

SOME RARE AND LITTLE KNOWN PLANTS OF FABACEAE FROM GARHWAL HIMALAYA

R.D. GAUR, L.R. DANGWAL AND D.S. RAWAT

Plant Systematics Laboratory, Deptt. of Botany, HNB Garhwal University, Srinagar-246 174.

(Accepted September 1992)

Key Words : *Argyrobium roseum*, *Astragalus psilocentros* var. *pilosus*, *Desmodium benthamii*, *D. renifolium*, Rare Fabaceae from Garhwal Himalaya.

Garhwal Himalaya is situated in the central part of North-West Himalaya, and constitutes one of the most attractive parts of the Himalaya. It has attracted attention of several botanists to explore the floristic wealth of the region from time to time (Hooker, 1876; Duthie, 1903; Osmaston, 1927; Babu, 1977; Naithani, 1984; Polunin and Stainton, 1985; Gaur, 1987 etc.). During the recent past several of the plant species became rare or endangered due to excessive exploitation and deterioration of original habitats. In the recent explorations the authors made some interesting, rare and little known plant collection of the Fabaceae (Papilionaceae) from Garhwal Himalaya.

A brief description with illustrations of these rare taxa is enumerated, together with their habitat, occurrence, approximate elevation, and collector's herbarium number. Plant specimens are matched with the authentic specimens of Botanical Survey, Northern Circle Dehradun (BSD) and Forest Research Institute Dehradun (DD) and deposited to the Herbarium, Botany Department, HNB Garhwal University (GUH) Srinagar Garhwal.

Argyrobium roseum (Camb.) Jaub. & Spach, Ann. Sci. Nat. ser. 2, 19 : 51. 1843; Baker in Hook. f., FBI. 2 : 64. 1876.

A prostrate herb upto 12 cm long. Stem terete much-branched. Stipules free lateral. Leaves petiole, trifoliate, glabrous above and pilose below. Inflorescence 1-4 flowered, axillary or terminal. Calyx bilabiate, pilose, vexillum red, wing feathery. Stamens monadelphous. Pod 0.8-3.5cm long. 3-15 seeded, pilose. (Figs. 1A-C).

Flowering and fruiting - July - October.

Specimen examined - GUH 15,115.

Distribution - Matiyali - Pauri Garhwal, 750 m.a.s.l.; this species is collected from the slope of Pinus forest with shady localities. Only a few plant specimens were observed in the locality.

Hooker (1876) reported occurrence of the species from Kumaon without any definite locality, and Duthie (1906) from Kalapathar (Kumaon). It is also reported from plains of North-West India (Sanjappa, 1992). This is a rare collection from Kumaon and new report for Garhwal Himalaya.

Astragalus psilocentros Fisch., Bull. Soc. Nat. Moscou 26 (2) : 405. 1853; var. *pilosus* Parker, (Kew Bull. 270. 1921, *nom. nud.*) For. Fl. Punj. 140. 1924. *A. polycanthus* auct. non Royle ex Benth. 1935; Baker in Hook. f., FBI. 2 : 134. 1876, *pro parte*.

