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TWO NEW SPECIES OF INDIGOFERA L. (FABACEAE) FROM WESTERN HIMALAYAS

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Whilst revising the genus *Indigofera* L. of India the author came across a number of specimens from Western Himalayas identified as *Indigofera gerardiana* Wall. ex Baker (= *I. heterantha* Wall. ex Brandis). On critical examination, these specimens were found to represent two distinct species that are allied to *Indigofera heterantha* (those from India, Himachal Pradesh and Uttar Pradesh) and *I. dosua* Buch.-Ham. ex D. Don (those from Pakistan: Chitral). They are described and illustrated in this paper.

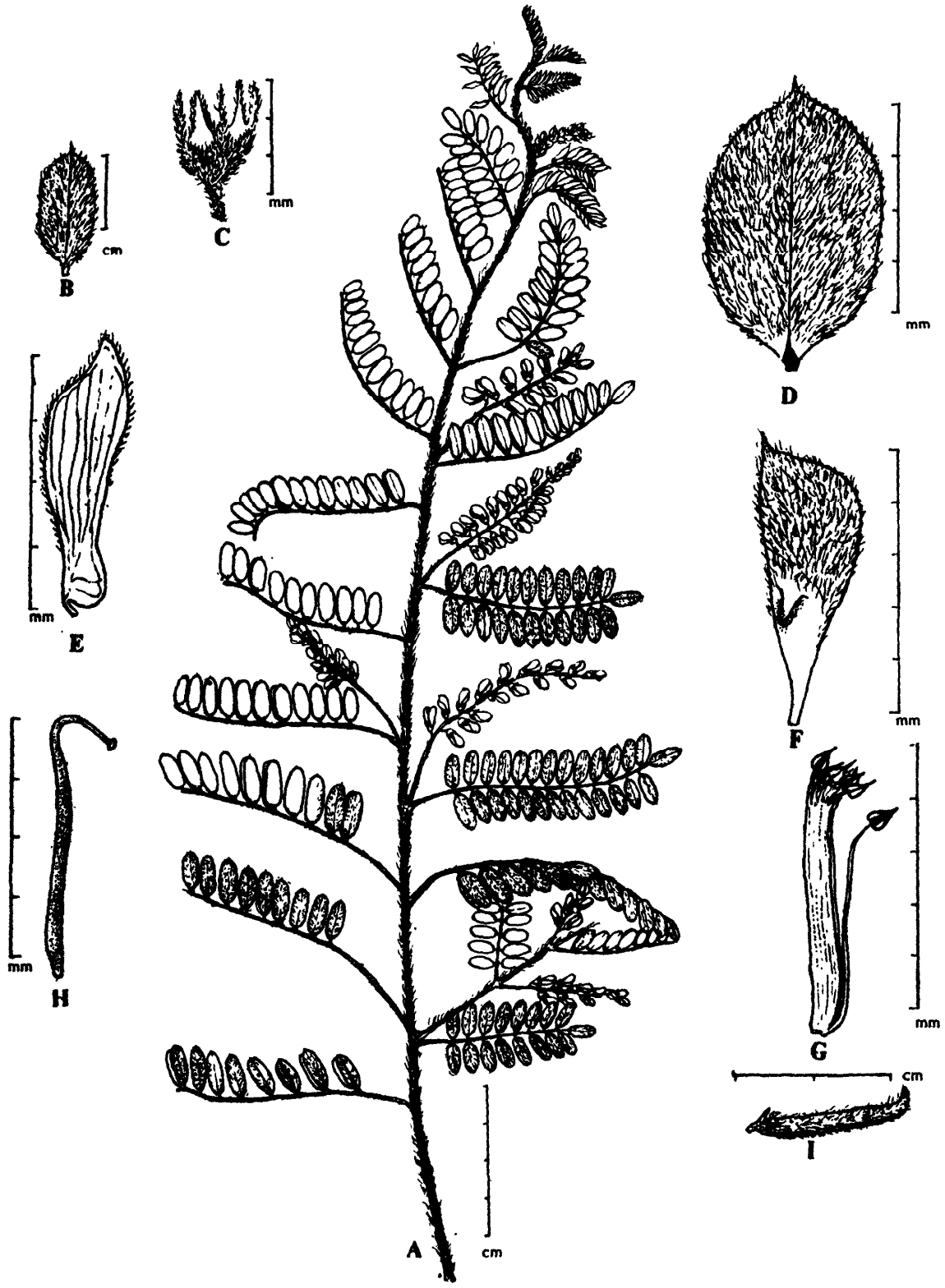
Indigofera gangetica Sanjappa, sp. nov. (Fig. 1)

I. heteranthae Wall. ex Brandis affinis, sed differt tomento pilis densis patentibus, stipulis longis setaceis, racemis manifeste pedunculatis, leguminibus 5-6 seminalibus, subcylindricis, tomentosis.

Typus : *Wallich* 5480C ex parte (CAL) India, Kumaon (Holo CAL, Iso CAL, K).

