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Solanum sisymbriifolium Lam. (*Solanaceae*): A New Record for Turkey

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Abstract: *Solanum sisymbriifolium* Lam. (*Solanaceae*) is reported as a new record for Turkish flora and an illustration of it is given.

Key Words: New record, *Solanaceae*, *Solanum*, Turkey

Solanum Sisymbriifolium Lam. (*Solanaceae*): Türkiye için Yeni Bir Kayıt

Özet: *Solanum sisymbriifolium* Lam. Türkiye'den ilk kez rapor edilmektedir. Ayrıca türün şekli de çizilmiştir.

Anahtar Sözcükler: *Solanum*, *Solanaceae*, Türkiye, Yeni Kayıt

Introduction

Dr. F. Karaer carried out extensive field studies in the central part of North Anatolia and collected some *Solanum* L. specimens from Samsun and Amasya provinces. At first glance in the field, one of them looked like *Solanum cornutum* Lam. (Baytop, 1992; Erik & Akaydin, 1995) because of the habit, stem, and leaf spines. After closer examination and consultation with the *Flora of Turkey and the East Aegean Islands* and supplements (Baytop, 1978; Davis et al., 1988; Güner et al, 2000) it was apparent that the specimens were quite different from *S. cornutum* and other *Solanum*. During 1996-2003, large numbers of samples were collected again from the same localities and the population sizes and phenological properties were observed. The specimens were crosschecked with various *Solanum* accounts given in the relevant literature (e.g., Boissier, 1879; Hawkes & Edmonson, 1964; Hawkes, 1966; Schönbeck-Temasy, 1972; Morton, 1976; D'Arcy, 1979; Pignatti, 1982; Cabrera, 1983; Pojarkova, 1997). As a result of further comparative studies and discussions (Pers. com. with Dr. Luis Ariza-Espinar from Argentina), we determined that this specimen was similar to *S.*

sisymbriifolium Lam. (sticky nightshade). It is not listed in the *Flora of Turkey* (Baytop, 1978). *S. sisymbriifolium*, a native of S. America, is commonly found outside cultivated areas in Europe (Hawkes & Edmonds, 1964). The specimens are found in Edinburgh Royal Botanic Gardens Herbaria (E). After studying the specimens, we decided that this specimen was *S. sisymbriifolium* and thus a new record for the flora of Turkey. *S. sisymbriifolium* is the first spiny shrubby species and *S. cornutum* is the first spiny annual species in the flora of Turkey. With this new record, the total number of recorded *Solanum* in Turkey has reached 10.

Results and Discussion

Solanum sisymbriifolium Lam. Tabl. Encycl. 2: 25. 1794. (Figures 1, 2).

Shrubby, perennial. Stems 1.2-2 m, much-branched, 1-8 cm diameter at base, viscous-villous, sparsely stellate, glandular, eglandular and simple hairy; prickles dense, subulate, 8-16 mm long, very sharp. Leaves alternate, leaf-blades ovate-oblong, 10-15 × 6-10 cm, deeply pinnatisect or pinnatifid many prickles, sparsely stellate-

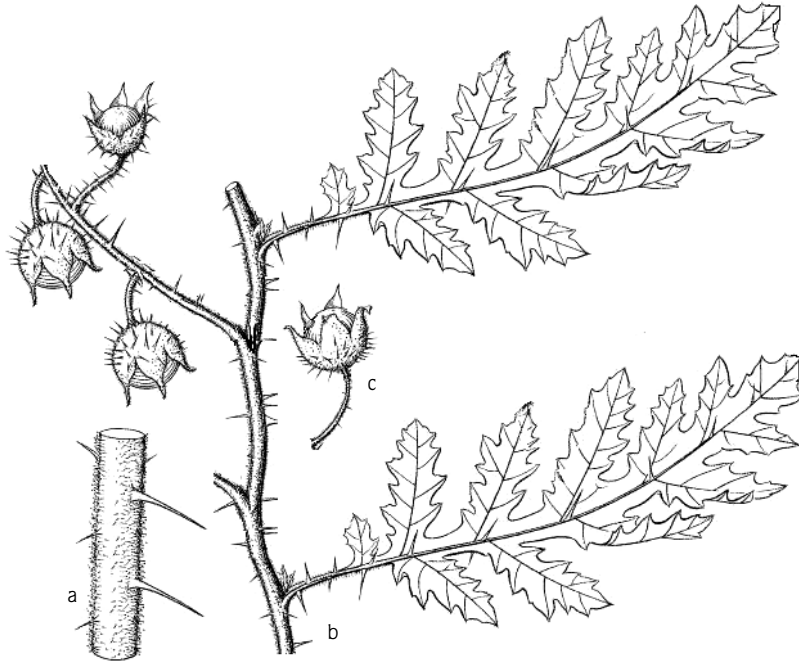


Figure 1. *S. sisymbriifolium* A: Stem (×1), B: habit (×2), C: fruit (1/2).

