

Gypsophila torulensis (Caryophyllaceae), a new species from Turkey

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Gypsophila torulensis M. Koç *sp. nova* (Caryophyllaceae) is described from the Torul district (Gümüşhane Province) in Turkey. The specimen was collected from calcareous rocks, at an altitude of 1100 m a.s.l. The new species resembles *G. muralis*; the differences between these two taxa are given in a table. Diagnostic characters, a full description, and a detailed figure of *G. torulensis* are provided in the article.

Gypsophila belongs in the subfamily Caryophylloideae of the family Caryophyllaceae. The genus comprises ca. 150 species, mostly found in steppes, on dry slopes and sandy soils of temperate Eurasia, the Eastern Mediterranean, and the Irano-Turanian region (Bittrich 1993). There are some species also in the north temperate zone and colder regions (Hutchinson 1973). In Turkey, *Gypsophila* had 55 species in ten sections (Huber-Morath 1967, Davis *et al.* 1988, Ataslar 2000). As a result of recent studies, three species have been added to the genus (Ataslar & Ocak 2005, Hamzaoğlu 2012, Budak 2012).

In Turkey, *Gypsophila* sect. *Macrorrhizaea* is represented by three species. The section includes annuals with $\pm$ tubular capsules, oblong and incised to 1/3 or less (Huber-Morath 1967, Davis *et al.* 1988). The species described here belongs to that section and raises the number of *Gypsophila* species in Turkey to 59.

The author collected some peculiar *Gypsophila* specimens in the Torul district, Gümüşhane Province, in northwest Anatolia. The specimens were compared with the *Gypsophila* mate-

rial in EDTU, to the photos of *G. muralis* in the Linnean collections (Hb. Linn. 579/18), and to relevant literature (Barkoudah 1962, Barkoudah *et al.* 1964, Rechinger 1964, Zohary 1966, Huber-Morath 1967, Shishkin 1970, Rechinger 1988, Bojňanský & Fargašová 2007). It was concluded that the collected specimens represented an undescribed species.

Gypsophila torulensis M. Koç, *sp. nova* (Fig. 1)

Type: Turkey. A7 Gümüşhane: Torul, between Torul-Gümüşhane 7 km, 1100 m a.s.l., on slopes with calcareous rocks, 40°31.28'N, 39°20.39'E, 17 July 2012 M. Koç 1373 (holotype Bozok Univ. Biology Dept. Herbarium; isotypes GAZI, ANK, Bozok Univ. Biology Dept. Herbarium).

Annual, whole plant glandular hairy. Stems slender, numerous, erect-ascending, 7–28 cm long, 0.5–2 mm diameter below. Leaves oblanceolate, 5–10 $\times$ 1.3–2 mm, $\pm$ acute, green. Inflorescence a very lax corymb, many-flowered. Bracts oblanceolate, 1.5–4 mm. Pedicels 5–10 mm.

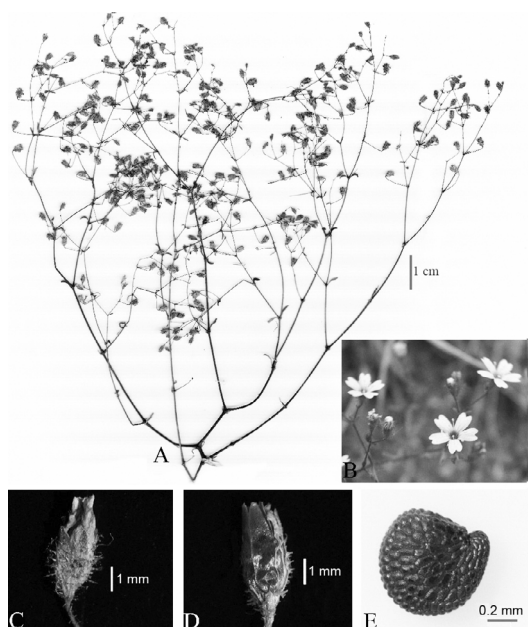


Fig. 1. *Gypsophila torulensis* (from the holotype). — **A:** Habit. — **B:** Flowers. — **C:** Calyx. — **D:** Capsule. — **E:** Seed.

Calyx long glandular-hispid, campanulate, 2–4 mm, divided to 2/3; teeth oblong, acute to acuminate, 0.6–1.5 mm, broadly scarious at margins. Petals whitish or pink, cuneate, 3–6 × 1.8–2 mm, emarginate. Capsule oblong, 2–3.8 × 1.3–1.8 mm, immersed in calyx. Seeds black-brown to blackish, reniform to subglobular, 6–10 in each capsule, 0.6–0.8 × 0.5–0.8 mm, with flat tubercles on surface. Flowering in June, fruiting in July.

