



***Rhaponticum pulchrum* (Asteraceae), A New Record for the Turkish Flora**

Mehmet Ufuk ÖZBEK ^{1,*}, Murat KOÇ ², Ergin HAMZAOĞLU ³

¹ Gazi University, Faculty of Science, Department of Biology, 06500, Ankara, Turkey.

² Bozok University, Department of High School of Animal Production, 66100, Yozgat, Turkey.

³ Gazi University, Gazi Faculty of Education, Department of Mathematics and Science Education, 06500, Ankara, Turkey.

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Abstract

Rhaponticum pulchrum (Asteraceae) was collected for the first time from Hanönü in Kastamonu and it was given a new record for the Flora of Turkey. The description, photographs of the isotypes from the Berlin and Natural History Museum herbaria, and photographs of the species in field, and a distribution map of the species in Turkey were given. Diagnostic characters and its taxonomic relationship with closely allied taxa were discussed.

1. INTRODUCTION

Rhaponticum Vaill. is represented by approximately 25 species worldwide. This genus has a distribution in Europe, Russia, Caucasus, Central and South West Asia, North Africa and Eastern Australia throughout the world [1]. In Turkey, only 3 species of it are distributed [2]. They are *R. serratuloides* (Georgi) Bobrov, *R. insigne* (Boiss.) Wagenitz and *R. repens* (L.) Hidalgo.

There have been many studies concerning the morphology, taxonomy and phylogeny of the genus [3-8].

During the field investigations within 2016, we collected some unknown samples of *Rhaponticum*. After a thorough investigation of the relevant literature [9-13] and comparisons with specimens from the herbaria GAZI, ANK and HUB, we conclude that this *R. pulchrum* Fisch. & C.A.Mey. is determined as a new record for the Flora of Turkey.

2. EXPERIMENTAL

The materials of our study consist of *Rhaponticum* specimens collected from Kastamonu-Hanönü in June 2016. These specimens are deposited in GAZI. Also the isotype photos in the BM and B were investigated (Figure 1). The distributions of species were plotted using Google Earth [14] (Figure 2).



Figure 1. *Rhaponticum pulchrum* A) isotype in the Botanical Museum Berlin herbarium (B) B) isotype in the Natural History Museum (BM).



Figure 2. Geographical distributions of *Rhaponticum pulchrum*.

3. RESULTS

Rhaponticum pulchrum Fisch & C.A.Mey (Figure 3).

Unarmed perennial herbs. Rhizome elongate, vertical, 5–10 mm thick. Stems erect, simple, 1–capitulate; 25–40 cm tall, solid, arachnoid-tomentose and sparsely glandular hairy, conspicuous 7–8 striate. Leaves distinctly bicoloured, sparsely tomentose and glandular hairy above, densely adpressed white-tomentose below; basal leaves ovate to elliptic, petiole 5–12 cm long, terminal lobes 10–15(–21) × 3.5–7(–12) cm, lyrate, unequally toothed; lateral lobes 1–3 pairs, 2–4.5(–5.5) × 1.5–4 cm, ovate to broadly ovate; cauline leaves 5–8 × 2–4 cm, ovate-elliptic, petiole 1–3 cm long, pinnately divided with 3(–4) pairs of ovate lobes; upper leaves similar to cauline leaves, reduced, sessile. Capitula homogamous, discoid, 3.5–5.5 cm diameter. Involucre broadly ovoid; outer and median phyllaries ovate-lanceolate, 11–18 × 4–5 mm; appendage scarious, suborbicular to broadly ovate, entire or lacerate, whitish, brownish at base, glabrescent to glabrous; inner phyllaries linear-lanceolate, 17–20 mm long, appendage 3–5 × 4–6 mm, linear-lanceolate, pale brownish, densely short pubescent. Receptacle flat, long hairy. Corolla 2.2–2.7 mm long, 5-nerved, pinkish–purple. Achenes obovoid, 5–6 mm long, 4-angled, indistinctly ribbed, greenish; pappus (1.5–)1.7–2 cm long, hairs 3–4 seriate, inner gradually longer, barbellate, dirty-white, persistent.

Distribution: Russia, Caucasia, and Iran.

Turkey. A5 Kastamonu: Hanönü, above Yukarı Küreçayı village, *Pinus brutia* openings, rocky slopes, 500–600 m, 11 June 2016, Koç 2305 & Hamzaoğlu.