hairy above, densely so beneath, lobes rounded, sinuate, petioles 1.5-5 cm, spiny, like as a stem. Inflorescence racemose, 6-8 (-10) flowered, upper flowers smaller and male. Peduncles 3-7 cm long, branched or not, glandular and simple pilose, densely spiny; pedicels slender, glandular-pilose, and slightly spinulose. 8-15 mm. Calyx cup-shaped green, membranous 6-9 × 2-4 mm, deeply 5-parted, lobes lanceolate acuminate, with dense prickles in hermaphrodite flowers. Corolla whitish or lilacs bluish and pale violet, rotate, 40-45 mm in diameter, shallowly lobes, lobes broadly triangular, stellate-pilose outside. Stamens equal, filaments slender, glabrous, 2-3 (-4) mm; anthers lanceolate, 7-10 mm. Ovary ovoid, glabrous, style 1-1.2 cm. Fruiting pedicels deflexed, densely glandular-pilose and viscid, fruiting calyx enlarged 11-12 × 4-6 mm. Berry bright red, subglobose, 5-6 mm diam. (in Turkey). Seeds 5-7, reniform, foveolate, c. 1-1.2 mm diam. (in Turkey).

Specimens collected

A5 Amasya: vicinity of Bahçeleriçi along the valley S slopes, 400 m, 25.vii.1999, F. Karaer 8250!, *ibid.* 20.ix.1999, F. Karaer 8900! (fruiting material), A6 Samsun: Between Toptepe and Directory of Forestry

along the valley east-facing slopes, 50-100 m, 7.vi.1995, F. Karaer 6016 *ibid.* 18.viii.1995, F. Karaer 6495! (fruiting material).

This species is a native of Central and South America (Argentina, southern Brazil, Paraguay, Uruguay, Bolivia, and Colombia). The plant's natural habitat is on waste areas, roadsides, fence rows, and dykes. Naturalised in S. Europe, Africa and Australia and in south-eastern N. America, where it grows near sea ports in waste places.

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Figure 2. *S. sisymbriifolium* a: Calyx and potato beetle (*Leptinotarsa decemlineata* Say), b: corolla, c: fruit, d: habit.

References

- Baytop A (1978). *Solanum* L. In: Davis PH (eds.) *Flora of Turkey and the East Aegean Islands*, 6: 437-443. Edinburgh: Edinburgh Univ. Press.
- Baytop A (1992). Trakya ve Türkiye Florasına ilave kayıtlar, *Doğa – Tr J of Botany* 16: 15-17.
- Boissier E (1879). *Solanum* L. In: *Flora Orientalis* 3: 283-284, Basel.
- Cabrera AL (1983). Flora de la Provincia de Jujuy (Republica Argentina) Parte viii: Cletraceas a *Solanaceas*. 340-341, Argentina.
- D'Arcy WG (1979). The classification of the *Solanaceae*, In: Hawkes JG et al. *Solanaceae* III: The Biology and Taxonomy of the *Solanaceae*, 3-47. London: Academic Press.
- Davis PH, Mill RR & Tan K (eds) (1988). *Solanum* L. In: *Flora of Turkey and the East Aegean Islands*. Vol. 10. 24-28, 298. Edinburgh: Edinburgh Univ. Press.
- Erik S & Akaydin G (1995). Ankara Şehrinden ilginç bir örnek *Solanum cornutum* Lam., *Tr J of Botany* 19: 167-169.
- Güner A, Özhatay N, Ekim T & Başer THC (eds.) (2000). *Flora of Turkey and the East Aegean Islands*, vol. 11 Edinburgh: Edinburgh Univ. Press.
- Hawkes JG & Edmonds M (1964). *Solanum* L. In: Tutin TG & Heywood VH (eds.). *Flora Europaea*. vol. 2: 197-199, Cambridge: Cambridge Univ. Press.
- Hawkes JG (1966). Modern taxonomic work on the *Solanum* L. species of Mexico and adjacent countries, *Am J Potato* 43: 81-103.
- Morton CV (1976). *A revision of the Argentina species of Solanum* L., Argentine: Academia Nacional de Ciencias, Cordoba.
- Pignatti S (1982). *Flora d'Italia*, 2: 513-516, Italy.
- Pojarkova AJ (1997). *Solanum* L. In: Schischkin BK & Bobrow CG (eds.). *Flora of the USSR*. XXII: 3-36 (*Moskva-Leningrad: Izdate'stvo Akademii Nauk SSSR.*) Washington DC.
- Schönbeck-Temasy E (1972). *Solanum* L., In: Rechinger KH (eds.). *Flora of Iranica Solanaceae*, 10: 3-24. Akademische Druck-u. Verlagsanstalt, Graz-Austria.