

## *Silene sumbuliana* (Caryophyllaceae), a new species from SW Anatolia, Turkey

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*Silene sumbuliana* İ.G. Deniz & O.D. Düşen *sp. nova* (Caryophyllaceae) is described and illustrated from SW Anatolia, Turkey. Diagnostic morphological characters for discrimination from the related *S. papillosa* Boiss. is given along with their ecological and chorological characteristics and relationship.

Key words: Caryophyllaceae, *Silene*, taxonomy, Turkey

The genus *Silene* is represented by ca. 700 species worldwide, 136 of which are found in Turkey (Coode & Cullen 1966, Davis *et al.* 1988, Tan & Vural 2000, Duran & Menemen 2003). Since *Silene* was revised for *Flora of Turkey* (Coode & Cullen 1966), 12 new species and three subspecies have been described from the country and five species added as new records for Turkey (Tan & Vural 2000). Thus, *Silene* is one of the most species-rich taxa in Turkey.

During “An investigation on the Flora of Elmali Cedar Research Forest Project” in May 2002, a peculiar *Silene* specimen was collected by the senior author in Avlankuzu mountain (W of Antalya, Turkey). More material of the same species was gathered by Deniz and Düşen in the same area in 2003.

These specimens were checked in the herbaria of AKDU (Akdeniz University Herbarium, Antalya) and GAZI (Gazi University Herbarium, Ankara) with the *Flora of Turkey* (Coode & Cullen 1966, Davis *et al.* 1988, Tan & Vural 2000). As the specimens did not resemble any described taxon, we concluded that they repre-

sent an undescribed species closely related to *S. papillosa*.

***Silene sumbuliana*** İ.G. Deniz & O.D. Düşen, *sp. nova* (Fig. 1)

*Affinis S. papillosae sed indumento antrorso vel patulo glanduloso pubescente (non retrorso puberulo), basalibus et inferis foliis spathulatis, distincte petiolatis (non oblonge-ovatis, sessilibus), foliis superioribus oblonge-spathulatis (non oblongis), alaribus floribus distincte pedicellaribus (non ± sessilibus), calyce ferente breves et longos glandulosos pilos (non eglandulosos), petalis integris vel minute-emarginatis (non penite-bipartitis), anthophoro confertim villosulo et 4.5–5.5 mm (non glabello et 3–3.5 mm), seminibus differentibus ab subglobosis ad globosa, colliculatis et obscure-brunneis vel atro-brunneis (non reniformis, aculeatis et pallide-brunneis), florescentia mensis Iunio et Quintili (non Aprili et Maio), S. sumbuliana crescente in clivis calcereis et luco in sylva Cedri libani (non*

