



A new species of *Centaurea* sect. *Psephelloideae* (Compositae) from SW Turkey

Authors: Wagenitz, Gerhard, Ertugrul, Kuddisi, and Dural, Hüseyin

Source: *Willdenowia*, 28(1/2) : 157-161

Published By: Botanic Garden and Botanical Museum Berlin (BGBM)

URL: <https://doi.org/10.3372/wi.28.2815>

BioOne Complete (complete.BioOne.org) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/terms-of-use.

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

GERHARD WAGENITZ, KUDDISI ERTUGRUL & HÜSEYİN DURAL

A new species of *Centaurea* sect. *Psephelloideae* (*Compositae*) from SW Turkey

Abstract

Wagenitz, G., Ertugrul, K. & Dural, H.: A new species of *Centaurea* sect. *Psephelloideae* (*Compositae*) from SW Turkey. – Willdenowia 28: 157-161. 1998. – ISSN 0511-9618.

Centaurea hadimensis from the Central Taurus is described as a species new to science and illustrated. It belongs to *C.* sect. *Psephelloideae* and is allied to *C. pyrrhoblephara*, *C. taochia* and *C. holtzii*, which are likewise endemic to a restricted area within Turkey.

Turkey, in particular the Southwest and East of the country, is one of the main centres of diversity for the genus *Centaurea* (Wagenitz 1986). In the 'Flora of Turkey', 172 plus a few additional, imperfectly known species of *Centaurea* were accepted (Wagenitz 1975). Since then the following new species have been described from Turkey:

C. cariensiformis Hub.-Mor. in *Bauhinia* 7: 179. 1982 (*C.* sect. *Acrolophus*)

C. iconiensis Hub.-Mor. in *Bauhinia* 7: 77. 1981 (*C.* sect. *Centaurea*)

C. mykalea Hub.-Mor. in *Bauhinia* 6: 370. 1979 (*C.* sect. *Centaurea*)

C. yozgatensis Wagenitz in *Ann. Naturhist. Mus. Wien* 98B: 176. 1997 (*C.* sect. *Acrolophus*).

Apparently the hidden treasures of the Turkish flora are still far from exhausted. Recently two of us studied the Gevne valley in the Central Taurus mountains. Besides other interesting findings one plant proved to be a new species.

Centaurea hadimensis Wagenitz, K. Ertugrul & H. Dural, **sp. nova** – Fig. 1-2.

Holotypus: Turkey, C4, Vil. Konya, Konya - Hadim, Gevne Valley, SW of Tosmur Yurdu, rocky places, 1500 m, 30.6.1996, *Ertugrul & Dural 1715* (KNYA; isotypus: GOET).

E *Centaureae* sectione *Psephelloideis* (Boiss.) Wagenitz. Differt a *C. pyrrhoblephara* Boiss. foliis omnibus indivisis, floribus marginalibus vix radiantibus; a *C. taochia* Sosn. et *C. holtzii* Wagenitz caulibus suberectis ultra 20 cm altis, ceterum a *C. taochia* Sosn. pappo longiore et a *C. holtzii* Wagenitz phyllorum appendicibus fere circularibus.

Perennis, basi lignosa, multicaulis. Caules ad 35-40 cm alti, basi curvati, ascendentes, in parte basali ramis axillaribus sterilibus provisi, ceterum simplices, tomentosi, dense foliosi, solum in parte superiori foliis destituti vel sparse foliosi. Folia utrinque appresse griseo-tomentosa, late lanceolata vel oblonga, basalia ignota, inferiora indistincte et breviter petiolata, c. 6 cm longa et 2 cm lata, media et superiora sessilia, media 4-4.5 cm longa et 1.5-2 cm lata, superiora plerum-



Fig. 1. *Centaurea hadimensis* (isotype at GOET).



