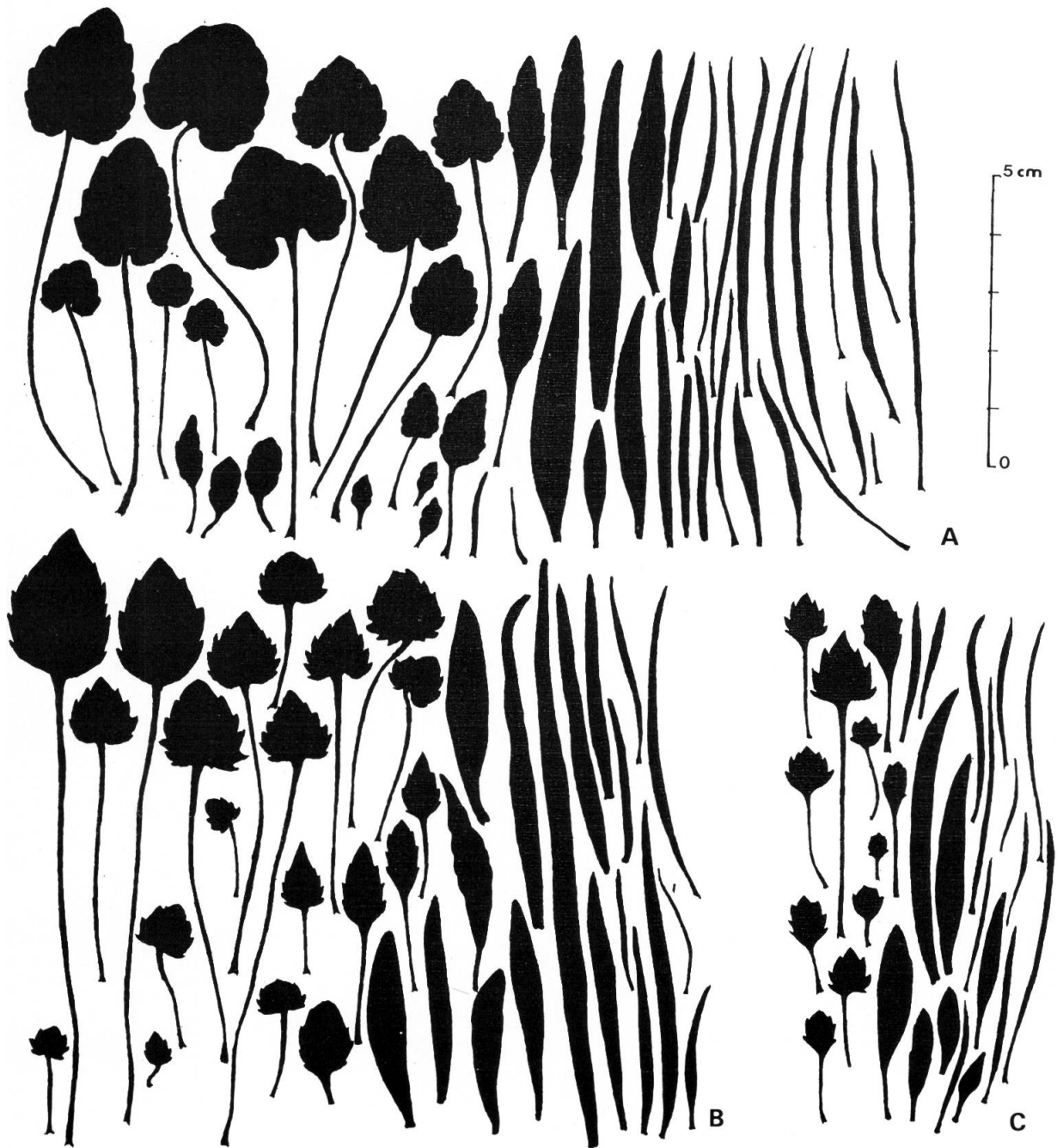


Fig. 4. — Leaf silhouettes.

**A**, *Campanula marcenoi* (from type locality); **B**, *Campanula scheuchzeri* (from M. Gran Sasso); **C**, *Campanula pollinensis* (from M. Pollino).

Character	<i>Campanula scheuchzeri</i>	<i>Campanula pollinensis</i>	<i>Campanula marcenoi</i>
<b>Basal leaf</b>			
Dimension (mm).....	5-10 × 3-10	5-25 × 3-15	5-25 × 7-22
Blade outline.....	ovate or subovato-cordiforme	ovato-cordiforme	cordiforme
Teeth for each side...	1-3(-4)	2-5	3-7
Margin.....	inciso-serrate	serrate	crenate
Base.....	truncate to rotundato-obtuse	truncate to subcordate	cordate (r. cordato-truncate)
Blade surface.....	glabrous or with rare hairs	glabrous	sparsely hairy
Petiole.....	0.5-3 cm long, hairy-ciliate	0.5-8 cm long, glabrous	3-6 cm long, hairy-ciliate
<b>Cauline leaf</b> .....	15-70 × 1-4 mm, often with base and blade ciliato-hairy	20-100 × 1-6 mm glabrous	10-90 × 1-6 mm, often with base and blade ciliato-hairy
<b>Flower number</b> .....	1-4(-6)	1-(2-3)	1-5(-7)
<b>Length of calyx teeth (mm)</b> .	(6-)-7-10(-14)	7-14	4-7(-8)
<b>Receptacle</b> .....	smooth	papillose or smooth	glutinous, papillose or smooth
<b>Corolla length (mm)</b> .....	15-20(-25)	10-20	14-20
<b>Length of corolla lobes (mm)</b>	4-5	3-4	5-6

Table 1. — Comparative characters between *C. marcenoi* and the two most related *Campanula* species.

differs from *C. marcenoi* in many essential characters, as the wholly glabrous leaves, the shape of basal leaves, the scape normally one-flowered, the calyx teeth up to 14 mm long and corolla lobes 3-4 mm long (Fig. 2-4). The diacritical characters of the above mentioned species are listed in the Tab. 1.

Remarkable differences among these species there are also from the ecological point of view. In fact, *C. scheuchzeri* is a S European orophyte diffused in alpine or subalpine meadows, heaths and shrub communities on well humidified soils of various substrata, while *C. pollinensis* grows normally on the rock crevices of the calcareous mountains of N Calabria, but often it occurs also in the cacuminal meadows and in the underbrush of the beech-woods. On the contrary as previously emphasized, *C. marcenoi* is a strict chasmophyte exclusive of the calcareous shady walls of some gorges of Madonie localized at 1000-1300 m.

Finally, *C. marcenoi*, as well as *C. pollinensis*, can be considered as a schizoendemic arising probably from the more widespread *C. scheuchzeri* in consequence of geographical isolation processes of the most southern populations. In particular, *C. marcenoi* for some morphological characteristics, regarding mainly the basal leaves, it seems taxonomically more isolated from *C. scheuchzeri* than *C. pollinensis*.

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