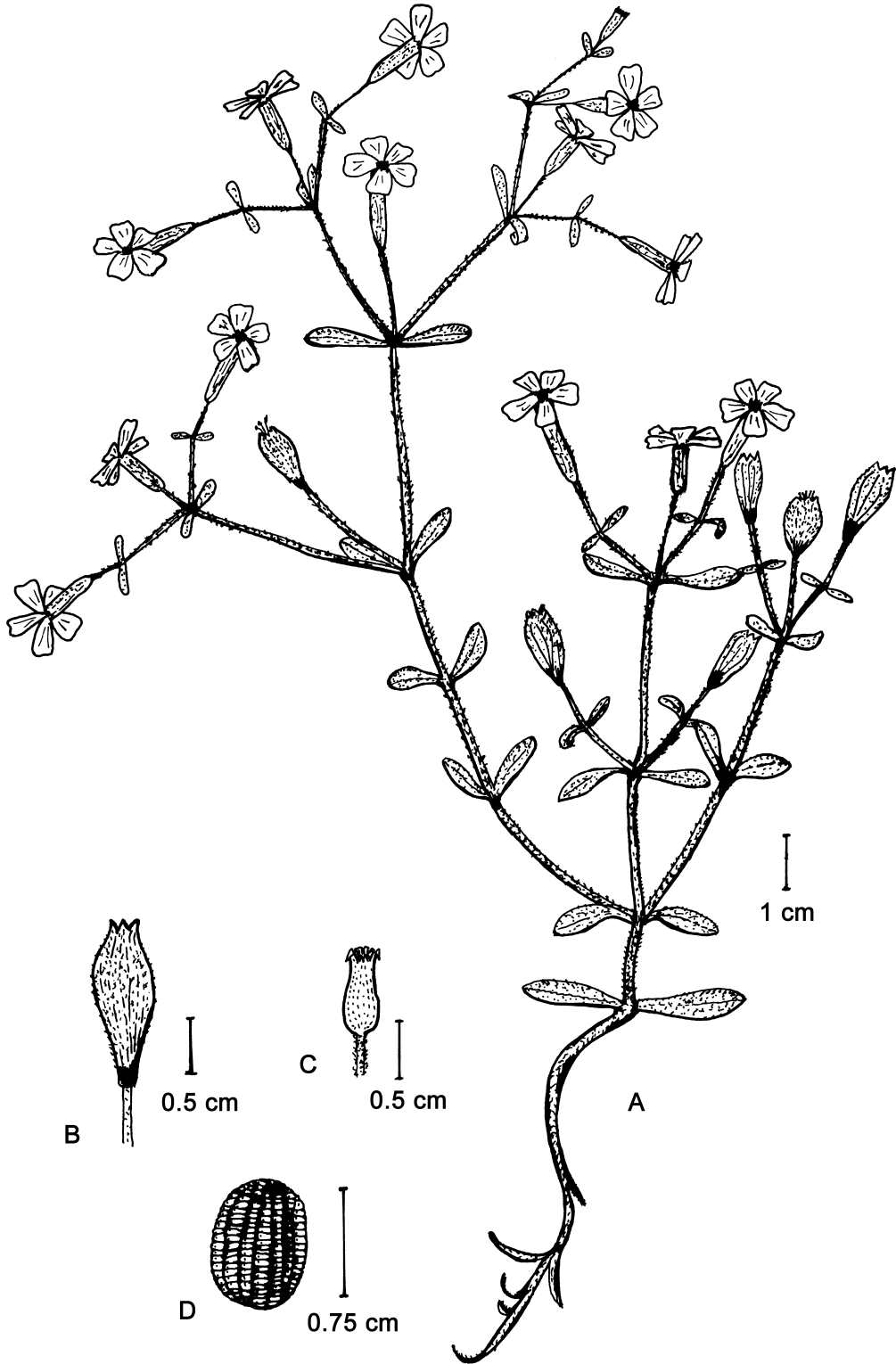


Fig. 1. *Silene sumbuliana* (from holotype). — A: Habit. — B: Calyx upon fruiting. — C: Capsule. — D: Seed (dorsal surface).

*in locis saxosis et foraminibus in Quercu coccifera*) differt.

TYPE: Turkey. C2/3 Antalya: Elmali, Çamkuyu, the top of Avlankuzu mountain, 1850–1880 m, clearings in *Cedrus libani* forest and on calcareous slopes, 21.V.2001 *İ.G. Deniz* 1573 (holotype AKDU; isotypes ANK, HUB, GAZI).

Annual, 10–35 cm tall. Stem ascending or erect, slender, terete, 1–2 mm diam., densely and antrorsely pubescent (or with spreading glandular hairs), simple or branched below. Basal and lower leaves spatulate, 12–21(–25) × 2.5–5 mm, acute, distinctly petiolate, puberulent, upper leaves oblong-spatulate, 10–22 × 3–5 mm, acute, ± sessile, puberulent. Bracts similar to cauline leaves but shorter, puberulent, bracteoles small, linear-lanceolate. Flowers diurnal, 3–10, in lax compound dichasia; alar flower present, erect and distinctly pedicellate. Pedicels 5–15 (–20) mm, straight, puberulent. Calyx (8–)10–17 mm, ± tubular at anthesis, clavate in fruit, constricted round anthophore, contracted at the apex in fruit, bearing short and long glandular hairs, distinctly 10-nerved, teeth triangular, 1–2 mm, acute. Anthophore 4.5–5.5 mm, densely villose. Petals 14–17 mm, pink; limb 7–8 mm, entire or minutely emarginate. Filaments 8–10 mm, glabrous. Anthers 0.9–1.1 mm, slightly exceeding claw. Styles 3. Capsule 6–8 mm, ovoid, smooth, glabrous, immersed in calyx. Longest diameter of seeds 0.5–1 mm, subglobose to globose, colliculate, dark-brown to blackish-brown. Flowering June–July, fruiting July–August.

