

***Indigofera himachalensis* V. Chauhan & A.K. Pandey (Leguminosae): an addition to the flora of Uttarakhand (India)**

Devender S. Meena² and Vibha Chauhan¹

Department of Botany, University of Delhi, Delhi 110007, India

¹Botanic Garden of Indian Republic, Botanical Survey of India, Noida-201 303, U.P., India

²Corresponding author; e-mail: devendersinghmeena2003@gmail.com

[Received 30.10.2016; Revised 17.12.2007; Accepted 18.12.2016; Published 31.12.2016]

Abstract

Present paper records the addition of *Indigofera himachalensis* V. Chauhan & A.K. Pandey (Leguminosae) to the flora of Uttarakhand.

Key words: *Indigofera himachalensis*, Leguminosae, New record, Uttarakhand

INTRODUCTION

Indigofera Linnaeus is the third largest genus of Leguminosae with approximately 750 species growing around the world. The genus is distributed in tropical and subtropical belts with Africa, Madagascar, Sino-Himalaya and Australia as major centers of diversity (Schrire *et al.* 2009; Chauhan *et al.* 2013; Wilson & Rowe 2015; Clark *et al.* 2015). In India, the genus is represented by 60 species and 10 varieties (Schrire 1992; Sanjappa 1995; Chauhan *et al.* 2013). The genus is known for its blue dye, Indigo which is obtained from the leaves of *I. tinctoria* Linnaeus (Siva 2007). From Uttarakhand 12 species of *Indigofera* were reported so far (Gaur 1999; Osmaston 1927; Kanjilal 1928), *I. himachalensis* is the 13th species of *Indigofera* from Uttarakhand. During our recent field exploration to Uttarakhand we come across with this interesting species which is described here with brief description.

In 2013, Chauhan *et al.* described this species from the state of Himachal Pradesh in India. After that, present collection records the extension of its distribution to the Indian state of Uttarakhand.

***Indigofera himachalensis* V.Chauhan & A.K.Pandey, Phytotaxa 112 (2): 43 – 49. 2013.**

Shrub, 1 – 5 m high; branched, biramous hairs with equal arms. Leaves 2–8 cm long, pubescent; leaflets 7 – 35, opposite or subopposite, 4 – 13 x 2 – 8 mm, elliptic, ovate, obovate to oblong, mucronate, obtuse to cuneate at base; stipules 3 – 6 x 0.5 mm, linear, pubescent. Racemes 2 – 10 cm long, axillary; axis 1.5 – 9 cm long, angular, adpressed pubescent. Pedicels up to 1 mm long. Bracts 2–3 x 0.5 mm, narrowly triangular, pubescent. Flowers 5 – 8 mm long; calyx adpressed pubescent outside, narrowly triangular. corolla pink; standard 4 – 7 x 2.5 – 4 mm, elliptic to obovate, mucronate; wing petals 2 – 5 x 1.5 – 2 mm, distal wing bearded outside; keel petals 3 – 7 x 1.5 – 3.5 mm, adpressed pubescent outside; staminal sheath 4.5



PLATE - I. *Indigofera himachalensis* V.Chauhan & A.K.Pandey: **A.** A flowering twig; **B.** Fruits.

– 6.5 mm long; anthers c. 0.5 mm long; ovary 2 – 5 mm long, linear, glabrous, ovules 6 – 12; style 2.5 – 3 mm long, glabrous. Pods 20 – 53 x 2 – 4 mm, spreading, straight, cylindrical, sparsely adpressed hairy, sutures narrow, 5 – 8-seeded; seeds 2 x 1 mm, cylindrical, rounded at both ends, smooth, reddish-brown.

Flowering & Fruiting: July – September

Habitat: Road side, shady and moist places at an altitude of 2664 m above amsl.

Exsiccatae: Dhanaulti, Uttarakhand, 2664 m, 11.08.2016, D.S. Meena & A.K. Pandey 3285 (DUH).

Distribution: INDIA (Himachal Pradesh and Uttarakhand); Endemic

Acknowledgements

Authors are thankful to the University Grants Commission for providing financial assistance in the form of National Fellowship for Higher Education of ST Students to D.S. Meena and National Post-Doctoral Fellowship to V. Chauhan from SERB-DST. Authors are grateful to Prof. Arun K. Pandey and Dr. Paramjit Singh for critically going through the manuscript and encouragements.

LITERATURE CITED

- Chauhan, V.; Pandey, A.K. & Schaefer, H. 2013. *Indigofera himachalensis* (Fabaceae: Indigoferaeae), a new species from Himachal Pradesh, India. *Phytotaxa* 112 (2): 43 – 49.
- Clark, V.R.; Schrire, B.D. & Barker, N.P. 2015. Two new species of *Indigofera* L. (Leguminosae) from the Sneeuwberg Centre of Floristic Endemism, Great Escarpment (Eastern and Western Cape, South Africa). *PhytoKeys*. 48: 29 – 41.
- Gaur, R.D. 1999. *Flora of the District Garhwal North West Himalaya*, TransMedia Srinagar (Garhwal), U.P. India.
- Kanjilal, U. 1928. Forest Flora of the Chakrata, Dehradun and Saharanpur Forest Divisions, United Provinces (Revised edition by B.L. Gupta). Manager of Publications, Delhi.
- Osmaston, A.E. 1927. *A Forest Flora for Kumaon*. Superintendent, Government Press, United Provinces, 1927.
- Sanjappa, M. 1995. Revision of the genus *Indigofera* in India. *Fascicles of Flora of India* 21: 1 – 160.
- Siva 2007. Status of natural dyes and dye-yielding plants in India. *Curr. Sci.* 92 (7): 916 – 925.
- Schrire, B.D. 1992. New combinations and resurrected names in *Microcharis* and *Indigastrum* (Fabaceae-Papilionoideae). *Bothalia* 22: 165 – 170.
- Schrire, B.D.; Lavin, M.; Barker, N.P. & Forest, F. 2009 Phylogeny of the tribe Indigoferaeae (Leguminosae–Papilionoideae): Geographically structured more in succulent-rich and temperate settings than in grass-rich environments. *Amer. J. Bot.* 96: 816 – 852.
- Wilson, P.G. & Rowe, R. 2015. Additional taxa of *Indigofera* (Fabaceae: Indigoferaeae) from the Eremaean Botanical Province, Western Australia. *Nuytsia*. 25: 251 – 284.