anthers of the short stamens remain close to or even touching the stigmas and in open flowers a good load of pollen can be seen on the stigmas. Bagged flowers show 100% fruit-set, despite the absence of insect vectors.

CONCLUSION

According to Veldkamp who revised *Biophytum reinwardtii* in Flora Malesiana, the only form in Malesia is the medium-styled one. However, he has not checked the self-compatibility of this form (pers. com.). Similar populations in Kerala are found to be 100% self-compatible and structurally adapted for self-pollination.

The existence of two kinds of populations, different in their adaptations and breeding systems requires further investigation.

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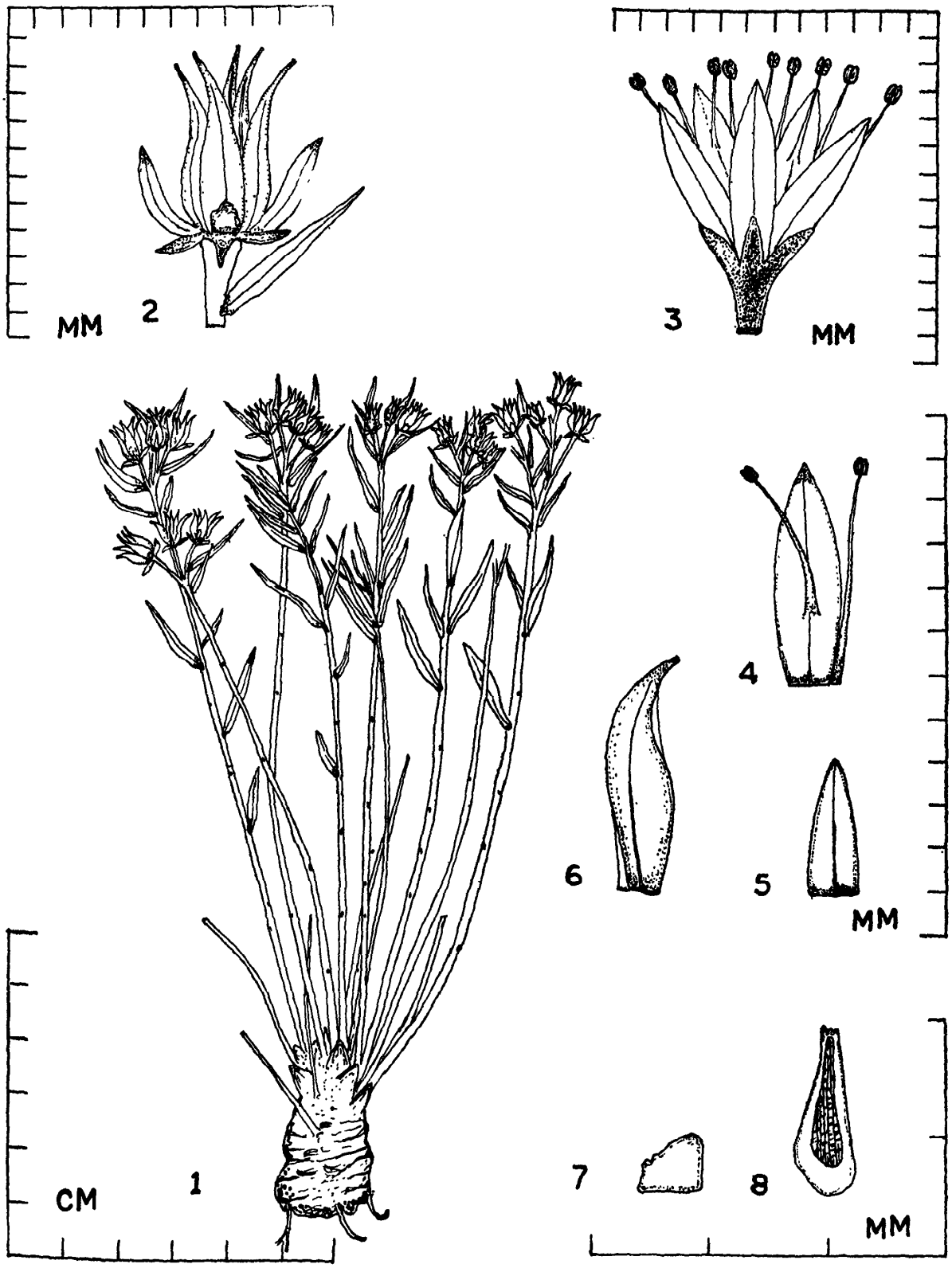
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A NOTE ON THE OCCURRENCE OF *RHODIOLA FASTIGIATA* (HK. F. ET TH.) FU CRASSULACEAE IN THE HIMALAYA

