

New distributional record of *Solanum sisymbriifolium* Lamarck (Solanaceae) from Tripura, India

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Abstract

Solanum sisymbriifolium Lamarck (Solanaceae) is reported here for the first time from the state of Tripura in India. A brief description of the species along with line drawing is provided for easy identification. The species is recorded from several areas of the state and is growing as a weed.

Key words: *Solanum sisymbriifolium*, New Record, Tripura

INTRODUCTION

Solanum Linnaeus is a large and diversified genus belonging to the economically important cosmopolitan family Solanaceae with over 1250 species in the world and distributed in the tropics and subtropics of both the old and new world (Mabberley 2008). This cosmopolitan family is widely distributed throughout tropical and temperate regions with centres of diversity occurring in Central and South America and Australia (Edmonds 1978; D'Arcy 1991). In India the genus *Solanum* is represented by 42 species and distributed almost throughout the country (Deb 1980). Within the family, *Solanum* constitutes the largest and most complex genus, many of which are economically important throughout the range of their cosmopolitan distribution. The giant genus *Solanum* with its approximately 1500 species has become a model system for collaborative online taxonomy in challenging tropical plant groups (Knapp *et al* 2004). The "spiny" or "prickly" *Solanum* (subgenus *Leptostemonum*) is the largest clade in the genus, with some 750 species (Bohs 2005). Recently few specimens belonging to the genus *Solanum* are collected from the West District of Tripura. After close examination and consultation with the *Flora of Tripura* (Deb 1983) it became apparent that the specimens are quite different from the *Solanum* species recorded for the state. The population size and phenological properties were observed at the same locality. The specimens are crosschecked with various *Solanum* accounts given in the relevant literature (Deb 1983; Hooker 1885; Prain 1903; Kanjilal *et al* 1939). On herbarium consultation at CAL, the specimens are identified as *Solanum sisymbriifolium* Lamarck. The species is also referred as *S. balbisii* Dunal, *S. brancaefolium* Jacquin, *S. formosum* Dunal, *S. inflatum* Hornemann, *S. thouinii* C.C. Gmelin, *S. viscidum* Schweigger and *S. viscosum* Lagascaby different authors (Manson 1967) and can be confused with *S. aculeatissimum* and *S. maritimum* (Symon 1981). According to Hawkes & Edmonds (1964), *Solanum sisymbriifolium* is commonly found

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outside cultivated areas in Europe and is a native of South America. A perusal of literature revealed that the species was not hitherto known from Tripura. So, its present collection forms a new record for the flora of Tripura. The present paper reports its occurrence in the state along with its short description, distribution and ecology. The voucher specimens are deposited in Tripura University Herbarium (TUH).



PLATE - I. *Solanum sisymbriifolium* Lamarck: **Fig. 1.** Habit; **Fig. 2.** Leaf; **Fig. 3.** Inflorescence; **Fig. 4.** Flower; **Fig. 5.** Fruit; **Fig. 6.** Pollinator; **Fig. 7.** Dissected fruit; **Fig. 8.** Seeds

Solanum sisymbriifolium Lamarck, Tabl. Encycl. 2: 25. 1794

Erect, shrubby, annual or perennial. Stem and branches viscid, hairy, sparsely glandular stellate and with simple hairs; *prickles* dense, subulate, 8 – 16 mm long, very sharp. *Leaves* alternate; lamina ovate-oblong, 10 – 15 × 6 – 10 cm, deeply pinnatisect or pinnatifid, much prickles, sparsely stellate - hairy above, densely so beneath, lobes rounded, sinuate; petioles 1.5 – 5 cm, prickly like stem. Raceme many flowered; peduncles 3 – 7 cm long, pilose, hairs glandular and simple, densely prickly; pedicels slender, glandular-pilose, and slightly prickly, 8 – 15 mm. *Calyx* cup-shaped green, membranous, 6 – 9 × 2 – 4 mm, deeply 5-parted, lobes lanceolate acuminate, densely prickly in hermaphrodite flowers; *corolla* white or slightly bluish or pale violet, rotate, 40 – 45 mm in diameter, lobes broadly triangular, stellate - pilose outside; *stamens* equal, filaments slender, glabrous, 2 – 3 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, 1 - 2 cm across, globose, covered by enlarged and reflexed calyx; *seeds* many, reniform, 2 mm in diameter.

Flowering & Fruiting: Almost round the year

Occurrence: The species grows in dry areas and common near road sides throughout the state; very common

Voucher Specimen: Hapania, *Moumita 446*, dated 12.10.2012; Kailasahar, *Moumita 447*, dated 15.11.2012; Kamalpur, *Moumita 448*, dated 21.11.2012; Belona, *Moumita 449*, dated 29.11.2012; Sabroom, *Moumita 450*, dated 30.11.2011; Agartala, *Moumita 45*, dated 05.12.2012.

Global Distribution:

Native range: This species is a native of Central and South America (Argentina, southern Brazil, Paraguay, Uruguay, Bolivia and Colombia).

Known introduced range: North America (Canada, Mexico, the United States), Europe (Spain, the Netherlands), Asia (India, China, Taiwan), Africa (South Africa, Congo, Swaziland), and Australasia (Australia, New Zealand)

Indian Distribution: Andhra Pradesh, Assam, Bihar, Kerala, Karnataka, Maharashtra, Manipur, Orissa, Punjab, Sikkim, Tripura Uttar Pradesh and West Bengal.

Report on Medicinal importance: The fruits and flowers are used as analgesic, in the synthesis of corticosteroids and oral contraceptives (Ferro *et al* 2005). The ethanol extract of leaves also shows neuropharmacological, anti-diarrheal, and cytotoxic activities (Serker *et al* 2013).

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