

## A New Record for Turkey: *Centaurea aziziana* Rech.f. (Asteraceae)

Metin ARMAĞAN<sup>1,\*</sup>, Murat ÜNAL<sup>2</sup>

<sup>1</sup>Yüzüncü Yıl University, Faculty of Education, Department of Biology, 65080 Van - TURKEY

<sup>2</sup>Yüzüncü Yıl University, Faculty of Science and Art, Department of Biology, 65080 Van - TURKEY

Received: 22.01.2008

Accepted: 28.04.2009

**Abstract:** *Centaurea aziziana* Rech.f. (Asteraceae) is recorded for the first time (B9 Van province) for the flora of Turkey. The diagnostic characters of *C. aziziana* are described and its habitat and conservation are discussed.

**Key Words:** Asteraceae, *Centaurea*, new record, Turkey

### Türkiye İçin Yeni Bir Kayıt: *Centaurea aziziana* Rech.f. (Asteraceae)

**Özet:** *Centaurea aziziana* Rech.f. (Asteraceae) türü Türkiye'den (B9 Van) ilk defa kaydedilmiştir. *C. aziziana*'nın tanıttıcı özellikleri, yetişme ortamı ve koruma durumu belirtilmektedir.

**Anahtar Sözcükler:** Asteraceae, *Centaurea*, Türkiye, yeni kayıt

### Introduction

During floristic investigations, the authors collected some *Centaurea* L. specimens around Güzeldere Pass and İspiriz Mountain (Van) between 2002 and 2007. Firstly, it was attempted to identify them according to the *Flora of Turkey* (Wagenitz, 1975; Davis et al., 1988; Güner et al., 2000; Özhatay & Kültür, 2006). Based on our further studies on the *Centaurea* specimens, it can be seen that these specimens have some common characteristics with *C. cassia* Boiss. and *C. lycia* Boiss. in Turkey. However, there were some discrepancies between the descriptions of them and our specimens (Figures 1 & 2). Therefore, it was compared with the *Centaurea* recorded in *Flora Iranica* (Wagenitz, 1980), and it was checked directly using

herbarium specimens of TARI whether it is correct or not. Finally, it was identified as *Centaurea aziziana*, which is known as an endemic species in Iran. Therefore, it is obvious that this is a new record for Turkey. The record is not surprising since the species also grows nearby in Iran.

*Centaurea aziziana* Rech.f., Oesterr. Bot. Z. 97: 255. 1950. (Figures 1, 2).

**Basionym:** *Jurinea sharifiana* Rech.f. & Esfandiari var. *aziziana* (Rech.f.) A.Parsa Flore de l'Iran (Publ. Univ. Teheran 1777): 10: 215 (1980).

**Type:** Rechinger 6576 (E, W).

**Distr.:** N. Mazandaran: Kojur, between Zanus and Kinch, alt. between 1330-1600 m (Figure 3).

\* E-mail: metinarmagan@gmail.com



Figure 1. *Centaurea aziziana*. a. fertile flower; b. sterile flower; c. achene; d. phyllaries; e. lower leaf; f. habitus.



Figure 2. a. Habitat of *Centaurea aziziana* in Güzeldere Pass; b. Capitulum.

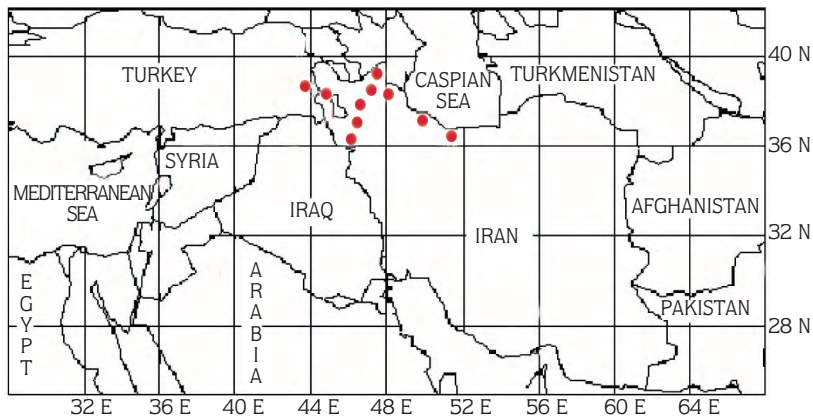


Figure 3. Distribution areas of *Centaurea aziziana*.

The description of the species given below was based on specimens collected around Güzeldere Pass and İspiriz Mountain (Van).

Perennial, 40-70 cm profusely branched with numerous capitula, stem erect, striate and angular, with arachnoid hairs to glabrous. Radical leaves petiolate,

Table. Differences between the characteristics of *Centaurea aziziana*, *C. lycia*, and *C. cassia*.

