



A new record for the flora of Turkey: *Scorzonera renzii* Rech. f. (Asteraceae)

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Abstract

Scorzonera renzii Rech. f. (Asteraceae) was recently collected from Karz Mountain, Bitlis (East Anatolia) and it has been reported as a new record for the flora of Turkey. It is described, illustrated and discussed.

Key words: *Scorzonera*, New Record, Turkey

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Türkiye florası için yeni bir kayıt: *Scorzonera renzii* Rech. f. (Asteraceae)

Özet

Bitlis Karz Dağından (Doğu Anadolu) toplanan *Scorzonera renzii* Rech. f. (Asteraceae), Türkiye florası için yeni bir tür olarak kaydedildi. Tür betimlendi, resmedildi ve kısaca tartışıldı.

Anahtar kelimeler: *Scorzonera*, Yeni Kayıt, Türkiye

1. Introduction

The genus *Scorzonera* L. (Asteraceae) includes about 180 species widely distributed in the arid regions of Eurasia and Africa (Lack, 2007). The first treatment of *Scorzonera* is given by De Candolle (1805). According to his system *Scorzonera* includes perennial herbs and shrubs with simple, entire, rarely pinnatifid leaves, phyllaries always deprived of horns, and seeds mainly without or with hollow pedicels. Considerable changes in the treatment of the genus *Scorzonera* were introduced by Boissier (1875). In his system the genus *Scorzonera* includes *Podospermum* DC. and *Epilasia* (Bunge) Benth. as sections. The most acceptable system is given by Lipschiz (1935, 1939) which is in many regional "Flora" (Chamberlain, 1975; Chater, 1976; Rechinger, 1977).

According to Chater (1976), the genus *Scorzonera* is represented with 28 species in Europe and five of them (*S. cana* (C.A.Mey.) O.Hoffm., *S. cretica* Willd., *S. hispanica* L., *S. laciniata* L., *S. mollis* M.Bieb.) are also distributed in Turkey (Chamberlain, 1975). Since the revision of the genus *Scorzonera* by Chamberlain (1975) on behalf of the Flora of Turkey, some other new taxa, such as *S. pisidica* Hub.-Mor. (Davis et al., 1988), *S. latifolia* (Fisch. et C.A.Mey.) DC. var. *angustifolia* Prilipko ex Lipsch. (Güner, 2000), *S. sandrasica* Hartvig et Strid (Güner, 2000), *S. longiana* Sümbül (Güner, 2000), *S. adilii* A.Duran (Duran, 2002), *S. ulrichii* Parolly & N. Kilian (Kilian and Parolly, 2002), *S. karabelensis* Parolly & N. Kilian (Parolly and Kilian, 2003), *S. yildirimlii* A.Duran & Hamzaoğlu (Duran and Hamzaoğlu, 2004), *S. ketzkhovelii* Grossh. & Sosn. have been added to the Flora of Turkey (Hamzaoğlu et al., 2010). Fifty *Scorzonera* species are now known to inhabit in Turkey. In this paper, the new record of *Scorzonera* species is described and illustrated.

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During a field trip in Bitlis, East Anatolia (Figure 1), the authors collected a specimen belong to the genus *Scorzonera*. Following a careful examination, it was thought that that it is a new, previously undescribed species.

According to Chamberlian (1975), Chater (1976), Davis et al. (1988) and Güner (2000), Özhatay et al. (1999), Özhatay and Kültür (2006), Özhatay et al. (2009), as well as comparing with specimens in the herbaria E, G, GAZI, HUB, K, KNYA and ANK, the specimen represent a new record for the flora of Turkey. Based on the description in the Flora Iranica (Rechinger, 1977) it keys out as *Scorzonera renzii* Rech. f. which were examined and compared with specimens of the other related *Scorzonera* species in Turkey. Selçuk University, Herbarium of the Faculty of Education was abbreviated as MR.

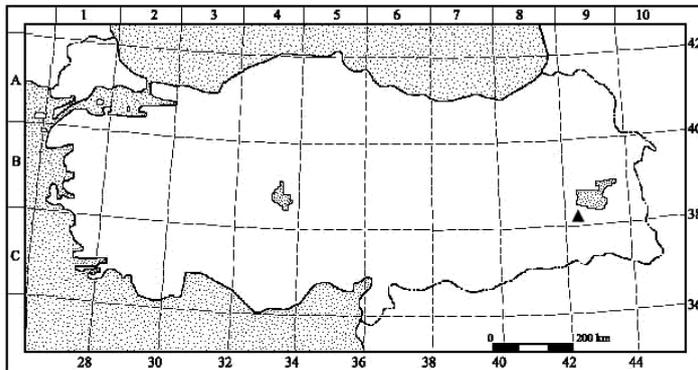


Figure 1. Distribution of *Scorzonera renzii* (▲) in Turkey.

Scorzonera renzii Rech. f., Fl. Iranica. 122: 48 (1977) (Figures 1 and 2).

