

(IV)

RECORDS OF TWO NEW NTFP PLANTS OF FAMILY BORAGINACEAE FROM JAMMU AND KASHMIR

Introduction

During the course of scrutinizing the specimens of Boraginaceae housed in Herbarium, Botanical Survey of India, Northern Regional Centre, Dehradun (BSD) for the study and documentation of the Flora of Jammu and Kashmir, one of the authors (KA) observed that the specimens of these two distinct species were erroneously identified. After perusal of the relevant literature (Hooker, 1883; Johnston, 1952; Kazmi, 1970, 1971; Stewart, 1972; Nasir, 1989; Naithani, 1990) and critical studies of both the specimens at Central National Herbarium, Botanical Survey of India, Kolkata (CAL), Herbarium of Forest Research Institute, Dehradun Herbarium (DD) and Botanical Survey of India, Dehradun (BSD), revealed and confirmed the identity of both the species as *Lasiocaryum diffusum* (Brandis) I.M. Johnst., and *Trichodesma zeylanicum* (Burm.f.) R. Br., respectively. These species have not been reported earlier from the state of Jammu and Kashmir. Present paper records the first report of the occurrence of these two taxa from Jammu and Kashmir, which shows their extended distribution, earlier known to occur from Uttarakhand to Sikkim and from Punjab plains, Uttar Pradesh and Deccan Peninsula, respectively. The specimens studied are housed in the Herbarium of Botanical Survey of India, Dehradun (BSD).

Lasiocaryum diffusum (Brandis) I.M. Johnst. in J. Arn. Arb. 21: 51. 1940; Hara in Hara *et al.*, En. Fl. Pl. Nepal 3:101.1982; Uniyal *et al.*, Fl. Pl. Uttarakhand (A Checklist) 180.2007. *Microcaryum diffusum* Brandis in Fedd. Rept. 22: 101.1925.

Annual, erect or diffused herb, 3.5 to 8 cm high. *Stems* slender, numerous from base, branched, densely covered with thin, spreading trichomes. *Leaves* alternate, shortly petiolate, obovate-spathulate, 3.5-4.0 x 1.5-2.5 mm, subrounded or narrowed at base, obtuse to rounded at apex, entire at margins, upper surface densely covered with small, thin spreading trichomes emerging from white, tuberculate bases, lower surface loosely covered with small spreading trichomes, rugose, dark green when fresh, brownish when dry; midrib depressed. *Inflorescence* in dense terminal, hairy racemes; bracts leafy. *Flowers* tubular-campanulate, c. 1.91 x 0.94 mm, blue. *Pedicels* much elongated, erect, slender, pubescent, 1-1.2 mm long. *Calyx* 5-lobed; lobes lanceolate or ovate-oblong, 1.0-1.2 mm long, acute at apex, densely hairy. *Corolla* blue, tubular; lobes

suborbicular, 1.2-1.4 mm long. *Stamens* 5, inserted. *Anthers* oblong-ovate. *Ovary* 4-locular, ovoid, keeled. *Nutlets* 4, erect, hairy, brown.

Flowering and fruiting: August–September

Distribution: India: Jammu and Kashmir; Uttarakhand (Garhwal) to Sikkim.

Ecology: It grows on moist, alluvial soil in alpine forest areas along hill slopes at an altitude of c. 3900 m.

Specimen examined: Jammu and Kashmir; Ladakh, Khardungla, 3900 m, 06.08.1986, B.M.Wadhwa 82458 (BSD).

Uses: Young plants are eaten by cattle's and a good source of fodder. Mature plants are used for thatching purpose in villages.

Trichodesma zeylanicum (Burm.f.) R. Br., Prodr. Fl. Nov. Holl. 496.1810; C.B. Clarke in Hook.f., Fl. Brit. India 4: 154.1883. *Borago zeylanica* Burm.f., Fl. Ind. 41.1768. *Leiocarya kotschyana* Hochst. in Flora 27:30.1844. "Trikantaka"