Fig. 2. *Centaurea hadimensis* – capitulum (isotype at GOET).

que apice appendice hyalina provisa. Sub capitulis nonnulla folia squamiformia appendicibus phyllorum similia. Involucrum 20-25 mm longum, 15-20 mm latum, cupuliforme. Phylla appendicibus totaliter obiecta; appendices in parte basali hyalinae, ceterum dilute brunneae, medio nervo brunneo indistincto, fere circulares, sine mucrone terminali, ciliata ciliis utrinque 8-10, 2-2.5 mm longis. Flores purpurei, marginales steriles, ceteris aequilongi, vix radiantes, staminodiis provisi. Achenia immatura. Pappus duplex, externus multiserialis e setis scabris ad 9 mm longis, internus e paleolis 3 mm longis.

Relationships

The new species shows clearly the characters of *Centaurea* sect. *Psephelloideae*: phyllaries with non-decurrent hyaline appendages lacking a terminal mucro, purple flowers, the marginal with distinct staminodia, and a “double” pappus with inner row of short bristles.

The allied species differ mainly in the following characters: in *C. pyrrhoblephara* Boiss. the lower leaves are lyrate and the marginal flowers strongly radiant; *C. holtzii* Wagenitz has yellowish-tomentose leaves and ovate appendages with 12-13 cilia on either side; *C. taochia* Sosn. has decumbent stems and a much shorter pappus.

Describing a new species on the basis of a single collection may seem risky. In fact, this is certainly the case in sections with very variable species tending to hybridization as is the case in, e.g., *C.* sect. *Acrolophus* and *C.* sect. *Acrocentron*. In *C.* sect. *Psephelloideae*, however, species are well differentiated and usually allopatric.

In the key of the ‘Flora of Turkey’ (Wagenitz 1975: 478) the species may be inserted as follows:

- 19. Appendage with straw-coloured centre, darker (brownish) towards margin
 - 20. Stems erect or ascendent
 - 20*. Marginal flowers strongly radiant; appendages c. 12 mm broad, cilia 3-5 mm long; leaves partly lyrate *C. pyrrhoblephara*
 - 20*. Marginal flowers scarcely radiant; appendages 6-7 mm broad, cilia 2-2.5 mm long; leaves undivided *C. hadimensis*
 - 20. Stems decumbent *C. taochia*

Centaurea sect. *Psephelloideae* belongs to a group of sections (*Psephellus*-group, Wagenitz & Hellwig 1996) centering in E Anatolia and adjacent parts of the Caucasus and Iran. Thus it comes as a surprise that a new species could be found near the western limit of the group’s distribution area in Turkey.

An interesting character present in this and a few other species of this alliance (viz *C. pyrrhoblephara* Boiss., *C. appendicigera* C. Koch) should be mentioned explicitly. The uppermost stem leaves of reduced size have an apical membranous appendage similar to those of the phyllaries and there may be directly below the capitula some bracts that are quite similar to these appendages.

Acknowledgements

We thank Prof. Dr Mecit Vural and Doç. Dr Hayri Duman from the Gazi University, who first suggested that the specimens could represent a new species. The photographs were taken by Mrs Hourticolon.

References

- Wagenitz, G. 1975: *Centaurea*. – Pp. 465-585 in: Davis, P. H. (ed.), *Flora of Turkey and the East Aegean Islands* 5. – Edinburgh.

- 1986: *Centaurea* in South-West Asia: patterns of distribution and diversity. – Proc. Roy. Soc. Edinburgh **89B**: 11-21.
- & Hellwig, F. 1996: Evolution of characters and phylogeny of the *Centaureinae*. – Pp. 491-510 in: Hind, D. J. N. & Beentje, H. J. (ed.), *Compositae: Systematics*. Proceedings of the International *Compositae* Conference, Kew, 1994, **1**. – Kew.

Addresses of the authors:

Prof. em. Dr Gerhard Wagenitz, Albrecht-von-Haller Institut für Pflanzenwissenschaften, Abt. Systematische Botanik, Untere Karspüle 2, D-37073 Göttingen; e-mail: gwageni@gwdg.de
Dr Kuddisi Ertugrul and Dr Hüseyin Dural, Selcuk Üniversitesi, Fen-Edebiyat Fakültesi, Biyoloji Bölümü, 420131, Konya, Turkey; e-mail: ekuddisi@selcuk.edu.tr