Type: Persia: Chalil Kuh supra Pesan, 1800-2400 m, 1.VII.1974, Renz in Rechinger 48668 (W, photo!)

Caulicentennial herb. Root vertical, slender; root collar sparsely covered with brown or straw-coloured leaf sheaths. Stems 35-90 cm tall, 3-4 mm diam. below, 2-5 stemmed, erect, hollow, glabrous, clearly striate, leafy. Leaves graminaceous; basal leaves 20-30 x 0.2-0.3 cm, entire, glabrous, subsessile, greenish, 5-7 veins, apex subfiliform; cauline leaves 10-20 x 0.3-0.5 cm, slightly amplexicaul, gradually diminishing up the stem. Capitula in racemes almost from middle of stem, cylindrical, 2-3 x 0.4-0.8 cm, remote from each other, solitarily borne on short peduncles, peduncles 3-7 mm. Outer phyllaries 0.5-1 x 0.2-0.5 cm, lanceolate to ovate, acute to acuminate at apex, glabrescent or rarely tomentose, margin scarios; inner phyllaries 2-3 x 0.3-0.6 cm, oblong-linear, acute, margin scarios, tomentose tip part. Flowers yellow, ligules longer than inner phyllaries, 10-12 x 1-1.5 mm. Achenes 12-15 x 1-1.5 mm, glabrous, ridged, furrow, cylindrical; pappus 9-12 mm, dirty white, hairs plumose below, scabrid above.

Flowering period July-August, fruiting period August.

Examined specimens: B9 Bitlis: Tatvan, Sapur village, Karz mountain, 1965 m, 38° 26.154' N, 042° 24.413' E, 06 vii 2009, A.Duran 8646 & B.Doğan (MR, GAZI, ANK, HUB),.

2. Conclusions

In Turkey, *Scorzonera renzii* is distributed in the province of Bitlis (Tatvan, Karz Mountains) in east Anatolia (Figure 3). Iran was previously the only known distribution area of the species (Rechinger, 1977).

Scorzonera renzii grows in calcereous stony slopes of steppe vegetation at 1950-2000 m with *Serratula kotschyi* Boiss., *Diplotaenia cachrydifolia* Boiss., *Laserpitium carduchorum* Hedge, & Lamond, *Tanacetum tomentollum* (Boiss.) Grierson, *Centaurea saligna* (C.Koch) Wagenitz, *C. persica* Boiss, *Achillea vermicularis* Trin.

S. renzii is superficially similar to *S. elata*. It mainly differs from *S. elata* based on its clear roots thick, cylindrical (not tuberous), root collar sparsely covered with brown or straw-coloured leaf sheaths (not covered with leaf sheaths); stem unbranched, hollow, 35-90 cm tall (not branched, solid, 30-40 cm tall) and Capitula in racemes (not solitary in the end of the branches). A comparison of *S. renzii* and *S. elata* is given in Table 1.

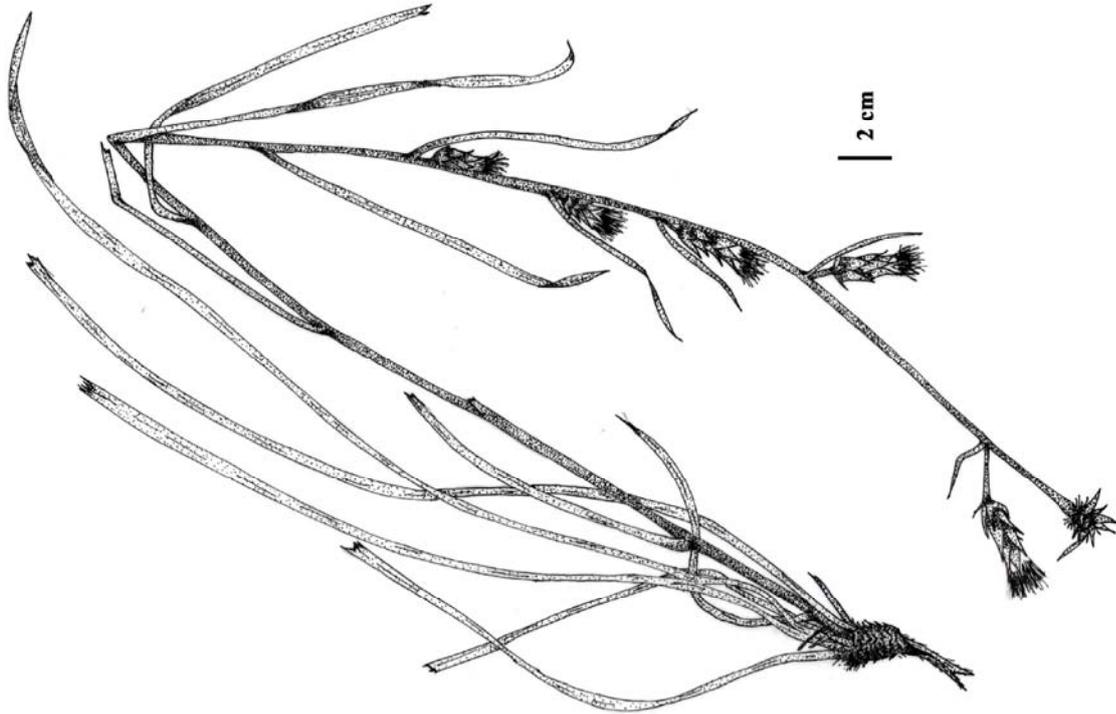


Figure 2. Habit of *Scorzonera renzii*.