Characters	<i>C. aziziana</i>	<i>C. lycia</i>	<i>C. cassia</i>
Indumentum	arachnoid-tomentose, scabrid and glandular-punctate	tomentose	glandular-punctate, scabrous and arachnoid to glabrate
Basal Leaves	pinnatifid or bipinnatifid	lyrate or simple	-
Appendages	often irregularly lacerate 2-3 mm long and denticulate	denticulate and ± lacerate	with 10-15 cilia 1-2 mm long
Pappus	scabrous, 1-2 mm long	3-4 mm long	1-1.5 mm long

pinnatifid or bipinnatifid; segments 1-2 mm broad, linear or oblong-lanceolate. Median leaves sessile, pinnatifid, segments linear. Upper leaves usually linear, sessile, with 1-2 teeth near base. Leaves scabrid, glandular punctate, arachnoid to tomentose. Involucre 9-11 × (6-)8-10 mm, ovoid. Phyllaries pluriseriate, imbricate. Appendages often irregularly lacerate 2-3 mm long, denticulate, apex emarginate and ending with small mucro, upper part colourless and hyaline, centre thick and light brown. Flowers rose-purple. Marginal flowers scarcely radiant, 14-15 mm long, sterile; central flowers hermaphrodite, infundibular, 12-13 mm long. Achenes sparsely pubescent, 3-3.5 mm long. Pappus scabrous, 1-2 mm long. Flowering and fruiting: July-August. Steppe and rocky places, 2200-2400 m.

Turkey. East Anatolia. B9 Van: between Güzelsu (Hoşap) and Başkale, Güzeldere Pass, steppe and rocky places, 07 vii 2002, 38°08'48"N, 043°05'08"E, 2350 m, *Metin* 2736. Van: Başkale, north-west of Barış village, rocky slope, 09 vii 2007, 38°00'810"N, 43°59'223"E, 2205 m, *M.Ünal* 9911.

The specimens are deposited at the herbarium of VANF.

## Discussion

*C. aziziana*, which was not observed in Turkey previously, is distributed in north-west Iran, which is very close to Turkey. For that reason it is not surprising that there is a distribution of this species in south-east Turkey.

According to recent studies, it is assumed that the total taxa number of *Centaurea* species is 168 in Turkey (Uysal, 2008). After the addition of *C. aziziana*, this number has reached 169. *C. cassia* and *C. lycia* are the species that have the most common characteristics with *C. aziziana*. However, the differences between them are shown in the Table.

*Centaurea aziziana* grows in a very limited area (in Turkey), where it is under high grazing pressure and erosion effect. The recommended IUCN Red Category is Vulnerable (VU (B1a)) (IUCN, 2001). In its locality, the taxa given below exist abundantly: *Silene marschallii* C.A.Mey., *Bromus danthoniae* Trin. ex C.A.Mey., *Prangos pabularia* Lindl., *Scorzonera rigida* Aucher ex DC., *Tanacetum kotschyi* (Boiss.) Grierson, *Sedum gracile* C.A.Mey., *Silene araratica* Schischkin, *Rosa iberica* Stev., and *Aethionema speciosum* Boiss. & Huet.

## Acknowledgements

We would like to thank Assist. Prof. Dr. Fevzi Özgökçe for his help with the comparison between our specimens and the specimens in TARI (Research Institute of Forests and Rangelands Herbarium), Teheran, Iran. Also many thanks to Dr. Vali Mozaffarian (Research Institute of Forest and Rangelands, Teheran, Iran) and Prof. Dr. Lütfi Behçet (Yüzüncü Yıl University, Van, Turkey) for confirming our identification.

## References

- Davis PH, Mill RR & Tan K (1988). *Flora of Turkey and the East Aegean Islands*. Vol. 10 (Suppl. 1): pp. 166-169, Edinburgh: Edinburgh University Press.
- Güner A (2000). *Centaurea* L. In: Güner A, Özhatay N, Ekim T & Başer KHC (eds.). *Flora of Turkey and the East Aegean Islands*. Vol. 11 (Suppl. 2): pp. 163-164, Edinburgh: Edinburgh University Press.
- IUCN (2001). *Red List Categories: Version 3: 1*. Prepared by the IUCN Species Survival Commission. IUCN, Gland, Switzerland and Cambridge, UK.
- Özhatay N & Kültür Ş (2006). Check-List of Additional Taxa to the Supplement Flora of Turkey III. *Turk J Bot* 30: 281-316.
- Uysal T (2008). *Centaurea ertugruliana* (Asteraceae), a new species from Turkey, *Ann Bot Fennici* 45: 137-140.
- Wagenitz G (1975). *Centaurea* L. In: Davis PH (ed). *Flora of Turkey and the East Aegean Islands*. 5: 465-585. Edinburgh: Edinburgh University Press.
- Wagenitz G (1980). *Centaurea* L. In: Dittrich M, Petrak F, Rechinger KH, Wagenitz G (eds). *Flora Iranica*. Compositae: III. Cynareae: pp. 313-420. Graz: Akademische Druck und Verlagsanstalt.