

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

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Received: 23.10.2008

Accepted: 28.04.2009

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**.

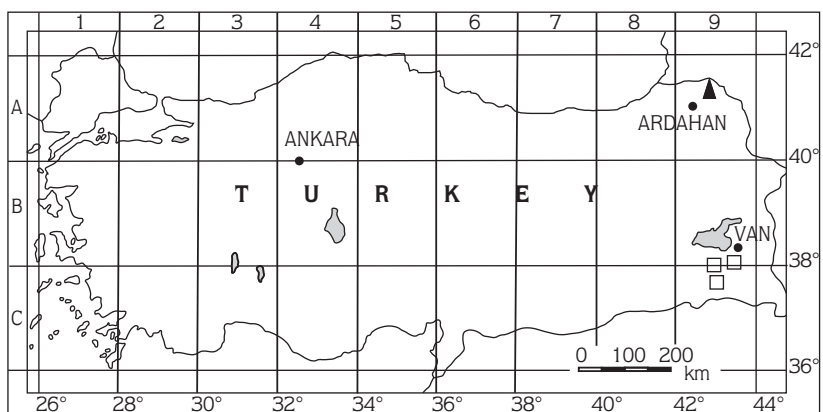


Figure. Distribution of *Senecio grandidentatus* (▲) and *Senecio doriiformis* subsp. *doriiformis* (□) in Turkey.

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.

Acknowledgements

The authors wish to thank the curators of the herbaria at KATO (Assoc. Prof. Dr. Salih Terzioğlu) for allowing us to study their *Senecio* specimens. We are indebted to TÜBİTAK (Project no. TBAG-106T240 and TBAG-107T510) for its financial support.