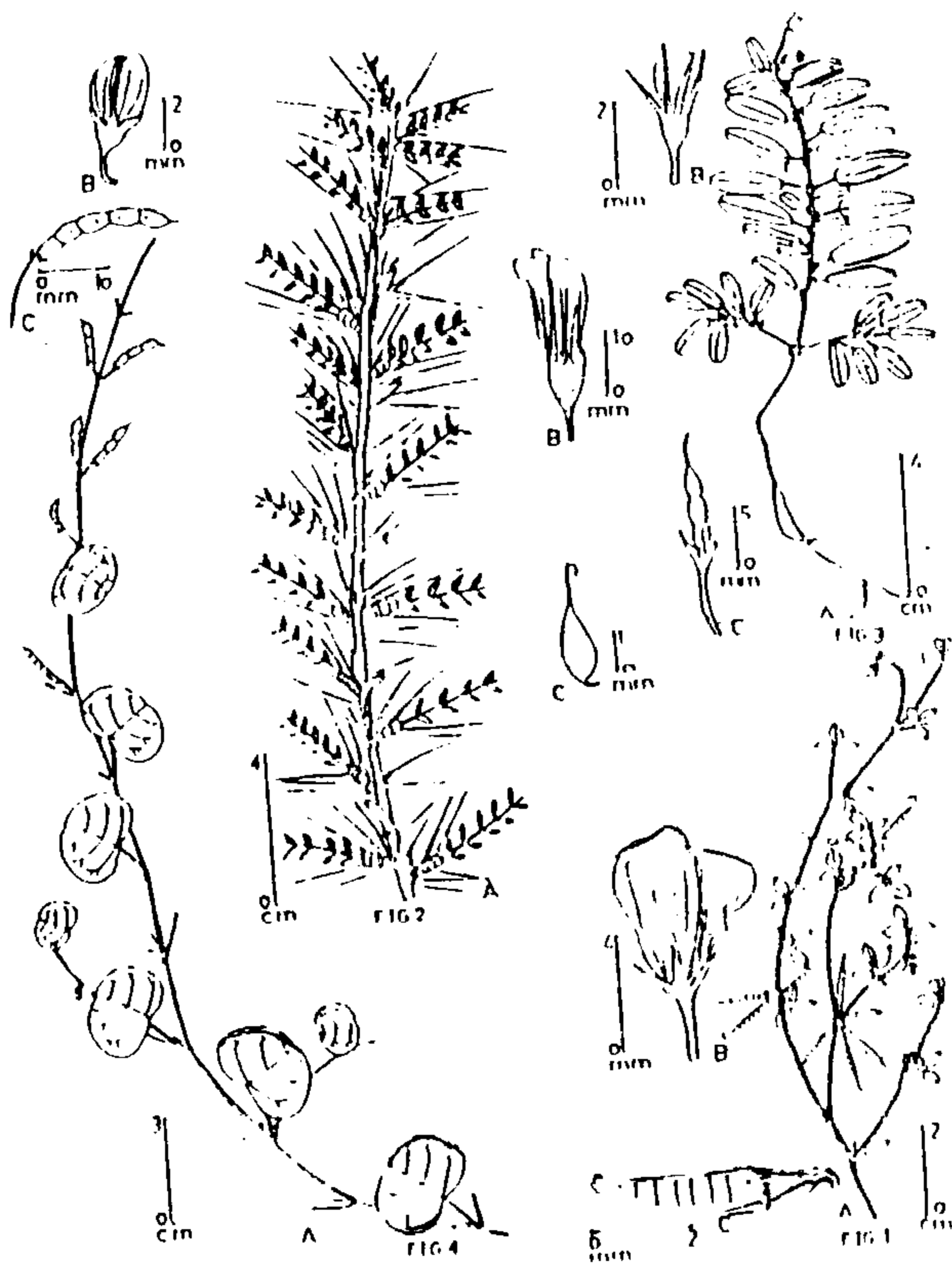
A much-branched spinescent shrub. Leaves stipulate, pinnately compound, clothed with long ciliate hairs, and show an angular scar on the twigs when withered. Leaflets 4-5 pairs. Rachis pilose, spinescent. Flowers yellow, solitary or paired in the axils. Calyxtubular, pilose, mouth oblique. Corolla twice as the calyx. Stamens diadelphous (9+1), anthers uniform. Gynoecium incurved, ovary sessile, hairy. Pod 6.0-10 mm long. (Figs. 2A-C).

Flowering and fruiting - March-April.

Specimen examined - GUH 14,233.

Distribution - Tapovan-Chamoli Garhwal, 1800 m.a.s.l.; this species found along the road side of Tapovan on dry localities, and specimens are scattered in scanty population.

Hooker (1876) reported the species from Kumaon and Garhwal without any definite locality, however, Duthie (1906) collected it from Valley of Dhauri



Figs. 1A-C. *Argyrolobium roseum*: A-Flowering and fruiting branch, B-Flower, C-Pod. Figs 2A-C. *Astragalus psilocentros* var. *pilosus*: A- Flowering and fruiting branch, B-Flower, C-Pod. Figs. 4A-C. *Desmodium renifolium*: A-Flowering and fruiting branch, B-Flower, C - Pod.

River, and Osmaston (1927) from Tapovan in North Garhwal. It is also reported from Himachal Pradesh (Sanjappa, 1992). This is a rare collection after a long interval (see Naithani, 1984).