Gypsophila torulensis is endemic to Gümüşhane Province in northwest Anatolia. It resembles *G. muralis* but has several distinguishing characters (Table 1).

References

- Ataslar, E. 2000: *Gypsophila* L. — In: Güner, A., Özhatay, N., Ekim, T. & Başer, K. H. C. (eds.), *Flora of Turkey and the East Aegean Islands*, Suppl. 2, 11: 49–50. Edinburgh University Press, Edinburgh.
- Ataslar, E. & Ocağ, A. 2005: *Gypsophila osmangaziensis* (Caryophyllaceae), a new species from Central Anatolia, Turkey. — *Annales Botanici Fennici* 42: 57–60.
- Barkoudah, Y. I. 1962: A revision of *Gypsophila*, *Bolanthus*, *Ankryopetalum* and *Phryna*. — *Wentia* 9: 1–203.

Table 1. Morphological differences between *Gypsophila torulensis* and *G. muralis*. Specimens examined of the latter: *M. Kireç* (EDTU-7213) and *F. Dane & N. Polat* (EDTU-3881).

Characters	<i>G. torulensis</i>	<i>G. muralis</i>
Stem	glandular hairy	± puberulent
Leaves	oblanceolate	linear
Inflorescence	very lax corymb	lax corymb
Bracts	oblanceolate	linear
Calyx	long glandular-hispid, campanulate	glabrous, campanulate-turbinate
Calyx teeth	acute to acuminate	obtuse
Ovary	6–10-ovuled	12–36-ovuled

- Barkoudah, Y. I., Chater, A. O. & Akeroyd, J. R. 1964: *Gypsophila* L. — In: Tutin, T. G., Heywood, V. H., Burges, N. A., Valentine, D. H., Walters, S. M. & Webb, D. A. (eds.), *Flora Europaea*, vol. 1: 219–222. Cambridge University Press, Cambridge.
- Bittrich, V. 1993: Caryophyllaceae. — In: Kubitzki, K., Rohrer, J. & Bittrich, V. (eds.), *The families and genera of vascular plants*, vol. 2. Magnoliid, Hamamelid and Caryophyllid families: 230–231. Springer Verlag, Berlin.
- Bojňanský, V. & Fargašová, A. 2007: *Atlas of seeds and fruits of Central and East-European Flora: The Carpathian Mountains Region*. — Springer Verlag, Dordrecht.
- Budak, Ü. 2012: *Gypsophila yusufeliensis* (Caryophyllaceae), a new species from Turkey. — *Annales Botanici Fennici* 49: 425–427.
- Davis, P. H., Mill, R. R. & Tan, K. 1988: *Gypsophila* L. & *Silene* L. — In: Davis, P. H., Mill, R. R. & Tan, K. (eds.), *Flora of Turkey and the East Aegean Islands*, vol. 10, suppl. 1: 73–81. Edinburgh University Press, Edinburgh.
- Hamzaoglu, E. 2012: A new species of *Gypsophila* and a new name for *Silene* (Caryophyllaceae) from Turkey. — *Turkish Journal of Botany* 36: 135–139.
- Huber-Morath, A. 1967: *Gypsophila* L. — In: Davis P. H. (ed.), *Flora of Turkey and the East Aegean Islands*, vol. 2: 149–171. Edinburgh University Press, Edinburgh.
- Hutchinson, J. 1973: *The families of flowering plants*, 3: 530–531. Clarendon Press, Oxford.
- Rechinger, K. H. 1964: *Gypsophila* L. — In: Rechinger, K. H. (ed.), *Flora of Lowland Iraq*: 241–243. J. Cramer, Weinheim.
- Rechinger, K. H. 1988: *Gypsophila* L. — In: Rechinger, K. H. (ed.), *Flora Iranica*, vol. 163: 206–246. Akademische Druck und Verlagsanstalt, Graz.
- Shishkin, B. K. 1970: *Gypsophila*. — In: Komarov, V. L. & Shishkin, B. K. (eds.), *Flora of the U.S.S.R.*, vol. 6: 556–591. Israel Program for Scientific Translations, Jerusalem.
- Zohary, M. 1966: *Gypsophila* L. — In: Zohary, M. (ed.), *Flora Palaestina*, vol. 1 (Text): 100–102. Israel Academy of Sciences and Humanities, Jerusalem.