



Research article

## *Solanum sisymbriifolium* Lam. (Solanaceae): A new addition to the flora of Odisha, India

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**Abstract:** During the exploration of invasive flora in the northern part of Odisha, *Solanum sisymbriifolium* Lam. was collected from Rupsa of Balasore district. After reviewing its distribution through flora and available literatures, the species is found to be a new one to the Flora of Odisha. A detailed description with photographs, distribution, occurrence and phenology of the taxon are provided for easy identification.

**Keywords:** Solanaceae - *Solanum sisymbriifolium* - New record - Odisha.

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### INTRODUCTION

*Solanum* L. is a large and diversified genus belonging to family Solanaceae possessing more than a thousand numbers of species distributed throughout the world (Bohs & Olmstead 1997). Family Solanaceae has a number of widely used drug plants such as *Nicotiana tabacum* L., *Datura* spp. and *Atropa belladonna* L. in India. The genus *Solanum* also has global importance for its food crops such as *Solanum melongena* L., *Solanum tuberosum* L., *Solanum lycopersicum* L. etc. This genus constitutes many economically important species widely distributed throughout tropical and temperate regions, with centers of diversity in Central and South America and Australia (Edmonds 1978, D'Arcy 1991). In India, the genus *Solanum* is represented by 42 species. A total of 9 wild and 3 cultivated species of *Solanum* have been reported in Flora of Orissa (Saxena & Brahmam 1994–96). *S. sisymbriifolium* is distributed mostly in the southern part of India and also it has been reported in Jharkhand (Panda *et al.* 2014), Uttar Pradesh (Srivastava *et al.* 2015), Delhi (Mishra 2015), Bihar (Mishra & Kumar 1992), Rajasthan (Yadav & Menna 2007) and Tripura (Saha & Datta 2013). However, *Solanum sisymbriifolium* has not been reported so far from the state of Odisha. With the addition of this newly recorded species, the total number of *Solanum* wild species in Odisha is increased to ten.

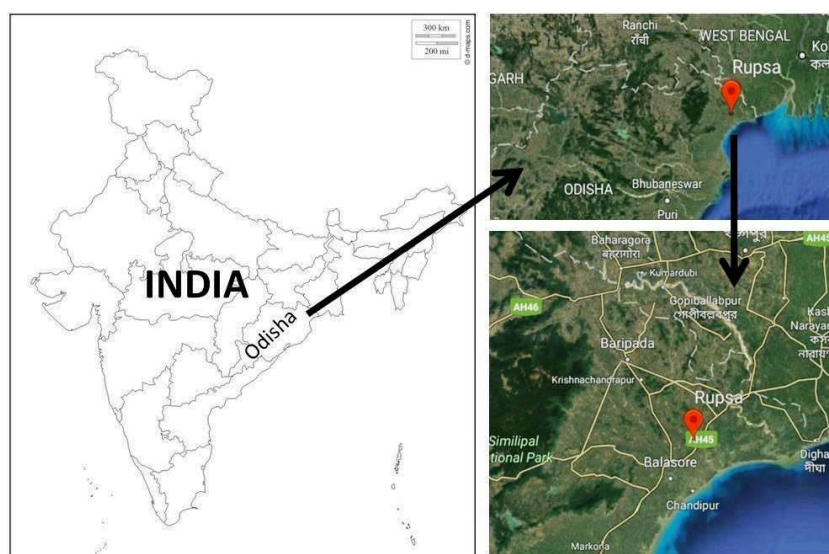
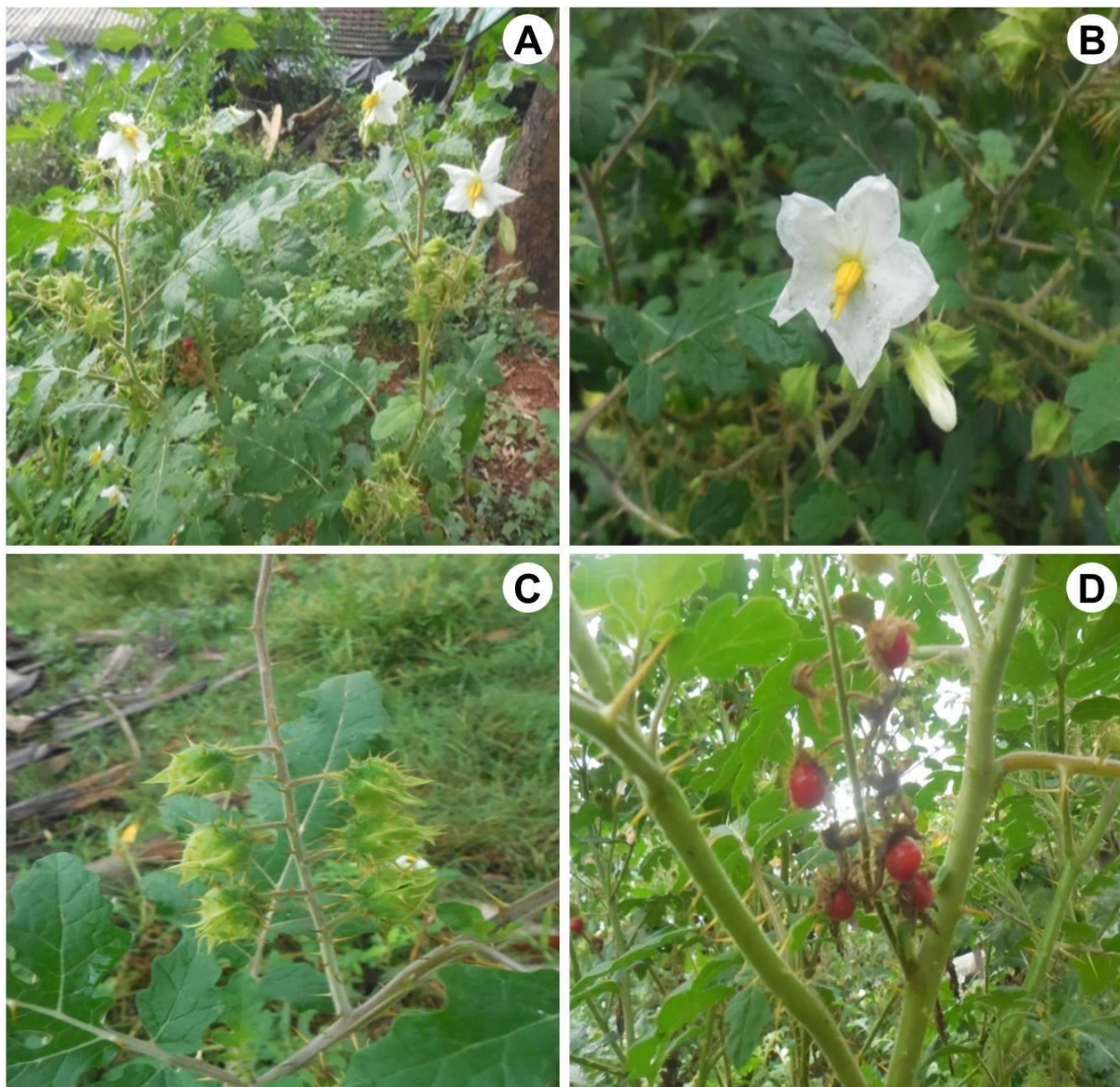