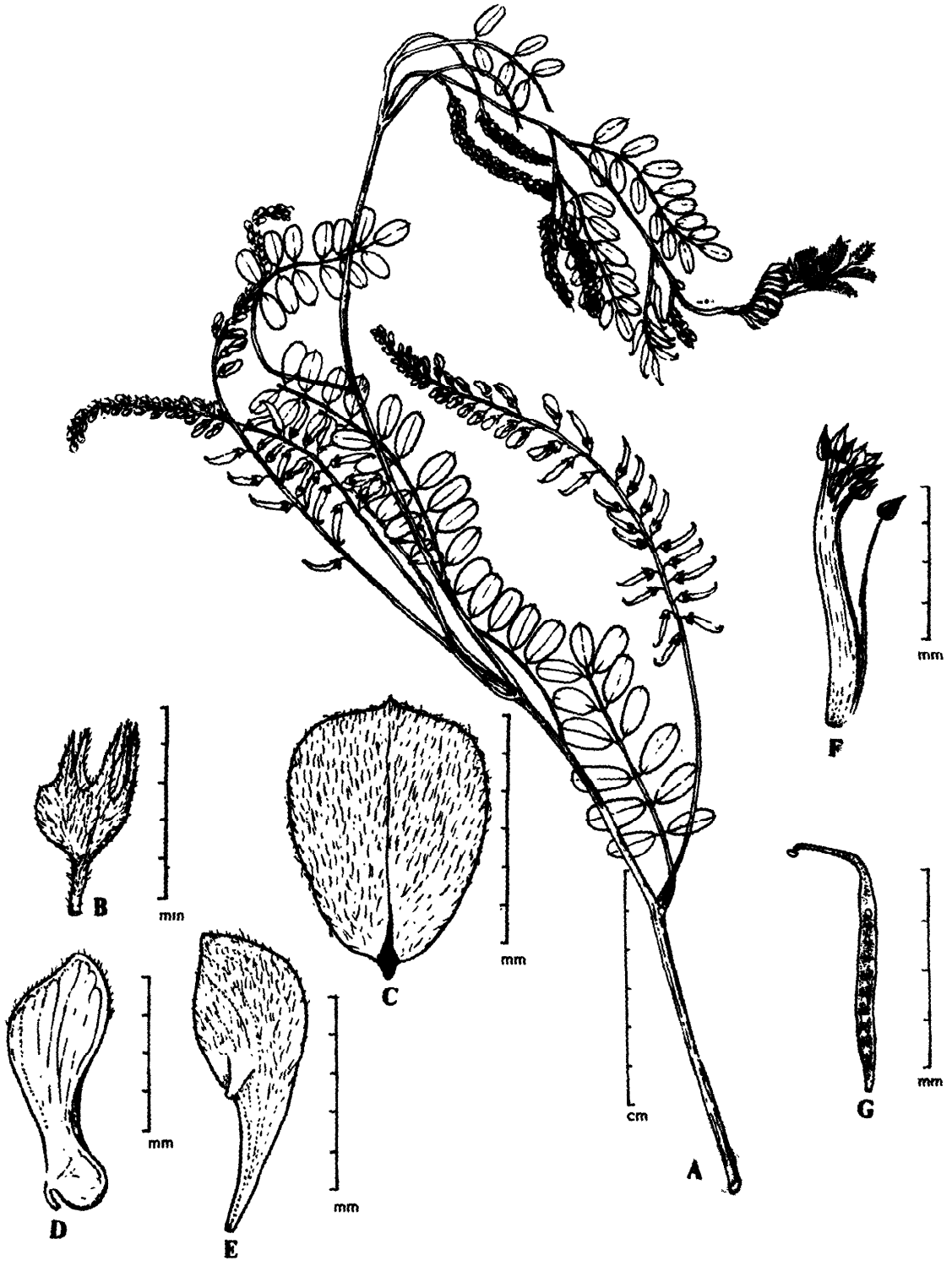
Shrub, 2-2.5 m high, branches spreading, striate, densely spreading white tomentose (biramous hairs with very unequal arms) when young, glabrous with age. Leaves 8 cm long, imparipinnate, alternate, stipules 5-6 mm long, linear or curved, setaceous, spreading pubescent without, caducous; rachis 5-7 cm long, canaliculate above, pubescent; stipellae 1 mm long, linear, pubescent, subpersistent; petiolules 1 mm long, pubescent; leaflets 21-25, opposite, 10-12 × 4-5 mm, elliptic or oblong, rounded at both ends, mucronate, spreading pubescent on both surfaces, green above, pale below. Racemes 4-5 cm long including 8-12 mm long peduncle; rachis striate, spreading tomentose, compactly many-flowered. Flowers 5-6 mm long, pink; pedicels 1 mm long, slender, pubescent; bracts 2 mm long, linear, setaceous, spreading pubescent without, caducous. Calyx 1-1.8 mm long, campanulate, spreading tomentose; teeth 5, 1.2 mm long, linear, setaceous, dorsal teeth shorter than ventral ones. Standard 5-5.5 × 3-3.5 mm, elliptic-oblong, obscurely clawed at base, acute at apex, densely spreading grey pubescent, wings 4.5-5 mm long, glabrous, clawed at base, upper auricle distinct; keels 5-5.5 mm long, lateral pocket present, densely spreading tomentose. Stamens 5 mm long, diadelphous (9+1), alternately long and short, anthers apiculate. Ovary 3.5 mm long, linear, glabrous; ovules 5-8; style 2 mm long, curved; stigma capitate. Pods spreading 1.8-2.4 × 0.3 mm, linear, subcylindric, densely spreading grey tomentose; sutures thin, endocarp smooth; seeds 6-8.

