

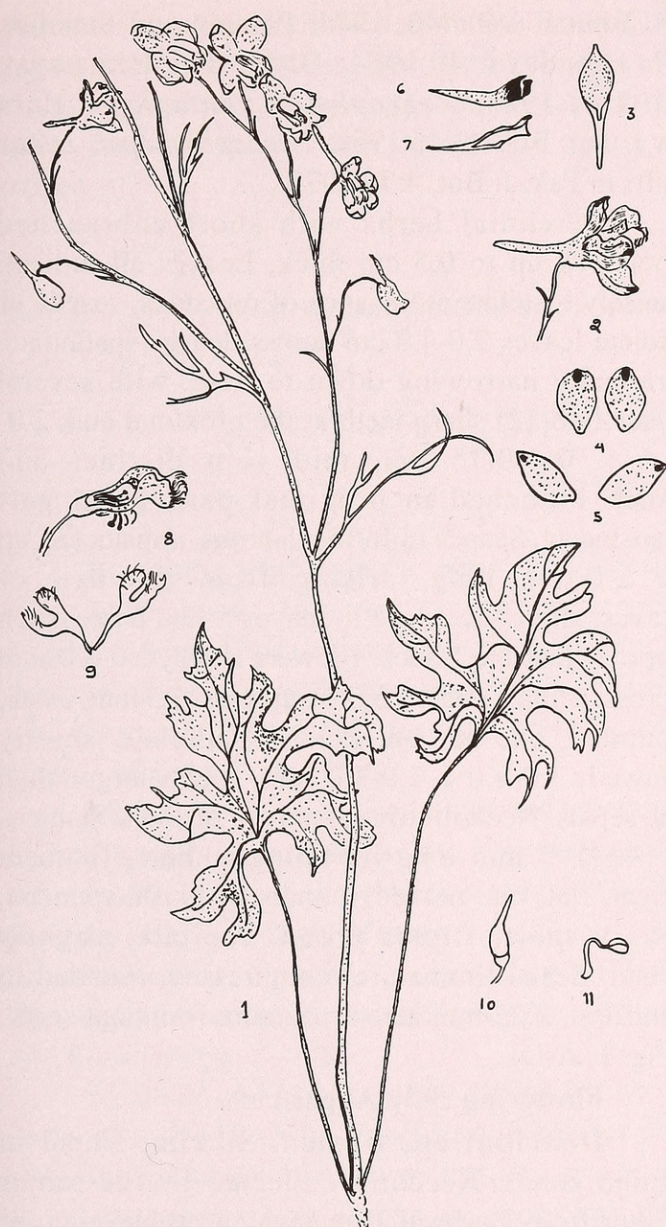


Fig. 1. *Delphinium altissimum* Wall.

1. Whole plant; 2. Single flower; 3. Dorsal sepal;
4-5. Lateral sepal; 6. Posterior petal;
7. Sectional view of posterior petal;
8. View of petal and stamen; 9. View of anterior petal;
10. Pistil and ovary; 11. Stamen.

with a small ochraceous patch at the tip; upper two sepals 1.35-1.4 x 0.7-0.18 cm, lower two sepals 1.48-1.5 x 0.55-0.6 cm. Petals 4, in equal pairs; anterior pair hairy; obtusely 2-lobed, 1.1-1.2 x 0.35-0.4 cm with narrow stalk behind, posterior pair linear 2 toothed in front, whitish blue with dark blue patch at the tip c 2.5 cm long. Stamens many, c 6 mm long, curved with dark blue bithecal anthers. Staminodes many, enclosed. Pistil 4 mm long, green, glabrous; stigma simple; ovary single celled.

Flowering time: September

Altitudinal Zones: 1220-1525 m.

Distributional status: Rare.

Ecology: It grows on rock crevices along with, *Didymocarpus* sp., *Setaria* sp., *Arundinella* sp. and *Begonia* sp.