Figure 1. Map showing the collection site in Odisha.

During July 2017, few specimens belonging to genus *Solanum* are collected near Rupsa railway station, Balasore district of Odisha (Fig. 1). Rupsa railway station is situated at 21° 37'21" N longitude and 87° 01'09" E latitude. After critical identification and consultation with the *Flora of Orissa* (Saxena & Brahmam 1994–1996), it was found different from the *Solanum* species recorded for the state. The phenology, distribution, habitat, ecology are observed at the same locality. The specimens were verified with other published *Solanum* literatures (Deb 1983, Hooker 1885, Prain 1903, Kanjilal *et al.* 1939, Shetty & Singh 1991, Almeida 2001). Finally, the specimens are identified as *Solanum sisymbriifolium* Lam. with consultation of herbarium at CAL (Central National Herbarium, Kolkata). The voucher specimens are preserved in the herbarium of Botany Department, North Orissa University, Baripada.



**Figure 2.** *Solanum sisymbriifolium* Lam.: **A**, Plant in natural habitat (Habit); **B**, A flower twig; **C**, Unripe berry (fruit); **D**, Ripe berry and prickles.

#### DESCRIPTION OF THE SPECIES

*Solanum sisymbriifolium* Lam., Tabl. Encycl. 2: 25. 1794.

(Fig. 2)

*Solanum sisymbriifolium* f. *lilacinum* Kuntze

Perennial under shrub with maximum height of 2 meter. Stem sub erect or scandent with glandular hairs and prickled throughout. Prickles up to 15mm long, yellow in colour and sharped. Leaf alternate, lamina ovate-oblong, 9–16 × 4–11 cm, deeply lobed, pinnatifid with many prickles along main veins on both surfaces with sparsely stellate hairs, wavy margin. Inflorescence racemose, 5–10 flowered. Peduncle *ca.* 20 cm long, hairs glandular and simple. Pedicel *ca.* 1 cm long, slender and slightly prickly. Flower white, small, actinomorphic.



Calyx cup-shaped, 9 × 3 mm, deeply 5-parted, green, prickly. Corolla white or slightly bluish, 35–45 mm in diameter, rotate, stellate, lobes triangular. Stamens 5, exserted, yellow, filaments reduced, slender, glabrous, *ca.* 0.2 cm long, anthers 0.7–0.8 cm long attached to petals. Ovary ovoid, 0.2 cm, superior, glabrous; style 1.3 cm long. Fruiting pedicels deflexed with acresent calyx, densely glandular- pilose and viscid, fruiting calyx enlarged 1.1–1.3 × 0.4–0.7 cm, enveloping most berry. Berry bright red, globose, 0.6–1.4 cm. diameter. Seeds reniform, *ca.* 0.2 cm diameter.

**Flowering & Fruiting:** June–September.

**Habitat:** The species grows on waste places, roadsides, landfills and ploughed fields.

**Voucher specimen:** India, Balasore dist., Rupsa railway station, 12 m, N 21° 37'21" E 87° 01'09", 14.07.2017, *M.R. Mohanta et al.* 1562 (NOU).

**Global distribution:** This species is a native of Central and South America (Argentina, Southern Brazil, Paraguay, Uruguay, Bolivia and Colombia) and introduced in 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, Jharkhand, Punjab, Sikkim, Tripura Uttar Pradesh and West Bengal.

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