

Research Article

OCCURRENCE OF *SESAMUM MULAYANUM* NAIR IN GARHWAL HIMALAYA, UTTARAKHAND

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ABSTRACT

The authors spotted population of *Sesamum mulayanum* Nair in some locality of Garhwal Himalaya and being reported here as additions to flora of Garhwal Himalaya. A detailed description, phenology, distribution and figures have been provided.

Keywords: Garhwal Himalaya, Herbarium, Pedaliaceae, *Sesamum Mulayanum*, *S. Orientale*

INTRODUCTION

During our recent plant explorations in some localities of Garhwal Himalaya (Singh, 2010; Rawat *et al.*, 2013; Tiwari *et al.*, 2014; Tiwari *et al.*, 2015; Ballabha *et al.*, 2015), we came across an interesting *Sesamum* species growing in wild habitat. Voucher specimens for herbarium were collected along with relevant field data for correct identification of the species. Critical examination of the specimens in the herbarium of FRI, Dehradun (DD) and BSI Northern Circle, Dehradun (BSD), the plant revealed as *Sesamum mulayanum* Nair of Pedaliaceae, closely allied to cultivated *S. orientale* Linn. The voucher specimens were deposited and are being maintained at H.N.B. Garhwal University Herbarium, Srinagar Garhwal, Uttarakhand (GUH 20732). A total four populations of *S. mulayanum* Nair recorded under present study *viz.* Maletha & Chauras (in Tehri district), Srinagar (in Pauri district) and Gaucher (in Chamoli district). Maximum individual *ca.* 2000 in a hectare was observed at Chauras near pedestrian bridge on the right flank of Alaknanda river and minimum *ca.* 500 individual at Gaucher along the road side (NH 58).

According to Babu (1977), *S. mulayanum* Nair appears to be a seed variant of *S. orientale* Linn. and suggested the experimental studies to throw light on the relationship between of these two taxon. However, it is a different species (Nair, 1963) which vary from *S. orientale* Linn. in nature of pods (abruptly & shortly beaked), seeds (surface conspicuously reticulate, side broad, transversely or reticulate rugose) and habits (up to 4 m high). Further, the species also being maintained as different species at herbarium of FRI (DD) and BSI Northern Circle (BSD) till date. The species has not been mentioned by earlier workers in regional flora (Naithani, 1984-85; Gaur, 1999) and in Checklist of flowering plants of Uttarakhand (Uniyal *et al.*, 2007). Thus, the species forms a new distributional record for flora of Garhwal and is the second species of *Sesamum*. The genus *Sesamum* L. contains about 19 species in the world, only 6 species in India (Nair *et al.*, 2006) and now it is represented by two species in Garhwal Himalayan region of Uttarakhand, India.

Sesamum mulayanum Nair, Bull. Bot. Surv. India 5:251-253. 1963; Kulkarni. J. Bomb. Nat. His. Soc. 68(2): 495-496. 1971; Bennet, Indian For. 100(11): 691. 1974; Mitra & Biswas. Sci. Cult. 49: 40-48. 1983; Kawase, J. Trop. Agr. 44: 115-122. 2000.

Annual aromatic herb, erect, 2-3 m rarely 4 m, often branched. Stem quadrangular with furrow sides, pubescent, glandular, glabrescent-pilose. Leaves heteromorphic, lower leaves opposite, palmate, 3-foliate, 3-lobed, petiole upto 12 cm, leaflets lanceolate, ovate, acute-acuminate, serrate or coarsely dentate, upper leaves alternate, petiole shorter upwards, linear or lanceolate, acute or acuminate, entire. Flowers solitary in the axils of upper leaves, pedicel short 0.2 to 0.5 cm. Calyx persistent, 0.4 to 0.7 cm, segment oblong-lanceolate, pubescent, acute or obtuse. Corolla 2.25 to 3.5 cm long, pink-whitish, obliquely campanulate, conspicuous purple pigmentation on the lower lip. Stamens 4, epipetalous, didynamous. Filament upto 1cm, anthers upto 0.3 cm long, dorsifixed. Style glabrous, 0.8 to 2.5 cm long, white. Capsule in opposite

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pairs often, erect, quadrangular, 4-grooved, 2-2.5 cm long, beak upto 0.5 cm long. Seed black, brownish rarely whitish, ovate, upto 0.25 cm, surface conspicuously reticulate, side broad, transversely or reticulate rugose. Figure 1.

Flowering and Fruiting: July-November.