Distribution : INDIA (Himachal Pradesh, Uttar Pradesh).



Indigofera gangetica Sanjappa

Fig A-I : A. Flowering twig. B. Leaflet. C. Calyx. D. Standard petal. E. Wing petal. F. Keel petal. G. Stamens. H. Carpel. I. Pod.



Indigofera chitralensis Sanjappa

Fig . A-G : A. Flowering twig. B. Calyx. C. Standard petal. D. Wing petal. E. Keel petal. F. Stamens. G. Carpel.

Habit : Open areas, altitude 1400-2500 m.

Specimens examined other than type INDIA : **Himachal Pradesh** : Rampur, alt. 1400 m, June 14, 1962, *N. C. Nair* 22666 (CAL, BSD); Jeori, alt. 1550 m, May 25, 1962, *N. C. Nair* 21824 (CAL, BSD); Kinnaur Dist., Saraham, alt. 2400 m, May 26, 1962, *N. C. Nair* 21929 (CAL, BSD); Shong-Tong forest rest house, alt. *ca*. 1957 m, June 11, 1972, *K. P. Janardhanan* 48384; Simla Hills, Fagu-Sainj Road, Aug. 7, 1940, *M. B. Raizada* 11502 (DD); Kulu-Manali, alt. 1500 m, May 25, 1978, *B. S. Aswal* 9218 (CDRI, Lucknow) Suket State, between Suket & Gere, alt. ± 5000-7000', May 17, 1906, *I. H. Burkill* 26927 (CAL). **Uttar Pradesh** : Tehri-Garhwal, Magra, alt. 1600 m, July 22, 1964, *U.C. Bhattacharyya* 33629 (CAL, BSD); Garhwal, *G. King s.n.* (CAL); Mussourie range, 1869, *G. King s.n.* (CAL); Tehri-Garhwal, Maindrot, alt. 3500', May 1891, *J. S. Gamble* 22754 (CAL); Kumaon, alt. 3000-6000', *T. Thomson s.n.* (CAL); Hasting Pilbu, alt. 7000', June 1883, *Dr. Schlich s.n.* (CAL); Unknown locality, June 1831, *Vicary* 207 (CAL); *Royle s.n.* (CAL Acc. Nos. 11067, 110790, 110791 and specimen numbered 2 of Acc. No. 110769).

Indigofera chitralensis Sanjappa, sp. nov. (Fig. 2)

I. dosuae Buch.-Ham. ex D. Don affinis, sed differt tomento pilis adpressis brevibus, foliis petiolatis, foliolis 13-19, oppositis, racemis quam foliis 2-3-plolongioribus, bracteisque brevioribus.

Typus : S. A. Harriss 16069 Chitral, Mirg. 20.6.1985, Western Himalayas (Holo CAL, Iso DD).

Shrub; branches erect, angular, adpressed pubescent when young; terete, glabrous with age. Leaves 6-9 cm long, imparipinnate, alternate; stipules 5-6 mm long, linear, acuminate, adpressed pubescent, caducous; rachis 5-8 cm long; canaliculate, adpressed pubescent, infrajugal rachis 3-6 mm long; stipellae 1-1.5 mm long, subulate, pubescent; petiolules *ca* 2 mm long, pubescent; leaflets 13-19, opposite 8-14 × 4-7 mm, elliptic or obovate, rounded at base, rounded to emarginate at apex, mucronate, adpressed pubescent on both surfaces. Racemes 18-23 cm long including 2.5-3.5 cm long peduncle; rachis angular, adpressed pubescent, many-flowered. Flowers 7 mm long, pink; pedicels 2 mm long, pubescent; bracts 2.5-4 mm long, linear, acuminate, adpressed pubescent, caducous. Calyx 3.5 mm long, campanulate, adpressed pubescent without; teeth 5, 2-2.5 mm long, 2 dorsal lobes shorter than 3 ventral ones. Standard 7× 4.5 mm, obovate, obscurely clawed at base, rounded and mucronulate at apex, puberulous without; wings 6 mm long, clawed at base, upper auricle distinct, ciliate along upper margin; keels 6.5 mm long, lateral pocket present, adpressed pubescent without. Stamens 6 mm long, diadelphous (9+1), alternately long and short. Ovary 4 mm long, linear, puberulous; ovules 5-7; style 2 mm long, curved; stigma capitate. Young pods spreading, densely adpressed pubescent.

Distribution : Kashmir : Chitral.

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