

Verbascum turcicum (Scrophulariaceae), a new species from Turkey

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Received 24 Oct. 2009, revised version received 3 Feb. 2010, accepted 8 Feb. 2010

Bani, B., Adıgüzel, N. & Karavelioğulları, F. A. 2010: *Verbascum turcicum* (Scrophulariaceae), a new species from Turkey. — *Ann. Bot. Fennici* 47: 489–492.

Verbascum turcicum B. Bani, Adıgüzel & Karavel. *sp. nova* (Scrophulariaceae), collected from B6 Adana province in South Anatolia, Turkey, is described and illustrated. The diagnostic morphological characters of the new species and the closely similar *V. leianthoides* and *V. leiocarpum* are discussed. A distribution map of *V. turcicum* and the two other species are provided.

Key words: morphology, new species, taxonomy, *Verbascum*

The genus *Verbascum* (excl. *Celsia*) (Scrophulariaceae) has about 360 species from all over the world (Heywood 1993). Represented with 243 species in Turkey, the genus has been divided into 13 partly artificial groups with an additional 129 hybrids; 193 of the species are endemic to Turkey, thus the endemism percentage is 80%. (Huber-Morath 1978, Davis *et al.* 1988, Vural & Aydoğdu 1993, Sutorý 2001, 2004, Karavelioğulları *et al.* 2004, 2006, 2008, 2009, Özhatay 2006, Kaynak *et al.* 2006, Parolly & Tan 2007, Parolly & Eren 2008, Yılmaz & Dane 2008, Karavelioğulları 2009).

Verbascum has been divided into two sections, sect. *Aulacospermae* and sect. *Bothrospermae*. Seed morphology is the most important character to distinguish the sections. In sect. *Aulacospermae*, the seeds are longitudinally corrugated, while in sect. *Bothrospermae* they are transversally corrugated and alveolate. All species of *Verbascum* in Turkey belong to sect. *Bothrosperma* (Murbeck 1933, Huber-Morath 1971).

The first revision of Turkish *Verbascum* was made by Huber-Morath (1978). Subsequently eight species and six hybrids have been described (Vural & Aydoğdu 1993, Sutorý 2001, 2004, Karavelioğulları *et al.* 2004, 2006, 2008, 2009, Özhatay 2006, Kaynak *et al.* 2006, Parolly & Tan 2007, Parolly & Eren 2008), and two new species were recorded for the country (Yılmaz & Dane 2008, Karavelioğulları 2009). According to Huber-Morath (1978), the species described here belongs to “Group” I of *Verbascum*. Thus the total number of species in Group I is now 28.

During the period of 2005–2008, more than 4000 plant specimens were collected from Tahtalı range for the purpose of surveying the flora. While the *Verbascum* specimens were being identified, the authors came across some peculiar specimens resembling *V. leianthoides* and *V. leiocarpum* according to Huber-Morath (1978). They were cross-checked with the keys provided by Huber-Morath (1978, 1981) and the *Verbascum* accounts given in various relevant

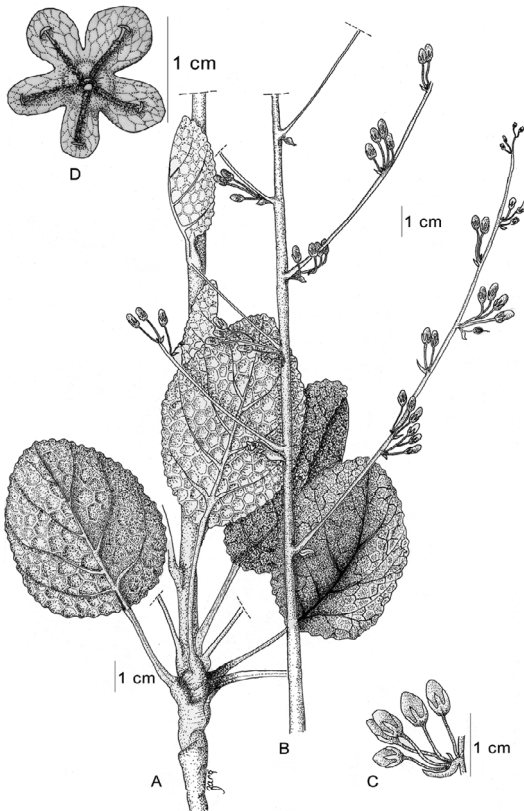


Fig. 1. *Verbascum turcicum* (from the holotype). — **A:** Stem. — **B:** Portion of panicle. — **C:** Cluster of fruits. — **D:** Flower.

publications (Fedchenko 1955, Ferguson 1972, Tackholm 1974, Feinbrun-Dothan 1978a, 1978b, Meikle 1985, Ekim 2000). The specimens were also compared with the material in ANK, E and GAZI.

Verbascum turcicum B. Bani, Adıgüzel & Karavel., *sp. nova* (Figs. 1 and 2).

Affinis V. leianthoide, sed foliis basalibus late ovatis ad orbicularibus, ellipticis, foliis superioribus late ovatis, obtusis et dilute cordatis, fasciculis floriferis raro pedunculatis, floribus accessoriis 0–2, bracteis, pedicellis et calycibus pilosis, capsulis pilosis et interspersis glandiferis, lobis calycibus mucronulatis differt.