ACKNOWLEDGEMENTS

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31. *PYCNOPLINTHOPSIS BHUTANICA* (HARA) JAFRI (BRASSICACEAE): A NEW RECORD FROM WEST HIMALAYA

(With a text-figure)

Pycnoplinthopsis bhutanica (Hara) Jafri (Brassicaceae) has been considered endemic to Eastern and Central Himalayas, confined to the alpine

zones of Bhutan, Sikkim and Nepal (Hara 1968, 1971, 1979; Jafri 1972, Grierson and Long 1984, Polunin and Stainton 1984, Ohba 1988). How-

ever, Sharma and Balakrishnan (1993) have not described it from India. Polunin and Stainton (1984) have also quoted it as "rare but remarkable plant locally abundant en route to Anapurna South base camp, Nepal." The recent discovery of this species from Garhwal, West Himalaya in Indian territory is of considerable phytogeographical interest. A short description of the species is included in this communication along with illustration.

Voucher specimens after proper documentation are deposited and maintained in Herbarium, Department of Botany, HNB Garhwal University,

Fl. Bhutan 1(2):440. 1984; Polunin and Stainton, Fl. Himalaya. 40.1984; Ohba, The Himalayan Pl. 1:37.1988. *Pegeophyton bhutanicum* Hara in J. Jap. Bot. 43:45.1968; *Pycnoplenthopsis minor* Jafri in Pak. J. Bot. 4:76.1972.

Perennial herbs with short unbranched rootstock up to 0.5 cm thick. Leaves all radical, densely rosulate at the apex of rootstock, rosette of radical leaves 2.0-4.0 cm across, leaves spathulate, gradually narrowing down to base, with several (usually 8-12) sharp teeth at the proximal end, 2.0-2.5 x 0.4-0.75 cm, mid vein distinct and much branched in proximal part, basal part translucent. Scapes filiform, glabrous, translucent, up to 2.0 cm long, arising from the axil of leaves, slightly connate to leaves at the base, much shorter than the leaves. Flowers small, 2.0-3.0 mm across, white. Sepals 2.5-3.0 mm x 2.0-2.5 mm, ovate, rounded, one nerved. Petals spathulate, shortly clawed, 3.0-4.0 x 2.0-3.0 mm, much larger than the sepals. Nectariferous gland not distinct. Stamens 6 (4 ± 2), 2 mm long including anthers, filament linear, flat, one nerved, anthers blackish, rounded. Ovary short, stigma broad, capitate, slightly lobed. Seeds (immature) compressed, rounded to reniform, 0.25 mm across, (mature fruits not seen). (Fig. 1, A-D).

Flowering: July-August.

Distribution: Bhutan, Sikkim, Nepal in alpine zones. Recently collected by the senior author from Garhwal Himalaya, at an elevation of 4800 m.

Specimens Examined: INDIA, U.P., Chamoli dist., Shilla Samudra, 4,850 m a.s.l., July, 1991, D.S. Rawat 19,790 (GUH); INDIA, U.P., Chamoli dist., Roopkund area, August, 1993, D.S. Rawat 21,007 (GUH). A small population at both the sites were observed.

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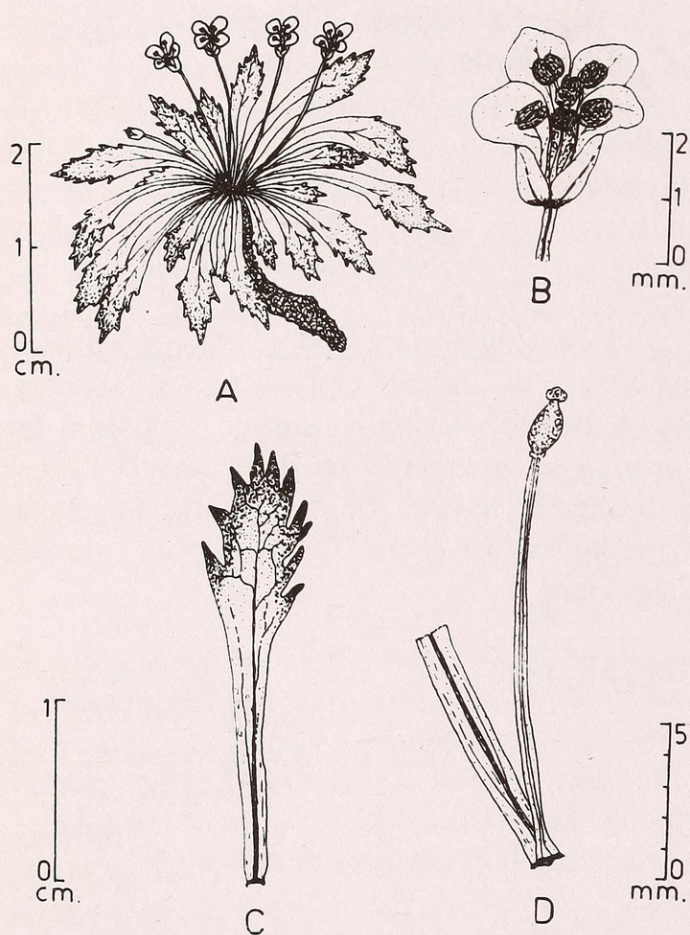