During a recent collection tour in the Garhwal Himalaya, the second author collected the female plants of this rare species from the environs of Lake Hemkund (Chamoli Dist.) at an altitude of Ca 4200 m. *Rhodiola fastigiata* is a characteristically dioecious species and had been collected in Garhwal previously by Strachey and Winterbottom during their extensive collection tour of Garhwal and Kumaon as far back as 1846-49. Hooker f. and Thomson described it a few years later from a Sikkim collection. It is also known from recent collections in Kumaon and Kashmir in Western Himalaya. Though it has a wide range of distribution its frequency of occurrence is rare. Further, due to its resemblance in the general appearance to and—occurrence usually with other species of *Rhodiola* like *R. quadrifida* and *R. tibetica*, it is likely to be missed in the field. It can, however, be distinguished from the other species by its smaller size, smaller leaves, petals, gynoecium and fastigiate stems. The authors have also noticed, during their examination of the materials in the Indian Herbaria for a revision of the Indian Crassulaceae, that some of the recent collections of this species from Kashmir and Kumaon have been wrongly identified as



Rhodiola fastigiata (Hk. f. et Th.) Fu
Figs. 1-8 : 1. Habitat. 2 & 3. Flowers. 4. Stamens. 5-8. Parts of flower.

Sedum quadrifidum. This note is intended to draw the attention of the workers to this rare and interesting species.

Rhodiola fastigiata (Hook. f. & Thoms.) Fu in Act. Phytotax. Sin. Addit. 1 : 121. 1965. Ohba in J. Fac. Sci. Univ. Tokyo Sect. 3, 12 (4) : 190. 1978 *et* in Hara & Williams, Enum. Fl. Pl. Nepal 2 : 260. 1979.

Sedum fastigiatum Hook. f. & Thoms. in J. Linn. Soc. Bot. 2 : 98. 1858 ; Clarke in Hook. f. Fl. Brit. Ind. 2 : 419. 1878 ; Hamet in Notes R. Bot. Gard. Edinb. 24 : 121. 1912 ; Strachey & Winterbottom Cat. Pl. Kumaon 64 (Duthie). 1906 ; Praeger in J. Roy. Hort. Soc. 46 : 53. f. 19. 1921 ; Berger in Engler & Prantl, Nat. Pflfam. 2 Aufl. 18o : 442. 1930 ; Kitamura in Kihara, Fauna Fl. Nepal Himal. 140. 1955 ; Rau in High Alt. Fl. Pl. W. Himal. 105. 1975 ; Ohba in Ohashi Fl. East. Himal, (3rd Report) 350. 1975.

Type : Sikkim Reg. Alp. Kankola, Lama Kangra 1400-1700 ft. J. D. Hooker s. n. (K, Photo !).

Sedum quadrifidum Pall. var. *fastigiatum* (Hook. f. & Thoms.) Frod. in Act. Hort. Gothob. 5 : append. 30, f. 61-67. Pl. 7. 1930 ; Stewart in Ann. Cat. Vasc. Pl. W. Pakistan & Kashmir 334. 1972.

Flowers and fruits : June-October.

Distribution : Kashmir to Kumaon & Sikkim.

Gen. distribution : Bhutan, Nepal, Tibet & Yunnan.

Specimens examined : GARHWAL : Hemkund 4200 m, 2 Oct. 1980, N. B. Singh 72122 (BSD) ; KASHMIR : Mahagunesh Pass 4300 m, 26 July 1966, N. C. Nair 36977 (BSD) ; KUMAON : Milan Bugyals 4000-5000 m, 17 June 1958, T. A. Rao 6978 (BSD) ; SIKKIM : East Rathang glacier 20 May 1966, Sah 6658 (CAL) ; Llonakh, Younghasband 219 (CAL) ; Natula 4500 m, 16 Aug. 1945, N. L. Bor's collector 308 & Natula 4500 m, 14 Aug. 1945, N. L. Bor's Collector 307 (DD) ; Sherathang 4200 m, 10 Aug. 1981, N. B. Singh 72139 & Serathang to Kapuk 4000 m, 11 Aug. 1981, N. B. Singh 72140 (BSD).

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