

## *Centaurea glabro-auriculata* (Asteraceae), a new species from Turkey

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*Centaurea glabro-auriculata* Uysal & Demirelma *sp. nova* (Asteraceae) is described and illustrated from Central Taurus, Turkey. The species grows in stony places in Derebucak (C3 Konya Province). It is morphologically most similar to *C. drabifolioides* and *C. cheirolepidoides*, which are likewise endemic to a restricted area within Turkey.

Key words: *Centaurea*, new species, taxonomy

A broad redefinition of *Centaurea* was triggered in the last years thanks to the generalized use of molecular methods: the comparison of DNA sequences demonstrated finally that delineation of a monophyletic genus *Centaurea* was possible (Garcia-Jacas *et al.* 2000, 2001, Wagenitz & Hellwig 2000). This new definition, however, does not change the fact that Turkey is the main centre of diversity for *Centaurea* (Wagenitz 1986). Even excluding the species now placed in the genera *Psephellus* and *Rhaponticoides*, Turkey includes 166 species. With the advance of the exploration of this vast territory the number of *Centaurea* species is still increasing: twelve new taxa have been described since the completion of *Flora of Turkey* (Wagenitz 1975, Davis *et al.* 1988, Duran *et al.* 2002, Türkoğlu *et al.* 2003, Aytaç & Duman 2005, Wagenitz *et al.* 2006).

The specimens of *Centaurea glabro-auriculata* were compared with type and non-type specimens of *C. cheirolepidoides* (Edinburgh:

Demirdöğen 2579; KNYA: T. Uysal 694 and 1000, H. Demirelma 2590), *C. drabifolioides* (Geneva: Nydegger 44650, 46809), *C. marashica* (GAZİ: M. E. Uzunhisarcıklı 1901) and *C. isaurica* (Geneva: Çetik 311; Edinburgh: Huber-Morath 17529; KNYA: T. Uysal 506, 509, O. Tugay, 1625, 2180, 2585, 2935).

***Centaurea glabro-auriculata* Uysal & Demirelma *sp. nova* (Fig. 1)**

*Perennis, scabra, basi lignosa. Caules erecti, subsimplices, ad 25–35 cm alti, basi curvati, in parte basali ramis axillaribus sterilibus provisi, sparse foliosi. Folia scabrida, late lanceolata, basalia ignota, inferiora indistincte et breviter petiolate, 11–15 × 0.8–1 cm, media et superiora sessilia, media 6.5–11.5 × 0.5–0.8 cm, superiora 1–6 × 0.2–0.5 cm. Involucrum ovato-oblongum, 18–20 mm longum, 16–18 mm latum. Appendi-*

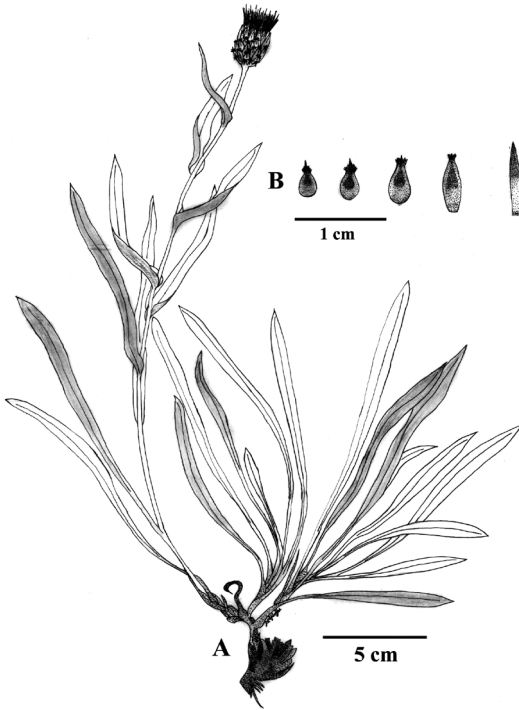


Fig. 1. *Centaurea glabro-auriculata* (from holotype). — A: Habit. — B: Phyllaries.

*ces phyllarum triangulari, ca. 1 mm longi, 0.5 mm lati. Flores lutei, marginales neutri, alii hermaphroditi. Achenia glabra, compressa, lanceolata, 4–5 mm longa, 2–2.5 mm lata, prope basin hilo laterali munita, pappus persistens, externus pluserialis et setid scabris ab exterioribus brevissimis ad interiores 6–7 mm, internus uniserialis e setis abbreviatis conniventibus 2 mm.*

TYPE: Turkey. C3 Konya; Derebucak, Tekneliyatak Tepesi, 1860 m, taşlık yerler, [37°19'95.1", N 31°29'50.8"E], 25.VII.2003 Demirelma 2770 (holotype KNYA).

