

Occurrence of *Indigofera prostrata* Willdenow (Fabaceae) in Western Himalayan region: a new record to the Flora of Himachal Pradesh from Sirmour District

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[Received revised 27.05.2013; Accepted 31.05.2013]

Abstract

Present communication deals with new distributional record of *Indigofera prostrata* Willdenow (Fabaceae) in Himachal Pradesh, India. Previously this species was considered under *Indigofera trifoliata* Linnaeus.

Key words: New record, *Indigofera prostrata* Willdenow, Himachal Pradesh

INTRODUCTION

The unique geographical position, coupled with varied climatic conditions made Himachal Pradesh as one of the biodiversity rich states of India. Situated at the north-western part of the Himalayan region (one of the global mega-biodiversity Hotspots), it is surrounded by Jammu & Kashmir in the north, Punjab and Haryana in the west and south-west, Uttar Pradesh and Uttarakhand in the south and south-east and Tibet in the east. Floristic composition of this hilly state is being surveyed since the later part of 19th century (Bennett 1875; Collett 1921; Polunin & Stainton 1984a,b; Aswal & Mehrotra 1994; Chowdhery & Wadhwa 1984; Dhaliwal & Sharma 1999; Kaur & Sharma 2004; Murti & Uniyal 1985; Nair 1977; Sharma & Dhaliwal 1997; Sharma & Singh 1996; Singh & Sharma 2006; Singh & Nath 1987; Singh & Rawat 2000; Lal & Rawat 2008, 2012; Lal *et al* 2012; Pusalkar & Singh 2008) and several other stray publications in form of small articles in various journals. Thorough search of literatures revealed that occurrence of *Indigofera prostrata* Willdenow in Himalayan region has not been reported so far. But it has been described independently under *Indigofera trifoliata* Linnaeus.

During our recent floristic explorations to Sirmour District of Himachal Pradesh, we came across this interesting species which is described below with brief description, habitat and phenology. We hereby provide explanation and photographs of the species for easy identification.

TAXONOMIC TREATMENT

Indigofera prostrata Willdenow, Sp. Pl. 3: 1226. 1802; Gamble, Fl. Pres. Madras 310. 1918 (Repr. 1: 219. 1967); Santapau, Fl. Khandala 3: 55. 1967; Gandhi in Saldanha & Nicolson, Fl. Hassan Dist. 257. 1976; Sharma *et al.* in Biol. Mem. 2: 43. 1977; Britto in Matthew, Fl.

Tamil Nadu Carn. 1: 427. 1983; R.S. Rao, Fl. Goa etc. 1: 125. 1985. *I. trifoliata* auct. non Linnaeus 1756: Wight & Arnott, Prodr. 201. 1834, p.p.; Baker in Hooker *f.*, Fl. Brit. India 2: 96. 1876, p.p.; Saldanha & G. Singh in Saldanha, Fl. Karnataka 1: 473. 1984, p.p. de Kort & Thijssse in Blumea 30: 137. 1984, p.p. (Fig. 1).

Annual herb, up to 30 cm high, branches prostrate or ascending, biramous hairs grey adpressed with equal arms. Leaves digitately trifoliolate, stipule ca. 1.5 x 1 mm, narrowly triangular, adnate to petiole; petioles 5 – 8 mm long, canaliculated above, pubescent; stipels absent; petiolules ca. 1mm long; leaflets 10 – 18 x 5 – 9.5 mm, obovate or oblanceolate, sometimes elliptic, adpressed pubescent on both surfaces, brown gland-dotted beneath. Racemes 3 – 5 mm long, axillary, sessile, globose; rachis pubescent, gland-dotted, 4 – 10 flowered. Flowers pink, ca. 3 mm long; bracts ca. 1 mm long, triangular, caducous; pedicels ca 1 mm long. Calyx adpressed pubescent outside, hypanthium ca. 0.5 mm long, teeth ca 1.5 mm long, narrowly triangular. Standard ca 3 x 2 mm, elliptic, sometimes obovate, adpressed hairy and copiously gland dotted on the back; wing petals ca. 2.5 x 1 mm, glabrous; keel petals ca 2.5 x 1.5 mm, adpressed hairy and copiously gland dotted on the back, lateral spur ca 0.8 mm long. Staminal sheath ca 2.5 mm long; anthers ca. 0.5 mm long. Ovary ca 2 mm long, linear, glabrous, upto 8-ovuled, style ca 1 mm long, glabrous beset with glands at base. Pods 15 – 20 x 1 – 1.5 mm, descending, straight, filiform, subcylindric, torulose, shortly apiculate, 5 – 8 seeded, sutures obscurely winged, sparsely adpressed pubescent and glanduliferous towards the tip. Seeds 1 – 1.5 x 0.8 mm, rounded at both ends, shiny, brown.

Flowering: August – January; **Fruiting:** September – January

Habitat and Ecology: Rare. In road side vegetation and grassy slopes on dry hills and steep slopes up to 1200 m.

Distribution: Andhra Pradesh, Goa, Gujarat, Himachal Pradesh, Karnataka, Kerala, Maharashtra, Tamil Nadu, **Endemic.**

Specimen examined: Himachal Pradesh, Sirmour district, Kakog (Sangrah), 15.09.2012, *Krishan Lal 1741*

Note: Ali (1958) and de Kort & Thijssse (1984) have reduced this species as a synonym of *I. trifoliata*, while Gamble (1918), Santapau (1953) and Sanjappa (1995) have treated it as distinct species. *I. prostrata* is distinguished form *I. trifoliata* in various characters as presented in Table 1.

Table 1. Comparative account of *Indigofera prostrata* and *I. trifoliata*

Characters	<i>I. prostrata</i>	<i>I. trifoliata</i>
Habit	Diffuse prostrate	Stout erect
Branches	Slender, prostrate to ascending	Erect or with ascending stout branches
Petiole	5 - 8 mm long	8 – 12 mm long
Leaflet size	10 – 18 x 5 – 9.5 mm	10 – 30 x 8 – 12 mm
Petiolules	1 mm long	1 – 1.5 mm long, terminal one is 2 mm long
Flower size	3 mm long	5 – 6 mm long
Pod size	15 – 20 x 1 – 1.5 mm	10 – 20 x 2 – 4 mm
Pod sutures	Obscurely winged	Prominently winged



Figure 1. A & B. Flowers, fruits and habit of *Indigofera prostrata*.

Acknowledgements

Grant support from R & D, University of Delhi to AKP is thankfully acknowledged. Thanks are due to Shri Pawan Kumar, HPPWD, Sangrah, for providing transport during field trip.

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