

Two New Additions to the Flora of Bihar, India.

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Short Communication

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ABSTRACT

Solanum diphylum L. and *Malva parviflora* L. reported as new distributional records for Bihar. A brief description, photographs and distribution are provided for both taxa.

INTRODUCTION

During the recent botanical exploration to Bhagalpur district, Bihar the authors found two interesting plants in two different parts of district. *Malva parviflora* L. (Malvaceae) was growing in a Bara Chaur, Narayanpur, Bhagalpur and *Solanum diphylum* L. (Solanaceae) was growing in university campus, Bhagalpur. On critical examination and perusal of literature [1,2,3,6,8,10,11,12] revealed that both plants were never reported from Bihar before.

Malva parviflora L. in Hoejer, Demonstr. Pl. Hort. Ups. 18. 1753 & Amoen. Acad. 3:146.1756 & Sp. Pl. ed. 2, 969.1763; Masters in Hook. f., Fl. Brit. India 1:321.1874; TK Paul [9] in BD Sharma et al., Fl. India 3: 361. 1993.



Figure 1. *Malva parviflora* L.. A. Habit; B. leaf lower surface; B. flower.

Figure 1

Annual herbs, 30 – 35cm high, ascending or prostrate, spreading. Stems branched at base, pubescent with scattered patent simple and stellate hairs, ultimately glabrescent. Leaves simple, suborbicular, 1.5 – 7 cm across, often slightly 3 – 7-lobed, cordate at base, crenate-serrate along margins, rounded to obtuse at apex, 5 – 7-nerved at base, with scattered stellate hairs on both surfaces; petioles 1 – 25 cm long with a line of stellate and simple hairs on upper side; stipules, lanceolate to deltoid, 1 – 3 mm long acuminate, hairy. Flowers 2 – 6 in axillary fascicles; pedicels 3 – 8 mm long, accrescent in fruits up to 10 mm, stellate-hairy or glabrous. Epicalyx segments 5; segments linear, up to 5 mm long, simple hairy, caducous. Calyx 5-lobed above, cupular below; cups c. 5 × 3 mm, divided to the middle; lobes ovate, c. 5 × 2 mm, acute, outside with minute stellate and simple hairs, glabrous inside. Corolla bluish-white 5-lobed; lobes obovate, 3 – 7 × 2 – 3 mm, glabrous or occasionally with minute stellate and simple hairs, glabrous inside. Staminal column c. 3 mm long, antheriferous towards apex, glabrous. Schizocarps 5 - 8 mm in diam., 2 - 3 mm long; mericarps 10, reniform, trigonous with sharp angles, margins keeled on the back, rarely slightly winged, dorsally prominently reticulate veined, glabrous, indehiscent. Seeds 1.8 - 2 mm in diam. reniform, glabrous, brownish black.

Flowering & Fruiting: December – April.

Exsiccatae: Bihar: Bhagalpur, Narayanpur block, Ashatol, 5.4.2013, S. Halder & G. Krishna 5901 (CAL).

Distribution: INDIA [Bihar, Jammu & Kashmir, Karnataka, Madhya Pradesh, Punjab, Uttar Pradesh, Sikkim, and Tamil Nadu], Pakistan, W. Asia, N. Africa, Europe, Nepal and Bhutan.

Solanum diphyllum L., Sp. Pl. 184.1753; M. Das & al., J. Econ. Taxon. Bot. 21: 158. 1997; T.K. Paul & M.C. Biswas, Bull. Bot. Surv. India 37: 137. 1995. *Pseudocapsicum diphyllum* (L.) Medik., Philos. Bot. (Medikus) 1: 122. 1789.



Plate 2: *Solanum diphyllum* L. Habit; inflorescence (inset)

Figure 2

Shrub up to 3 m high. Stem and branches terete, green to brown, minutely pubescent throughout; internodes c. 8 cm long. Leaves two at each node, unequal, elliptic, oblong-elliptic or linear-obovate, 1 – 10 × 0.5 – 4 cm acute or decurrent into petiole, entire along margins, acute or obtuse at apex; lateral nerves 4 – 7 on either side, minutely pubescent; petioles c. 5 mm long. Inflorescences a racemose fascicles, c. 10-flowered; peduncles c. 7 mm long; flowers bisexual, 5 – 8 mm across; pedicels c. 1 cm long. Calyx 5-lobed above, cupular below; cups 1.5 – 2 × 2 – 2.5 mm, minutely pubescent; lobes broadly triangular, c. 0.5 × 0.8 mm, acute, hirsute; Corolla creamy white, stellate, 5-lobed; lobes equal, elliptic or linear-ovate, 4 – 5 × 2.5 – 3 mm, incurved, hyaline; tube 1 – 2 mm long. Stamens 5, equal, epipetalous, introrse; filaments c.1 mm long, flat; anthers oblong, c.2 × 1 mm, basifixed, yellow, initially dehiscing poricidally, later longitudinally. Ovary globose, c.1 mm long; style 4 – 5 mm long. Berries globose, 7 – 12 mm diameter, slightly constricted in middle, glabrous, yellow or reddish yellow; seeds reniform or discoid, c.3 × 2 mm, thickened at margins, yellow or tan.

Flowering & Fruiting: March – July

Exsiccatae: Bihar: Bhagalpur, T.N.B. College campus, University road, 5.4.2013, S. Halder& G. Krishna 53863(CAL).

Distribution: INDIA [Assam, Bihar, Karnataka, Maharashtra, Tamil Nadu and West Bengal], Mexico, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua.

Note: *Solanum diphyllum* L. (Solanaceae), a native of Mexico and Central America has been naturalised in India. Paul Biswas^[9] recorded this plant as new addition to Indian flora from Howrah, West Bengal. Later Maity et al^[7] and Reema Kumari^[5] documented it as a new addition for flora of Assam and peninsular India respectively. While working on flora of Bihar, authors have collected the specimens from Bhagalpur district which turns out to be a new addition for Bihar.

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