Perennial herb with sterile leaf-rosettes and woody rootstock. Stem erect or ascending, scabrid, 25–35 cm long, usually simple, sometimes 1–2 one-headed branches from middle upwards. Basal leaves scabrid, lanceolate, petiolate, with a petiole up to 5 cm, with scabrid margins, entire, mucronate, attenuate, 11–15 × 0.8–1 cm (inc. petiole); median and upper leaves scabrid, linear-lanceolate, distinctly auriculate, median 6.5–11.5 × 0.5–0.8 cm, upper leaves 1–6 × 0.2–0.5 cm, margins entire, mucronate, leaves decreasing to capitula. Capitula 1–2, solitary

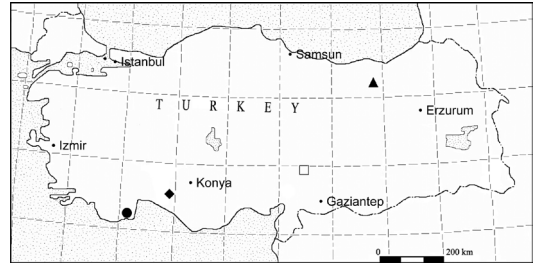


Fig. 2. Distribution of *Centaurea glabro-auriculata* (◆), *C. cheirolepidoides* (●), *C. drabifolioides* (▲) and *C. marashica* (□).

at end of branches; involucre ovoid to oblong, 18–20 × 16–18 mm. Phyllaries imbricate, sub-glabrous, lower ovate, 2.5 × 2 mm, median lanceolate, 8 × 4 mm, innermost linear-lanceolate, 12–13 × 4 mm. Appendages 1–1.5 × 0.5–1 mm, pale brownish, triangular, not decurrent, with 2–3 pairs of cilia (ca. 1 mm), ending in a slender, 1–3 mm long spinule, not totally concealing basal part of phyllaries. Flowers yellow, peripheral not radiant, corolla tube glabrous, 25 mm long, lobes 4–5 × 1–1 mm, linear, with 5 reddish stripes along corolla tubes. Achenes lanceolate, cream colored, glabrous, 4–5 × 2–2.5 mm, pappus brown, biseriata, scabrous, outer series 6–7 mm long, inner series 1–1.5 mm long.

*Centaurea glabro-auriculata* is endemic to South Anatolia (Konya, Derebucak province) and represents the Irano-Turanian floristic goeoelement (Fig. 2). The species seems to be very rare and local. It occurs in plane rocky lands at 1800–1900 m and occurs together with *Hypericum confertum* subsp. *stenobotrys*, *Linum austriacum* subsp. *austriacum*, *Potentilla kotschyana*, *Iberis sempervirens*, *Turritis glabra*, *Arenaria isaurica*, *Minuartia juniperina*, *Pterocephalus pinardii*, *Onosma stenolobum*, *Ulmus glabra*, *Ranunculus demissus* var. *major*, *Aethionema oppositifolium*, *Potentilla supina*, *Helichrysum arenarium* subsp. *aucheri*, *Dianthus calocephalus*, *Neatostema apulum*, and *Odontites aucheri*.

*Centaurea glabro-auriculata* is included in section *Cheirolepis*, in which have been merged the sections *Pseudoseridia*, *Pteracantha* and *Plumosipappus* after molecular and morphological analyses (Ertuğrul et al. 2004, T. Uysal unpubl. data). Consequently, 18 species were transferred to section *Cheirolepis*.

**Table 1.** Morphological comparison of *Centaurea glabro-auriculata*, *C. drabifolioides*, *C. cheirolepidoides* and *C. marashica*.

	<i>C. glabro-auriculata</i>	<i>C. drabifolioides</i>	<i>C. cheirolepidoides</i>	<i>C. marashica</i>
Stem	non-winged, with sterile shoots	winged, with sterile shoots	non-winged	winged
Basal leaves	linear-lanceolate, with a short petiole entire, greenish, scabrous	linear-lanceolate, with petiole, entire, greyish, scabrous	lanceolate, with petiole, lyrate or entire, grey-tomentose	narrowly lanceolate, with petiole, not entire; margin sparsely toothed, floccose-tomentose
Stem leaves	auriculate	narrowly decurrent	narrowly decurrent	distinctly decurrent
Tips of leaves	mucronate, with weak spinule; ca. 0.5–1 mm	mucronate, with weak spinule; ca. 1–2 mm	acute, with spinule; 0.5–2 mm	acute, with strong spinule; 2.5–6 mm
Capitula	ovoid to oblong	ovoid-oblong	cylindrical	globose or nearly cylindrical
Appendage	1–1.5 × 0.5–1 mm, with very narrow lamina, triangular, deflexed, creamish-brown weak terminal spine; with 2–3 pairs of cilia	2–3 × 2.5–3.5 mm, but not with very narrow lamina, palmate; ascending blackish brown terminal spine strong, 3–4 mm, with 5–10 pairs of cilia	0.5–2 × 0.2–2 mm, but not with narrow lamina, palmate, ascending, boarder blackish brown but cilia yellowish cream, terminal spine weak 1–1.5 mm, with 3–4 pairs of cilia	3–5 × 3.5–6 mm, triangular, straw-colored and brown at base, terminal spiny slender, 2–5 mm, with 3–5 pairs of cilia
Achenes	4–5 × 2–2.5 mm, lanceolate, cream colored, shorter than pappus	6 × 1.5 mm, linear, stripped, brown, in the same length with pappus	6 × 2 mm, linear-lanceolate, brown, shorter than pappus	4–5 × 1.5–2 mm oblong, straw colored, shorter than pappus
Pappus	outer series 6.5–7 mm, inner series 1–1.5 mm, brown	outer series 6 mm, inner series 1–1.5 mm cream	outer series 6–7 mm, inner 1–1.5 mm, creamish-brown	outer series 6–7 mm, inner series 1.5–2 mm, brownish

The new species is morphologically most similar to *C. drabifolioides*, *C. cheirolepidoides* and *C. marashica*. The four species are compared in Table 1.

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