Fig. 1. *Pycnoplenthopsis bhutanica* (Hara) Jafri
A. Flowering plant; B. Flower; C. Leaf; D. Scape and Ovary.

Srinagar-Garhwal (GUH).

Pycnoplenthopsis bhutanica (Hara) Jafri (Brassicaceae) in Pak. J. Bot. 4:74.1972; Hara, En.Fl.Pl. Nepal 2:44. 1979; Grierson and Long,

Pakistan and Dr. H. Ohashi, Tohoku University, Japan for providing literature on the species. Financial assistance to the senior author (DSR) from UGC New Delhi is also thankfully acknowledged.

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32. *KOSTELETZKYA VITIFOLIUS* (LINN.) COMB. NOV.

(With a text-figure)

Borssum (1966) places *Hibiscus vitifolius* Linn. under genus *Hibiscus* section *Pterocarpus* Garcke (1849). He mentions *H. vitifolius* Linn. as the type of the section *Pterocarpus* Garcke (1849).

Borssum (1966), has not mentioned the type species of *Kosteletzkya* Presl.

Mattei (1917), in fact had suggested separating Garcke's section *Pterocarpus* into a separate genus. After publication of *Kosteletzkya* Presl. (1835), Kearney (1955), thought perhaps *H. vitifolius* L. can be considered as belonging to a separate genus (sect. *Pterocarpus* Garcke), intermediate between *Hibiscus* and *Kosteletzkya*.

Bentham and Hooker (1862), listed 26 species under *Kosteletzkya*. After considering facts it is clear that Hochreutiner (1955) was correct considering sect. *Eucosteletzkya* Hochr. as identical with herbaceous species of sect. *Pterocarpus* and can be separated on the basis of alate or angular capsules.

Genus *Kosteletzkya* Presl. (1835) was originally described and accepted by Hochr. (1955) with respect to the alate or angular capsules.

However, Borssum (1966) emphasised the character of single ovule per carpel in 5-carpellate ovary. This differentiation on the basis of 1-seeded carpels in *Kosteletzkya* in comparison to 2-5 seeds

per carpel in *Hibiscus* is definitely an artificial generic segregation. If *Kosteletzkya* is segregated on the basis of single seed, then genus *Hibiscus* L. will have to be divided at least into 3 more genera on the basis of the number of seeds per carpel. Seeds in various species of *Wissandia* Medik. vary from 1-3 per carpel. Similarly *Abutilon* Gaertn. also contains species with 1 to many seeds. With the segregation character adopted by Borssum, these genera will require to be divided into more genera. Hochreutiner (1955), included species with alate and angular seeds under genus *Hibiscus* sect. *Eucosteletzkya* Hochr. including species resembling *Hibiscus* sect. *Pterocarpus* Hochr.

Therefore the genus *Kosteletzkya* should be restricted to the species with angular capsules and not to the species with single seeded capsules as suggested by Borssum.

Therefore, the following new combination has been proposed:

Kosteletzkya vitifolius (Linn.) Almeida & Patil.

March 9, 1995

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Rawat, D S, Dangwal, L R, and Gaur, R D. 1996. "Pycnoplithopsis bhutanica (Hara) Jafri (Brassicaceae): A new record from West Himalaya." *The journal of the Bombay Natural History Society* 93, 109–111.

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