A NEW SPECIES OF CENTAUREA L. (COMPOSITAE) FROM TURKEY

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Abstract

A new species of the genus Centaurea L. (Asteraceae) from Turkey, C. goeksunense Aytaç & H. Duman (sect. Psephelloideae (Boiss.) Sosn., is described and illustrated. The systematic position and distribution of this new species is presented and discussed.

Introduction

During studies on the flora of Turkey specimens of the genus Centaurea were collected from Gökşun (Kahramanmaraş) in 1917. It is a perennial herb with fairly long stems but the material was insufficient to be fully described because of the lack of flowers. Four years later, flowering material was collected from the same location by the second author. The specimens are superficially similar to C. brevifimbriata Hub.-Mor. and C. bornmuelleri Hauskn. ex Bornm. C. bornmuelleri was well known by the authors who collected it before in several localities, but C. brevifimbriata has not been studied by them. We examined the type specimen of C. brevifimbriata (in E) which is known in two very closed localitions in Malatya province and some specimens of C. bornmuelleri in GAZI, ANK and E herbaria, one of them mentioned in the Flora of Turkey (Coode & Jones 2252).

After the examination of the related types, and other specimens belonging to allied taxa and checking related references (Wagenitz, 1975, 2000; Davis, Mill, & Kit Tan 1988; Wagenitz, Ergürlü & Dural, 1998; Güner, 2000; Duran, & Duman, 2000), we concluded that our specimens represent a new species. The total number of Centaurea species known from Turkey is now 188.

Centaurea goeksunense Aytaç & H. Duman sp. nov. (Fig. 1 and 2).

Diagnosis: Affinis C. brevifimbriata Hub. - Mor. et C. bornmuelleri Hausk. ex Bornm. A C. brevifimbriata foliis basalibus pinnatipartitis cum 4-7 jugis (non plerumque simplicissimis); caulibus longioribus, 70-100 cm, (non 30-70 cm), appendicula ovata (non semicirculari), 1-2 mm ciliate (non 0.5 mm) et in spinulam 1 - 3 mm (haud spinulam carenti) terminanti differt. Ab C. bornmuelleri foliis basalibus pinnatipartitis cum 4-7 jugis (non plerumque simplicissimis); appendicula ovata (non semicirculari), 1-2 mm ciliate (non 2-4 mm) et in spinulam 1 -3 mm (haud spinulam carenti) terminanti recedit.

Perennial herb with sterile rosettes at base. Stems, 70-100 cm, erect, simple or with few branches in lower parts, floccose to becoming glabrous, densely foliate, upper part sparsely leafy or without leaves. Basal leaves withering at flowering - time; lower stem leaves 10-15 x 3-5 cm, pinnatipartite with 4-7 pairs of lanceolate segments, upper segment clearly longer than lateral; middle cauline leaves 3-7 x 0.5-1.5 cm, pinnatipartite with lanceolate lobes; upper cauline leaves 7-15 x 1-1.5 cm, simple, lanceolate to elliptic, shortly petiolate, decreasing to capitula, like bracts, all leaves grey floccose to tomentose.
Capitula 1 (-2) per stem, homogamous, 20-25 x 20-30 mm, ovoid to nearly oblong. Appendages concealing basal part of phyllaries, ovate - lanceolate, with hyaline irregularly 1-2 mm ciliate margins, ending in a slender 1-3 mm long spinule. Flowers pink. Achene 6-7 mm and brownish; pappus 7-10 mm, scabrous, brownish.


Examined specimens: C. brevifimbriata: Turkey B6 Malatya, Darende, Weizenfeld, 15 km, nördlich Darende, 1280 m, 28 Juni 1953, Hub. - Mor. 11935, isotype, E. Darende to Akçadağ, 3500 fit, 19. vi. 1954, Davis 21897, E.


The new species is close to C. brevifimbriata and C. bornmuelleri, but stem is longer than in these two species (over 70 cm, not 30-70 cm). Phyllaries of Centaurea goeksunense also differs from both by having a terminal 1-3 mm spinula. The upper parts of the stems of C. brevifimbriata and C. bornmuelleri are not leafy, while in this new species it is leafy in some cases.

Detail differential characters are given in Table 1.

<table>
<thead>
<tr>
<th></th>
<th>Centaurea goeksunense</th>
<th>C. bornmuelleri</th>
<th>C. Brevifimbriata</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stem</td>
<td>70 – 100 cm</td>
<td>35 – 70 cm</td>
<td>35 – 70 cm</td>
</tr>
<tr>
<td>Basal leaves</td>
<td>Pinnatipartite with 4 – 7 pairs of lanceolate segments</td>
<td>Usually entire and lanceolate</td>
<td>Usually entire and lanceolate</td>
</tr>
<tr>
<td>Upper part of stem</td>
<td>Leafy</td>
<td>Not leafy</td>
<td>Not leafy</td>
</tr>
<tr>
<td>Involucre</td>
<td>Ovoid, nearly oblong 20 – 25 x 20 – 30mm</td>
<td>Ovoid 20-25 x (12-)</td>
<td>Ovoid (17-) 20-25 x (11-)</td>
</tr>
<tr>
<td>Outer and middle phyllaries of appendages</td>
<td>Ovate, cilia 1–2 mm spinula 1–3 mm</td>
<td>semicircular, cilia (2-) 3–4 mm, spinula absent</td>
<td>Semicircular, cilia 0.5 mm, spinula absent</td>
</tr>
</tbody>
</table>

Distribution and ecology

South Anatolia. East Mediterranean mountain element. Endemic. It grows in clearings of wheat fields, with Achillea gonocephala Boiss. & Bal., Veronica cinerea Boiss. & Bal., Aethionema capitatum Boiss. & Bal., Ebenus laguroides Boiss., Hippomarathrum boissieri Reuter & Hausskn. etc., (some of which are endemic), between 1600 - 1650 m altitude. Flowering in June to July, fruit in July to August.
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Fig. 1. Centaurea goeksunense A- Habit a- Outer phyllary, b- Middle phyllary, c- Inner phyllary, d- Achene. _C. brevifimbriata_ e- Outer phyllary, f- Middle phyllary, g- Inner phyllary, h- Achene. _C. bornmuelleri_ i- Outer phyllary, j- Middle phyllary, k- Inner phyllary.
The range of this new species is restricted to a single location and it occupies less than 5 km² (criterion B2a) area. The number of mature individual specimens being less than 250 (criterion C), (IUCN, 2001). We suggest that it should be placed under the CR (Critically Endangered) category.

Fig. 2. Distribution of species in Turkey: ▲ C. goeksunense, ● C. bornmuelleri, ★ C. brevifimbriata

Acknowledgements

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Reference


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