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New Records of *Senecio* L. (Asteraceae) for the Flora of Turkey

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Abstract: *Senecio grandidentatus* Ledeb. and *Senecio doriiformis* DC. subsp. *doriiformis* (Asteraceae) were recently collected from Posof (Ardahan province) and Çatak (Van province), and are new records for the flora of Turkey. Their descriptions and distributions are given.

Key Words: New records, *Senecio*, Asteraceae, Turkey

Türkiye Florası için Yeni *Senecio* L. (Asteraceae) Kayıtları

Özet: Posof (Ardahan) ve Çatak'tan (Van) toplanan *Senecio grandidentatus* Ledeb. ve *Senecio doriiformis* DC. subsp. *doriiformis* (Asteraceae) taksonları Türkiye Florası için yeni kayıtlardır. Taksonların betimlemeleri ve yayılışları verilmiştir.

Anahtar Sözcükler: Yeni kayıtlar, *Senecio*, Asteraceae, Türkiye

Introduction

Senecioneae is one of the largest tribes of *Asteraceae*, and includes about 150 genera and 3000 species (Nordenstam, 2007). *Senecio* L. is among the largest genera of flowering plants. The large size of the genus (about 1500 species) has impeded attempts to make an infrageneric classification of *Senecio*. Moreover, the evolution of this genus is still poorly known; however, morphological, karyological, and molecular data generated in the past 30 years indicate that this genus and several other genera in the tribe are presumably poly- or paraphyletic (Chater & Walters, 1976; Jeffrey et al., 1977; 1978; Barkley, 1978; Bremer, 1994; Vincent, 1996; Mabberley, 1997; Pelsner et al., 2002). In Turkey, *Senecio* was revised by Matthews (1975) and two species were subsequently described (Kit Tan, 2000).

During field work carried out in 2006 some interesting *Senecio* materials were collected from Çatak (Van), which were identified as *S. doriiformis* DC. subsp.

doriiformis, a new record for the flora of Turkey. During field work conducted in 2008 in Posof (Ardahan province) specimens of *Senecio grandidentatus* Ledeb. were discovered. Based on these new data the number of *Senecio* species in Turkey increases to 40 and the number taxa increases to 46. *Senecio integrifolius* (L.) Clairv. (three subspecies), *S. papposus* (Rchb.) Less. subsp. *papposus*, and *Senecio cladobotrys* Ledeb. subsp. *cladobotrys*, which were transferred to the genus *Tephroses* (Rchb.) Rchb., are not considered in *Senecio* (Matthews, 1975; Budak et al., 2007). Full taxonomic descriptions of these new records are presented below.

Senecio grandidentatus Ledeb., Fl. Ross. 2: 636 (1845).

Type: In Insula Sara maris caspii, *Kieseritzky*, LE.

Perennial herb. Stem simple or branched in lower and middle part, erect, 45-150 cm tall, 3.5-10 mm in diameter below, sparsely floccose. Basal leaves petiolate,

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withered at anthesis. Lower cauline leaves petiolate; petioles 0.5-4.5 cm long, lamina 2-pinnatifid to pinnatisect with 5-11 pairs of lateral lobes, linear-lanceolate to ovate in outline, 4-19 × 3-9 cm, sparsely floccose above, densely floccose below. Margin irregularly serrate, apex acuminate-acute, base attenuate-obtuse. Upper cauline leaves sessile; lamina 2-pinnatifid to pinnatisect with 4-7 pairs of lateral lobes, linear-lanceolate in outline, 2-7 × 1-3.5 cm, amplexicaule with distinct auricles. Synflorescences corymbose, capitula numerous, supported by linear leaves with entire to pinnatisect margin. Peduncles 0.3-2 cm long, sparsely-densely floccose. Capitula radiate, ± densely floccose at base. Calycular bracts 8-10 in number, 3-4 mm long, whitish-green. Involucres 5-6 mm wide; phyllaries 13 in number, ovate-lanceolate, 4.5-5 mm long, sparsely floccose, whitish-green, apex acute. Ligules 12-14 in number, oblong-elliptic, 7.5-9.5 × 1.5-2 mm. Disc flowers 5-lobed, 50-60 in number, 5.5-6 mm long. Filament collar balusterform, anther bases ecaudate-sagittate. Style branches 0.8-1 mm long, outside short papillate near the top, apex truncate-obtuse with long papillate margin. Achenes 2-2.5 mm long and hairy. Pappus 5-5.5 mm long. Flowering time: August-October. Ecology: Damp marshy places, meadows, 1300 m.

Specimens examined (Figure): North-east Anatolia. A10 Ardahan: Posof, between Posof and Yurtbekler village, 1200 m, 05.X.2008, *Başkent & Tekin* (KATO 7690); *ibid.*, 1300 m, 23.viii.2008, *Hamzaoğlu* 5368, *Budak & Aksoy* (Bozok Hb.).