ETYMOLOGY. The epithet is derived from the name Turkey.

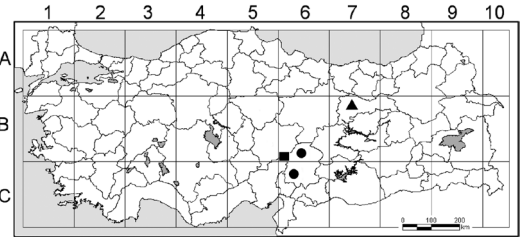


Fig. 2. Distribution map of *Verbascum turcicum* (■), *V. leianthoides* (●) and *V. leiocarpum* (▲).

Biennial, 55–95 cm, densely stellate hairy below, glabrescent above. Stem terete, erect, simple, 4–8 mm broad at base, purplish brown. Basal leaves (incl. up to 4.5 cm petiole) 6–10 × 3–6 cm, rosulate, broadly ovate to orbicular, elliptic, rounded to cuneate or rarely shallowly cordate at base, margins crenate, apex obtuse. Lower leaves 2.5–6.5 × 1.5–4.5 cm, elliptic, rarely obovate, apex acute to subobtusate; petiole 1–3.5 cm. Median leaves broadly ovate to ovate-oblong, decreasing in size to flowering part, upper leaves sessile. Inflorescence panicle, erect up to 50 cm, panicle branches 10–30 cm, with sessile or rarely pedunculate clusters of 1–8 flowers (accessory flowers 0–2). Bracts 2–3 × 1 mm, triangular-lanceolate, entire, acute, stellate hairy. Pedicels 4–20 mm, stellate hairy. Bracteoles 2. Calyx 2–4.5 mm, divided almost to base, with linear-lanceolate and mucronulate lobes, sparsely stellate hairy. Corolla ca. 15 mm diam., yellow, with numerous pellucid glands, glabrous outside. Stamens 5, anthers 0.5–1 mm, reniform, filaments 4.5–7 mm, with whitish wool, two anterior glabrous near apex. Ovary ovate, densely stellate hairy. Style 7 mm, filiform. Stigma spatulate. Capsule 5–6 × 3–3.5 mm, ovate to orbicular-oblong, stellate hairy to glabrescent, with interspersed glands. Flowering May–June, fruiting June–August.

HOLOTYPE: Turkey. B6 Adana: Tufanbeyli, Demiroluk village, Öküzçukuru yayla, *Abies* and *Cedrus* mixed forest, 1700–1800 m, 30.VI.2008 B. Bani 6415 (GAZI; isotypes HUB, ANK). — **PARATYPE:** Turkey. B6 Adana: Saimbeyli, above Naltaş village, mount Bozoğlan, 1600–1800 m, among *Abies* and *Cedrus* mixed forest, 8.VII.2006 B. Bani 4053 (GAZI, HUB, ANK).

Morphologically *Verbascum turcicum* resembles *V. leianthoides* and *V. leiocarpum*, but there are clear differences (Table 1).

Table 1. Morphological comparison of *Verbascum turcicum*, *V. leianthoides* and *V. leiocarpum*.

Species	<i>V. turcicum</i>	<i>V. leianthoides</i>	<i>V. leiocarpum</i>
Basal leaves	broadly ovate to orbicular, elliptic	elliptic–oblong to ovate	elliptic to broadly elliptic
Upper leaves	broadly ovate, shallowly cordate at base, apex obtuse	ovate to obovate, obtusely auriculate at base, apex acute to acuminate–cuspidate	elliptic, oblong to lanceolate, cuneate at base, apex acute
Clusters	1–8-flowered, rarely pedunculate, accessory flowers 0–2	2–11-flowered, sessile, accessory flowers absent	1–7-flowered, sessile, accessory flowers 1–2
Bracts	stellate hairy	glabrous	glabrescent
Pedicels	up to 10 mm, stellate hairy	up to 8 mm, glabrous	2–5 mm, glabrous
Calyx	2–4 mm, sparsely stellate-hairy, with mucronulate lobes	2–3.5 mm, glabrous, with acute lobes	2–3 mm, glabrous, with subobtusely or mucronate lobes
Capsules	ovate to orbicular–oblong, stellate-hairy to glabrescent, with interspersed glands	ovate, glabrous	ovate to oblong, glabrous

ADDITIONAL EXAMINED SPECIMENS. — *Verbascum leianthoides*. **Turkey**. C6 Kahramanmaraş: Kuru Dahg (Koru Da.), 10.V.1934 E.K. Balls (photo); same region, Armutludere district, Z. Aytaç 2690 (GAZI); same region, Binboğa Da. N of Gökşun, Davis 20058 (ANK). — *V. leiocarpum*. **Turkey**. B7 Malatya: rechtes Euphrat ufer, 8 km unter Kemaliye, Huber-Morath 8830 (E); Erzincan to Kemaliye 116 km, Karavelioğulları 3098 (GAZI); same region, nr. Kemaliye, Karavelioğulları 3466 (GAZI).

Acknowledgements

The authors would like to thank the Curators of Herbaria, ANK, HUB and E, who allowed us to study with their *Verbascum* specimens.

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