



Indigofera himachalensis (Fabaceae: Indigofereae), a new species from Himachal Pradesh, India

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Abstract

Indigofera himachalensis, a new species of Fabaceae is described from Himachal Pradesh, India. It differs from *I. heterantha* in having longer and sparsely adpressed hairy pods and larger seeds that are greater in number per pod with a reticulo-rugulate pattern of the spermoderm.

Key words: Fabales, Himalaya, ITS, Leguminosae, new taxon

Introduction

The genus *Indigofera* Linnaeus (1753: 751) belongs to the tribe Indigofereae (Fabaceae) and is the third largest genus in the family containing 700–750 species (Schrire 2005, Schrire *et al.* 2009). The species are distributed throughout the tropical and (sub)tropical regions of the world, but the major centers of diversity are in Africa and Madagascar (550 spp.), the Sino-Himalayan region (105 spp.), Australia (50 spp.), and the remaining 45 species occur in the New World (Schrire *et al.* 2009).

In India, the genus *Indigofera* is represented by approximately 60 species and 10 varieties, of which 15 species and seven varieties are endemic (Sanjappa 1995).

During our systematic studies of the genus *Indigofera*, field trips were made to Himachal Pradesh, and several specimens were collected. A close inspection of these specimens revealed some morphological similarities with *Indigofera heterantha* Wall. ex Brandis in Brandis & Stewart (1874: 135) and *I. cedrorum* Dunn (1920: 337), but quite a number of differences were also observed. The objective of the present study was thus to undertake morphological and molecular analyses to test whether these specimens represent a taxon new to science.

Material and Methods

Morphology:—We collected plant specimens from Sail, District Sirmour, Himachal Pradesh, India. We compared the specimens with *Indigofera heterantha* and *I. cedrorum* (both species are morphologically similar to the new material) and noted the differences between the three taxa (Table 1).

Taxon sampling:—We obtained two ITS sequences of *I. himachalensis* and added them to a dataset consisting of 40 species of *Indigofera* retrieved from GenBank, mostly produced by Schrire *et al.* (2009). *Cyamopsis tetragonoloba* (Linnaeus 1767: 104) Taubert (1894: 259) and *Phylloxylon xylophyloides* (Baker 1884: 176) Du Puy, Labat & Schrire (1995: 489) were included as outgroups based on the results of Schrire *et al.* (2009). The final data matrix comprised a total of 42 accessions representing 41 species of *Indigofera* covering the 4 major clades as described by Schrire *et al.* (2009) plus the two outgroups. The sequence alignment is available from the corresponding author on request.