***Senecio doriiformis* DC., Prodr. 6: 352 (1838).**

Perennial herb. Stem simple or branched in middle or upper part, erect to ascending, 30-95 cm tall, 3-10 mm

in diameter below, glabrous to glabrescent. Basal leaves petiolate, withered at anthesis. Lower cauline leaves petiolate; petioles 0.5-5 cm long, lamina linear-lanceolate or oblong-elliptic to ovate, 3-12 × 1-4.5 cm, glabrous to very sparsely floccose on both surfaces; margin entire or slightly to distinctly serrate-dentate, apex obtuse or acute, base attenuate to obtuse. Upper cauline leaves sessile. Lamina lanceolate to linear-lanceolate, 1-11 × 0.5-3 cm, semi-amplexicaule. Synflorescences corymbose with 14-35 capitula, supported by linear-lanceolate leaves with entire margin. Peduncles 1-11 cm long, glabrous-glabrescent. Capitula radiate, glabrescent to very sparsely floccose at base. Calycular bracts 5-8 in number, linear-lanceolate, 5-7 mm long, greenish. Involucres 6-9 mm wide; phyllaries 9-13 in number, linear-lanceolate, 6-7 mm long, glabrous to very sparsely floccose; apex acute and ± black. Ligules 6-8 in number, oblong-obovate, 7-10 × 3-6 mm. Disc flowers 5-lobed, 20-50 in number, 8-10 mm long. Filament collar balusterform; anther bases short sagittate to rounded. Style branches 1.0-1.3 mm long; outside glabrous to short papillate; apex truncate with long papillate margin. Achenes 3-5 mm long, glabrous or sparsely hairy near top. Pappus 7-8.5 mm long. Flowering time: June-July. Ecology: Rocky places, stream sides, 1350-3100 m.

The following key can be used for distinguishing the two subspecies of *S. doriiformis* in Turkey:

1. Cauline leaves oblong-elliptic to ovate, margin entire, apex obtusesubsp. **doriiformis**.
1. Cauline leaves linear-lanceolate, margin slightly to distinctly serrate-dentate, apex usually acutesubsp. **orientalis**.

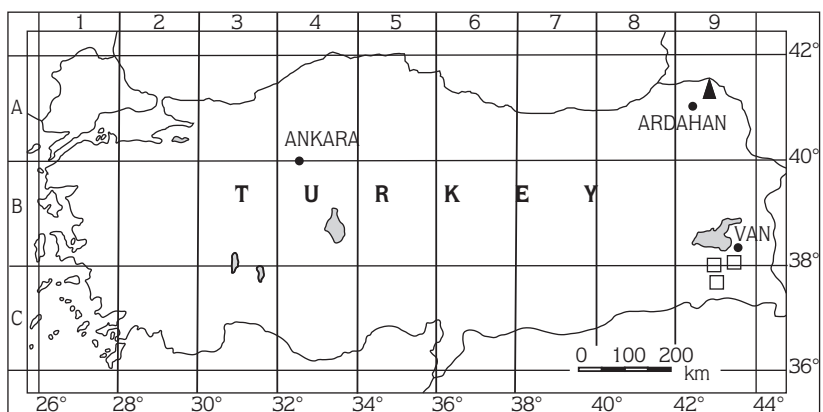


Figure. Distribution of *Senecio grandidentatus* (▲) and *Senecio doriiformis* subsp. *doriiformis* (□) in Turkey.

Subsp. *doriiformis*

Type: Lebanon (Lübnan) *Aucher-Eloy* 3440 (G-DC.).

Specimens of *S. doriiformis* subsp. *doriiformis* that were examined (Figure): East Anatolia. B9 Van: between Van and Çatak, near Ganispi waterfall, 1750 m, 01.vii.2006, *Hamzaoğlu* 4113, *Aksoy & Budak* (Bozok Hb.); Van: from Çatak to Van 8 km, 1710 m, 22.vii.2008, *Budak* 2297, *Hamzaoğlu & Aksoy* (Bozok Hb.); Van: Gevaş, Artos Mountain, c. 2135 m, 14.vii.1954, *P.H.Davis* 22690 & *Polunin* (ANK); Van: Çatak, Dalbastı village, Şeytanderesi, 1350 m, 20.vii.2002, *Bani* 1255 (GAZI); Van: south of Büyük Ereğ Mountain, 3100 m, 03.viii.1986, *Özçelik* 1101 (VANF).

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Discussion

Senecio doriiformis subsp. *doriiformis* has been reported from Lebanon and North Iraq close to the Turkish border. Now, the distribution range of the taxon is expanded into the vicinity of Van province, Turkey.

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