Additional specimens examined: Plantae Caucasicae Georgia, Borshom, June 1881, V.F. Brotherus & A.H. Brotherus s.n. (isotypes: B 100097191; BM, BM000996192).

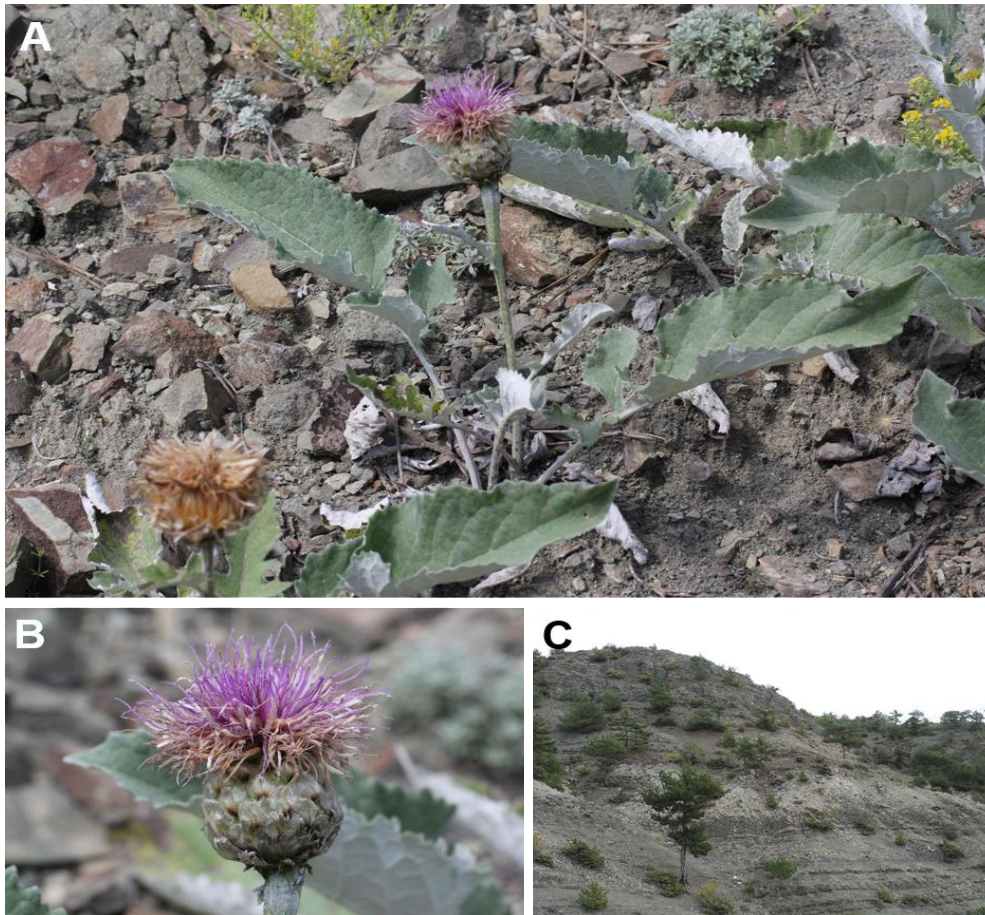


Figure 3. *Rhaponticum pulchrum* A) habit B) capitulum C) habitat (Photos: E. Hamzaoğlu, from type locality).

4. DISCUSSION

R. pulchrum is not morphologically similar to any *Rhaponticum* species grown in Turkey. This species differs from the other *Rhaponticum* species by distinctly bicolorous leaves (not concolorous leaves). Until now *R. pulchrum* has been distributed in Russia, Caucasia, and Iran. As a result of the taxonomic evaluation of this species, it is discovered from Turkey for the first time. Turkish members of the species clearly differs from those distributed in Russia, Georgia and Iran by their basal leaves with lobes 3(–4) pairs (not 5–10 pairs); terminal lobes 10–15(–21) × 3.5–7(–12) cm (not 3.5–7.5 × 2.5–4.5 cm), lateral lobes 2–4.5(–5.5) × 1.5–4 cm (not 1.2–2.5 × 0.5–1.7 cm), lamina sparsely tomentose and glandular hairy above (not scabrous and subglabrous above), petiole 5–12 cm long (not 15–30 cm); and also appendages 4–6 mm wide (not 7–10 mm), white (not pale reddish-brown). But, we think that these differences are variations within species, so it is given as a new record for the Flora of Turkey.

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CONFLICTS OF INTEREST

No conflict of interest was declared by the authors.

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