

Diversity of *Solanum sisymbriifolium* Lam. – An invasive and Wild Relative of cultivated Brinjal (*Solanum melongana* L.) in India

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ABSTRACT: *Solanum sisymbriifolium* Lam. is very invasive species and wild relative of cultivated brinjal. It is native to South America and spread in to Africa, Asia, Australia Europe and North America. The distribution in India of this important species is high lighted with distribution, ecology, phytophany. Herbarium study was undertaken available at CNH, Botanical Survey of India, Calcutta. This species spread and available in 12 states of India.

Keywords: Diversity, Collection, *Solanum sisymbriifolium*.

INTRODUCTION

Solanum L. is the most important economically genera of the family Solanaceae. Solanaceae consist of many important food plants and drug plants like *Nicotiana tabacum*, *Datura* spp and *Atropa belladonna* and food plants like *Solanum tuberosum*, *Solanum melongena*, *Lycopersicon esculentum* etc. *Solanum* is the largest genera having 1500 species distributed in all continent except Antarctica (Vorontsova *et al.*, 2013). In India the family Solanaceae is represented by 122 taxa belonging to 29 genera (Reenakumari, 2004). *Solanum* consists of 31 species distributed throughout the country. *Solanum sisymbriifolium* is newly reported in Bihar by Mishra and Kumar (1992), Rajasthan, Yadav and Meena (2007). Exploration was undertaken in the state of Jharkhand and Odisha. In both the state *Solanum sisymbriifolium* was reported as new distribution record, (Panda *et al.*, 2012; 2014). Mishra (2015); Saha and Dutta (2013) reported this species from Delhi and Tripura respectively.

PHYTOGRAPHY

Erect perennial under shrub, up to 2.5m high, much branched, woody at base, stellate, glandular stem with dense prickles. Leaves alternate, leaf blade ovate-oblong 10-14-4-9 cm, deeply pinnate-sect, with prickles on the margins, Inf. racemose, 6-15 flowered, peduncle up to 20cm. densely spiny, pedicels slender, glandular, spinulose. Calyx cup shaped, 0.5-0.9 × 0.2-0.4 cm,

deeply 5-partite. Corolla whitish or lilac or pale violet with triangular lobes. Stamens equal, glabrous, 0.2 cm long. Ovary ovoid, 0.2cm, superior, glabrous, style 1-1.2cm long, fruiting pedicel deflexed glandular, calyx enlarged enveloping the berry. Berry bright red. Seeds reniform Fls. and Frts: Through the year round.

Ecology: This plant is available and grown naturally in wasteland, road side, railway tract etc.

GLOBAL DISTRIBUTION

This species is native to central and South America (Argentina, Brazil, Paraguay, Uruguay, Bolivia and Columbia), North America (Canada, Mexico, USA), Europe (Spain, Netherland), Asia (India, China, Taiwan) and Australia (Australia, Newzeland).

India distribution: This species is grown naturally in road sides in the states like Andhra Pradesh, Assam, Bihar, Kerala, Karnataka, Maharashtra, Manipur, Odisha, Punjab, Sikkim, Tripura, Uttar Pradesh and West Bengal.

Herbarium study:

The herbarium of *Solanum sisymbriifolium* Lam. were studied at Central National Herbarium, Botanical Survey of India, Calcutta and it is reported that plants were collected from Nilgiri (K.M. Sebastine, 2176, CEC. Fisher, 1590, S.K. Mandal, 7165), Upper Shillong, (Choudhury, 29665), Darjeeling (P.K. Paul, 45659), Hoogly (A.K. Mukherjee, 114), Bihar (K.A. Bharati, 64221), Cherrapunji, Assam, (H. Deka, 24585).



Fig. 1. View of natural occurrence of *Solanum sisymbriifolium* Lam. with flower.

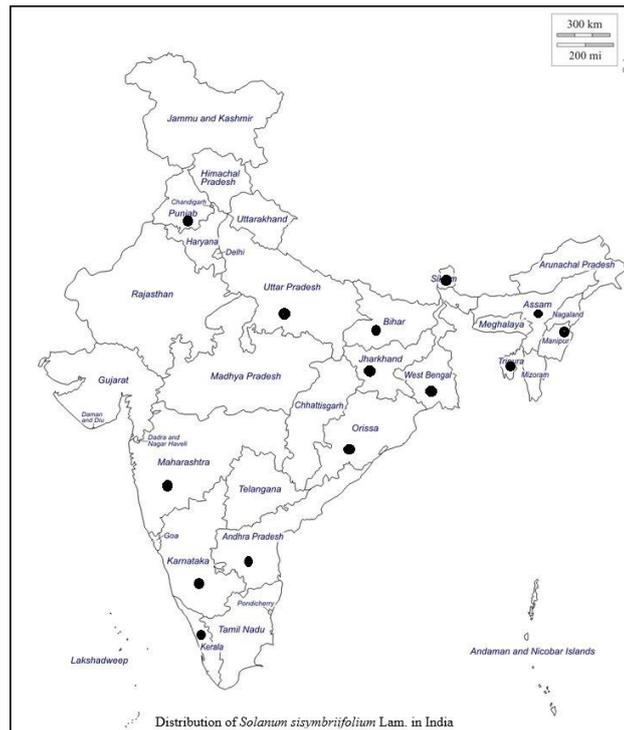


Fig. 2.



Fig. 3. Herbarium of *Solanum sisymbriifolium* Lam. deposited at CNH, Calcutta by (T.K. Paul).

CONCLUSIONS

Extensive survey of this species should be taken up and characterization for different trait should be done to find out resistant gene, which can be utilized for hybridization programme.

FUTURE SCOPE

As this species is grown in natural habitat and wild state, it must have many wild genes for different valuable traits like disease and insect pests, which can be manipulated in to cultivated brinjal species through biotechnic methods to develop good disease free varieties.

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Conflict of Interest. None.

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