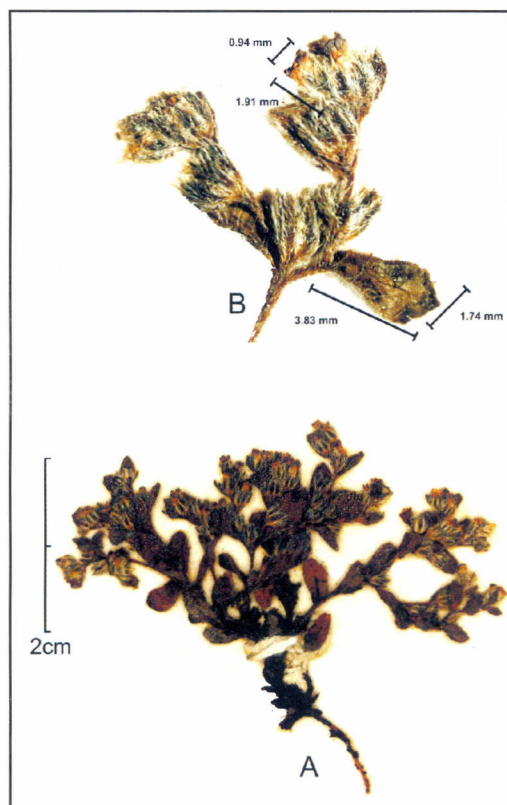
Annual, erect or diffused herb, c. 50 cm high with well developed woody tap root. *Stems* terete, branched, densely covered with thin, crisped, white trichomes arising from tuberculate bases. *Leaves* opposite, sessile, oblong-lanceolate or falcate-lanceolate, 2.5-7.5 x 0.4-1.8 cm, subamplexicaul or narrowed at base, acute to subacute at apex, entire at margins, upper surface covered with small, thin spreading trichomes emerging from white, swollen tuberculate bases except nerves, lower surface subcoriaceous, covered with small spreading trichomes on raised nerves, yellowish-brown on drying; midrib and lateral nerves depressed, prominent. *Inflorescence* in dense terminal racemes; bracts leafy. *Flowers* campanulate, 1.4 x 1.2 cm, white. *Pedicels* slender, pubescent, 2.3-2.7 cm long. *Calyx* 5 lobed; lobes ovate-lanceolate, 1-1.3 cm long, imbricate, acute-cuspidate at apex, dilated, villous. *Corolla* white, bluish tinged, subrotate, campanulate; lobes ovate-orbicular, 0.7-0.9 cm long. *Stamens* 5, exerted; anthers oblong-lanceolate. *Ovary* 4-locular, ovoid-conic. *Nutlets* ovoid, hairy, brown.

Flowering and fruiting: August–September

Distribution: India: Jammu and Kashmir; Punjab, Uttar Pradesh and Deccan Peninsula.

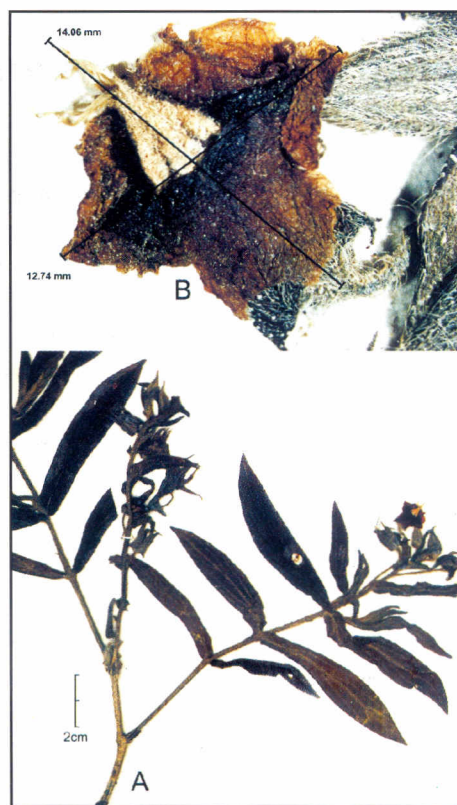
Ecology: It grows in open, dry places in tropical to

Plate 1



Lasiocaryum diffusum (Brandis) I.M. Johnst.
A. Habit , B. Flowering twig

Plate 2



Trichodesma zeylanicum (Burm.f.) R. Br.
A. Habit , B. Flower

subtropical forest areas along hill slopes at an altitude of 600-1200 m.

Specimens examined: Jammu and Kashmir, Kathua district, Mansar, 600 m, 06.08.1986),

P.K.Hajra 82458 (BSD).

Uses: The plant is reported highly medicinal and used in treating leucoderma and piles. Paste of its root is applied to heal wounds and to remove pain.

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