ETYMOLOGY. The new species is named in honour of Prof. Dr. Hüseyin Sümbül, a plant taxonomist at Akdeniz University, Faculty of Art and Science, Antalya.

This new species is similar to *Silene papillosa* but differs from it by the characters listed in Table 1. *Silene sumbuliana* is endemic to SW Anatolia (Fig. 2) and belongs in the East Mediterranean element. Its altitudinal range is 1850–1880 m. The associated species include *Cedrus libani*, *Ornithogalum pamphylicum*, *Sedum album*, *Centaurea pestalozzae*, *Knautia integrifolia* var. *bidens*, *Crupina crupinastrum*, *Papaver spicatum* var. *spicatum*, *Saponaria chloarifolia*, *Spergularia rubra*, and *Picris strigosa*.

CONSERVATIONAL STATUS. The new species is known from only one location where its distribution area is less than 10 km<sup>2</sup> (criterion B) and population size estimated to number fewer than 250 mature individuals (criterion C) so that it could be evaluated as “critically endangered (CR)” according to new the IUCN categories (IUCN 2001).

ADDITIONAL SPECIMENS EXAMINED (paratypes). — Turkey. C2/3 Antalya: Elmali, Çamkuyu, the top of Avlankuzu Mountain, 1850–1880 m, clearings in *Cedrus libani* forest and on calcareous slopes, 09.VI.2001 *İ.G. Deniz* 1750 (AKDU). C2/3 Antalya: Elmali, Çamkuyu, the top of Avlankuzu mountain, 1850–1880 m, clearings in *Cedrus libani* forest and on calcareous slopes, 08.VII.2003 *İ.G. Deniz* 2310, 2626 (AKDU).

REPRESENTATIVE SPECIMENS EXAMINED OF *Silene papillosa*. — Turkey. A. Güner *et al.*, A. Güner 9052 (GAZI); R.M. Nesbitt & D. Samuel 1871 (GAZI); N. Adıgüzel & Z. Aytaç 6993 (GAZI); İ. Çınbilgel 1885 (AKDU).

**Table 1.** Comparison of *Silene sumbuliana* with *S. papillosa*.

	<i>S. sumbuliana</i>	<i>S. papillosa</i>
Indumentum	antrorsely pubescent or with spreading glandular hairs	retrorsely puberulent
Leaves	basal and lower leaves spatulate, distinctly petiolate, upper leaves oblong-spatulate	basal and lower leaves oblong-ovate, sessile, upper leaves oblong
Alar flower	distinctly pedicellate	± sessile
Calyx	with short and long glandular hairs	with eglandular hairs
Petals	entire or minutely emarginate	deeply bipartite
Anthophore	densely villose, 4.5–5.5 mm	glabrous, 3–3.5 mm
Seeds	subglobose to globose, colliculate, dark brown or blackish brown	reniform, aculeate, light brown
Flowering time	June–July	April–May
Habitat	clearings in <i>Cedrus libani</i> forest and calcareous slopes	rocky places and openings in <i>Quercus coccifera</i>

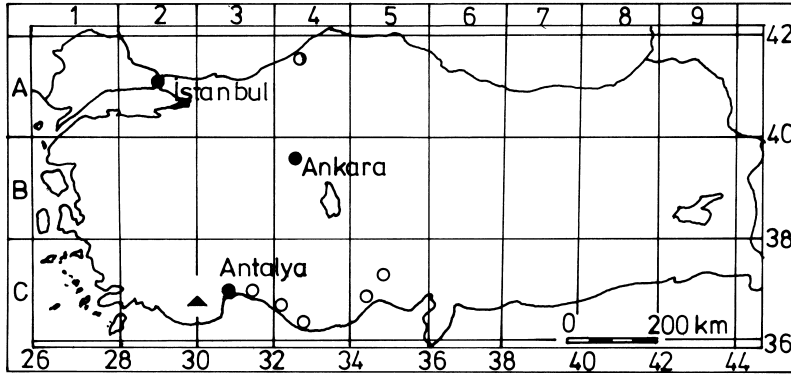


Fig. 2. Distribution of *Silene sumbuliana* (▲) and *S. papillosa* (●) in Turkey.

## Acknowledgements

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