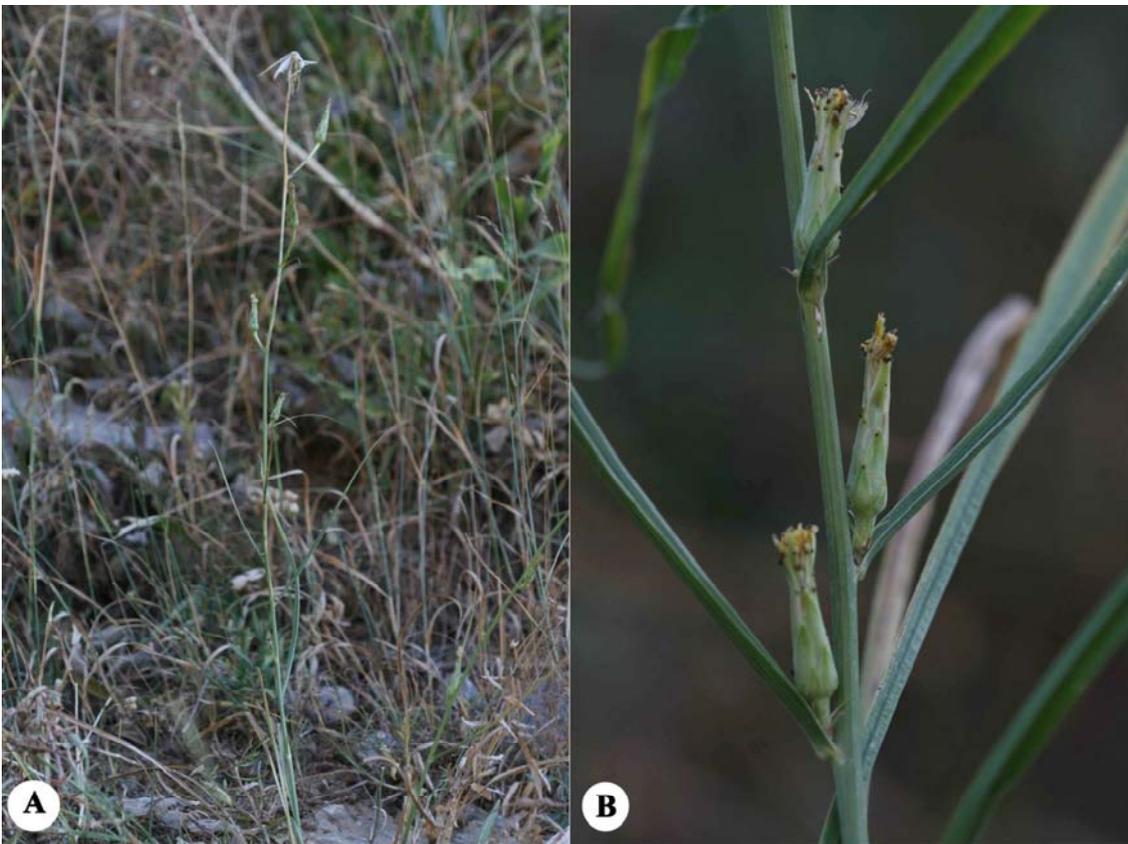


Figure 3. *Scorzonera renzii*. A-habit, B-capitula.

Table 1. A comparison between the diagnostic characters of *Scorzonera renzii* and *S. elata*

Characters	<i>Scorzonera renzii</i>	<i>Scorzonera elata</i>
Root	thick, cylindrical	tuberous
Root collar	covered with leaf sheaths	not covered with leaf sheaths
Stem	hollow, unbranched, 35–90 cm tall	solid, much branched, 30–40 cm tall
Basal leaves	20-30 cm long,, 2-3 mm wide	5-20 cm long, 1–2 mm wide
Capitula	in racemes	solitary in the end of the branches
Achene	12–15 mm long	c. 8 mm long

However, *Scorzonera renzii*, which was known as endemic to Iran, lost this characteristic after it was collected from Turkey. This species is rare in Turkey and only known from one locality (Bitlis, Tatvan, Karz mountains). The population is in a poor condition and numbers of individuals is estimated to approximately 120-125. By considering its narrow distribution area, Endangered (B2a) conservation status is proposed (IUCN, 2001).

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