Specimen examined: Western Himalaya, Garhwal, Tehri, Maletha coll. Dinesh S. Rawat 28.8.2012, GUH 20732 and DD 1186/151668 coll. K.N. Bahadur 17.10.1969 Jampur; DD 2442/144960 coll. H.B. Naithani 10.9.1969 Dehradun; BSD 35516 coll. N.P. Singh 8.3.1965 UP; BSD 23906 coll. U.C. Bhattacharya 23.1.1963 Dehradun; BSD 40745 coll. C.R. Babu 5.5.1967 Dehradun; BSD 26570 N.C. Nair 30.4.1963 Dehradun.

Distribution: Delhi, Goa, Hyderabad, MP, Maharastra, Punjab, Rajasthan, Uttar Pradesh and Uttarakhand (Chamoli, Dehradun, Pauri and Tehri).

Ecology: Uncommon, wild, in open and waste places, roadside and grow along with *Murraya paniculata*, *Cassia* spp. and *Ziziphus* sp.

Note: It is a good bee forage plant and used as fodder to cattle. As one of the valuable wild relative of cultivated *Sesamum*, it might be useful for crop improvement programme.

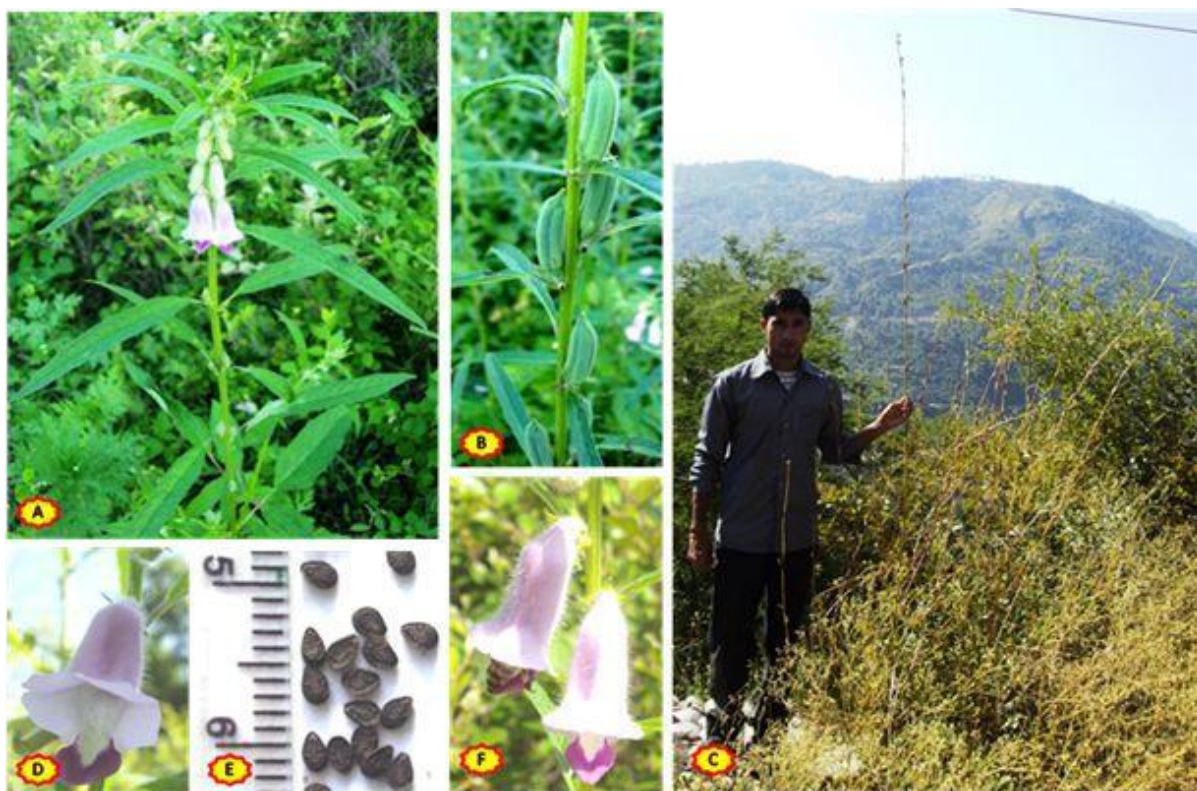


Figure 1: *Sesamum mulayanum* Nair, A-flowering stage, B-fruited stage, C-Habit & habitat, D-Flower, E-Seeds and F-Honey bee foraging on flower

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