

Silene peloritana (Caryophyllaceae) a new species from Sicily

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Abstract

Silene peloritana is described and illustrated as a narrow endemic circumscribed to Mt. Scuderi, an isolated peak of the Peloritani range (NE Sicily). The new species, belonging to *S.* sect. *Dipterosperma*, is a small therophyte growing on cacuminal carbonatic stands. It is well differentiated from the other Sicilian species of this section for its small size, shorter lower internodes, bracts and calyx teeth, petal lobes obovate, coronal scales purplish, and anthers pinkish-violet. A key of the Sicilian taxa belonging to *Silene* sect. *Dipterosperma* is provided.

Key words: Caryophyllaceae, chorology, ecology, Flora of Sicily, *Silene*, taxonomy

Introduction

Silene Linnaeus (1753: 416) sect. *Dipterosperma* (Rohrbach 1868: 144.) Chowdhuri (1957: 248) includes a small group of annual species with stem hairy-pubescent, eglandular, flowers erect, arranged in monochasia or dichasia, calyx hairy, not inflated, with 10-nerved, anthophore pubescent, petal limb deeply bifid, coronal scales present, seeds orbicular-reniform, laterally flat and dorsally furrowed between two undulate wings (Maire 1963, Talavera 1990, Chater *et al.* 1993). This group has been recently surveyed by Valsecchi (1995) and Brullo *et al.* (2012) who highlighted the remarkable variability among the populations, most of which require further studies.

During the field investigations carried out in the central Mediterranean territories, an interesting population belonging to this section was found on the top of Mt. Scuderi, an isolated peak of the massif Peloritani (NE Sicily). The population found differs from the current known species of the sect. *Dipterosperma*, which occur in the Mediterranean and Irano-Turanian countries, by several morphological features chiefly regarding habit, leaves, inflorescences, flowers, capsules and seeds. Moreover, there are both geographic and ecologic separations from the other species of *Silene* sect. *Dipterosperma* currently recorded from Sicily [such as *S. colorata* Poiret (1789:163), widespread along the coastal areas of Sicily, *S. apetala* Willdenow (1799: 703) known only for the island of Linosa (Pelagian Archipelago), *S. nummica* Valsecchi (1995: 452) and *S. arghireica* Valsecchi (1995: 459), both circumscribed to few localities of the Sicilian western coasts, and lastly *S. kemoniana* C.Brullo, Brullo, Giusso, Ilardi & Sciandr. (2012: 209) recently described as a punctiform endemism located in a mountain area close to Palermo]. As new species for science (named *Silene peloritana*, see below) is here proposed and described.

Material and methods

The morphological study was carried out on living plants (20 specimens), collected from the locus classicus. The morphological comparison with the related species of *S.* sect. *Dipterosperma* was made using herbarium material preserved in CAT, literature data, and living plants cultivated at the Botanical Garden of Catania University. The micro-morphology of the seed testa has been studied on dried material with the aid of a Scanning Electron Microscope (SEM) Zeiss EVO LS10, according to the Huttunen & Laine (1983) protocol.

TABLE 1. (Continued)

	<i>S. arghireica</i>	<i>S. kemoniana</i>	<i>S. apetala</i>
Plant height (cm)	20–35	5–15(–20)	10–40
Plant indumentum	minutely pubescent	pilose-pubescent	densely pubescent
Hair length (mm)	up to 1	up to 1	up to 1
Stem	erect	prostrate-ascending	erect
Stem branching	at the base and nodes	at the base	no or few branched
Lower internodes length (cm)	1–3	1–2	1–2
Upper internodes length (cm)	up to 5	up to 4	up to 5
Leaf shape	lanceolate, thin	spathulate, thin	lanceolate to linear–lanceolate
Leaf size (mm)	10–35 × 4–8	8–20 × 2–6	10–20 × 2–8
Leaf nerves	1-nerved	1-nerved	1–3-nerved
Leaf apex	sub–acute	obtuse	apiculate
Inflorescence (shape)	dichasia	helicoid monochasia	irregular monochasia–dichasia
Inflorescence (no. flowers)	3–5	(1–)2–4(–5)	1–4
Bract length (mm)	3–10	4–10	5–10
Pedicel length (mm)	4–15	3–15	5–20
Calyx indumentum	minutely pubescent	minutely pubescent	scabrid–hirsute
Calyx length (mm)	13–14	11–13	6–9
Calyx teeth size (mm)	3.8–4.5 × 1.6–2.2	1.8–2.2 × 1.2–1.5	2.5–3 × 1.5–2
Calyx teeth shape	triangular, acute	oblong, rounded	triangular–acuminate
Corolla colour	pink	pink	pinkish
Petal length (mm)	18–20	15–16	0–9
Petal limb length (mm)	8–9	8–8.5	0–3
Petal lobes size (mm)	3–3.2 × 3–3.5	6–6.5 × 1.5–2	inconspicuous
Petal lobes shape	hemi-elliptical	linear–spathulate	linear
Petal lobes margin	smooth	smooth	smooth
Petal claw length (mm)	10–12	7–8	0–7
Claw dorsal midrib	glabrous	glabrous	minutely hispid
Coronal scales length (mm)	2.5–3	2.5–3	0.8 mm
Coronal scales shape	2-lobed, white, smooth	retuse, white, erose–incised	retuse, white, smooth
		above	
Stamen filaments length (mm)	9–10	9–10	5–8
Anther	pink	pink	pale pink
Anther length (mm)	1.8–2	1.6–1.8	0.6
Ovary length (mm)	3.5–4	2.4–2.6	2–3
Capsula length (mm)	7–8	8–10	4–6
Carpophore	7–8	4–5	0.5–1.5 (2.5)
Seed diameter (mm)	1.5–2	1.6–1.7	0.9–1.2

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