Desmodium benthamii Balakr., J. Bomb. Nat. Hist. Soc. 63 : 328. 1966. *D. brachystachyum* Grah. ex Benth. in Miq, Pl. Jungh. 223. 1852 non Schlecht 1838; Baker in Hook. f., FBI. 2 : 171. 1876.

A small herb with slender stem, 10-30cm, glabrous (except near the apex). Stipules lanceolate, clothed with white hairs. Leaves unifoliate, petiolate, leaflets roundish or broadly oblong, cordate at the base. Flowers in short or dense axillary and terminal subsessile racemes, purple, pedicel reflexed at the tip. Calyx densely clothed with white hairs, teeth longer than tube. Corolla twice as the calyx. Stamens diadelphous (9+1), anthers uniform. Gynoecium base

hairy. Pods sessile, 1-3 jointed, hairy. (Figs. 3A-C).

Flowering and fruiting - September-October.

Specimen examined - GUH 14,638.

Distribution - Dadamandi - Pauri Garhwal, 800m.a.s.l.; common along road sides and associated with grasses in shady localities and fairly common in the locality.

Hooker (1876) and Duthie (1906) reported its occurrence from Upper Gangetic Plain and specially by Duthie from Chota Nagpur, and also reported from Andhra Pradesh, Madhya Pradesh, Tamil Nadu and Maharashtra (Sanjappa, 1992). This plant is not recorded from Kumaon as well as Garhwal Himalaya.

Desmodium renifolium (L.) Schindler, Feede Rep. 22 : 262. 1926; *D. reniforme* (L.) DC., Prod. 2 : 327. 1825; Baker in Hook.f., FBI. 2: 173. 1876.

A scandent herb with slender, glabrous stem, 30-100cm tall. Stipules linear, deciduous. Leaves petiolate, unifoliate. Raceme mostly terminal 8-18 cm long, lax, 10-20 flowered or few flowered in the axils of the leaves; bracts linear, minute. Calyx turbinate, slightly pubescent or glabrous. Corolla longer than calyx. Stamens diadelphous (9+1), anthers uniform. Pods glabrous upto 2.0 cm long, joints 3-5, longer than broad. (Figs. 4A-C).

Flowering and fruiting - July - October.

Specimen examined - GUH 15, 358.

Distribution - Srinagar-Pauri Garhwal, 700 m.a.s.l.; scattered along with shrubberies in exposed dry localities. It was observed in a limited zone (Kairain Khal-Srinagar) in scanty population.

Hooker (1876) reported this species from Eastern Himalaya and Duthie (1906) collected the plant species from Kumaon Himalaya. It is also reported from Western Peninsula and other places (Sanjappa, 1992). It is a little known plant from Garhwal Himalaya and rare from Kumaon also.

The authors are thankful to the authorities of FRI and BSI Dehradun, for their kind support.

REFERENCES

- Babu C R 1977 *Herbaceous Flora of Dehradun* Publication and Information Directorate (CSIR) New Delhi.

Duthie J F 1903 *Flora of the Upper Gangetic Plain* Bishen Singh Mahendra Pal Singh Rep ed Dehradun.

Duthie J F 1906 *Catalogue of the Plants of Kumaon and of the adjacent portions of Garhwal and Tibet based on the collections made by Strachey and Winterbottom during the years 1846-1849 and on the catalogue originally prepared in 1852 by R Strachey* Bishen Singh Mahendra Pal Singh Rep ed Dehradun.

Gaur R D 1987 A Contribution to the Flora of Srinagar Garhwal *J Econ Tax Bot* 9 31-63.

Hooker J D 1876 *Flora of British India* Vol II Bishen Singh Mahendra Pal Singh Rep ed Dehradun.

Naithani B D 1984 *Flora of Chamoli* Vol I BSI Howrah.

Osmaston A E 1927 *A Forest Flora for Kumaon* Bishen Singh Mahendra Pal Singh Rep ed Dehradun.

Polunin O & Stainton A 1985 *Flowers of the Himalaya* Oxford University Press New Delhi.

Sanjappa M 1992 *Legumes of India* Bishen Singh Mahendra Pal Singh Dehradun.