

Plagiothecium mussuriense Broth. mss. in Herb. CAL).

Resembles *P. curvifolium* Schlieph. of Europe and North America but differs in the plants being more slender, leaves not curved downwards, and less strongly decurrent.

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GENUS *MELANOCENCHRIS* NEES—A CRITICAL REVIEW

The genus *Melanocenchris* Nees (Proc. Linn. Soc. 1: 94. 1841) of the tribe Chlorideae comprises about five species of which three [*Melanocenchris abyssinica* (R. Br.) Hochst., *M. jacquemontii* Jaub. et Spach and *M. monoica* (Rottl.) C. E. C. Fisch.] are represented in India. Since they show apparent resemblance in their vegetative and floral characters, these taxa could not be readily distinguished based on their habit and size of the spikelets.

The peculiar nature of this taxon is the clustering of sterile and fertile spikelets into clusters of spikelets on the rachis and this character readily distinguishes this genus from all other genera coming under the tribe Chlorideae of the subfamily Pooideae. Each of these inflorescence units comprises 3-5 spikelets, 1 or 2 with fully fertile florets and the others rudimentary and variously transformed. Typically a fertile spikelet of the genus comprises two involucre glumes almost equal in size, pubescent along the margins and awned and two florets, the lower one of which is fertile and the upper male or sterile and rudimentary.

The characters given by Bor (Grass. Bur. Ceyl. Ind. & Pak. 473. 1960), Hooker f. (F. B. I. 7: 284. 1897), Batter and McCann

(Bombay Grasses, 248. 1935) and Fischer (Flora of Madras 3: 1267. 1928) to separate the three species of this genus are not helpful as the above mentioned authors gave more importance to the habit and vegetative characters of the plants which are variable. And probably due to this reason Hooker f. (l.c.) considers *Melanocenchris abyssinica* (R. Br.) Hochst. as only a variety of *Gracilea royleana* Hook. f. (= *M. jacquemontii* Jaub. et Spach) i.e. *Gracilea royleana* Hook. f. var. *plumosa* Hook. f. Bor (l.c.) while giving the key to the characters of the three species distinguished *M. monoica* (Rottl.) C. E. C. Fisch. as perennial and *M. jacquemontii* Jaub. et Spach and *M. abyssinica* (R. Br.) Hochst. as annuals; the latter two differing only in the size of the cluster of spikelets (8 mm and 10 mm respectively). Hooker f. (l.c.) also based his new variety i.e. *Gracilea royleana* Hook. f. var. *plumosa* Hook. f. only on the larger size of the cluster of spikelets. Examination of the authenticated specimen quoted by Bor (l.c.) namely *Mokin* 1368 and other authenticated sheets at CAL showed the following characters for their vegetative and floral parts which are of taxonomic importance. They are summarised below with illustrations.

<i>M. jacquemontii</i> Jaub. et Spach	<i>M. abyssinica</i> (R. Br.) Hochst.	<i>M. monoica</i> (Rottl.) C.E.C. Fisch.
Annual or perennial herbs.	Annual herbs.	Perennial herbs.
Leaves not aggregated at the base, 2-7 cm long, narrow, only 2-2.5 mm broad.	Leaves not aggregated at the base, 3-4 cm long, narrow, 2-4 mm broad.	Leaves strictly aggregated at the base of the culms, lanceolate, 3.5-4 cm long and 5 mm broad.
Ligule a rim of short hairs; blade and sheath both with scattered long hairs (Fig. I-A).	Ligule a rim of long hairs; blade and sheath with scattered long hairs (Fig. II-A).	Ligule a rim of short hairs; blade and sheath with hairs. The hairs on the blade almost marginal and equidistant (Fig. III-A).
Clusters of spikelets 8-9 mm long	Clusters of spikelets always 10-11 mm long	Clusters of spikelets 7-8 mm long only.
Fertile lemma trinerved and trifold, teeth scabrid slightly (Fig. I-D).	Fertile lemma trinerved and trifold, teeth scabrid slightly (Fig. II-D).	Fertile lemma not trifold, but acute and one nerved, upper portion scabrid (Fig. III-D).
Anthers 3, each 1 mm long, very thin (Fig. I-F).	Anthers 3, each 1 mm long, very thin (Fig. II-F).	Anthers 3, each 2.5 mm long, and thick with large pollen grains (Fig. III-F).

Thus, *M. monoica* (Rottl.) C. E. C. Fisch. can be easily separated from *M. abyssinica* (R. Br.) Hochst. and *M. jacquemontii* Jaub. et Spach by the acute nature of the fertile lemma, larger and thicker nature of the anthers, perennial habit and broader lanceolate leaves strictly confined to the base of the culms. The larger size of the cluster of spikelets, floral parts and comparatively longer ligular hairs of *M. abyssinica* (R. Br.) Hochst. can be easily distinguished from those of *M. jacquemontii* Jaub. et Spach.

1. Fertile lemma of the floret trifold; anthers 1 mm long and thin; leaves narrow, not aggregated at the base:
 2. Clusters of spikelets 8-9 mm long; ligule of short hairs, ± 1.0 mm long .. *M. jacquemontii*
 2. Clusters of spikelets 10-11 mm long, ligule of long hairs, ± 1.8 mm long .. *M. abyssinica*
1. Fertile lemma of the floret not divided, acute; anthers 2.5 mm long, thick; leaves lanceolate and aggregated at the base of the culms .. *M. monoica*

1. *M. jacquemontii* Jaub. et Spach, Ill. Pl. Or. 4: 36. 1851. *Gracilea royleana* Hook. f. Fl. Brit. Ind. 7: 284. 1896. *Melanocenchris royleana* Nees in Proc. Linn. Soc. 1: 95. 1841, nomen.

Specimens examined: MYSORE: Shimoga, Oct. 1908, A. Meebold 10561 (CAL); Belgau, without collector's name, 836 (CAL); Dharwar, 3 Sept. 1890, W. A. Talbot 2308 (CAL). MADHYA PRADESH: Gwalior, Aug. 1889, Mane 108 (CAL); Khandwa, 23 Sept. 1908, I. H. Burkill 31001 (CAL). GUJARAT: Sasangir, 22 Aug. 1960, S. R. Rolla 63863 (BSI); Palitana, 18 Aug. 1960, S. R. Rolla 63634 (BSI); Dwarka, 15 Aug. 1950, J. C. Dhuna D. 11 (CAL). RAJASTHAN: Pali Dist. Erinpura, near Jawai Dam, 1 Oct. 1960, S. R. Rolla 66744 (BSI); Gulab Bag, 5 Jan.

1966, R. B. Majumdar 10362 (CC); Bhawani-mandi, 26 Sept. 1964, B. M. Wadhwa 7653 (CC); Kotah, 4 Sept. 1956, P. C. Nanda 432 (CAL); Jodhpur, Mar. 1868, without collector's name, s. n., (CAL); BIHAR: Gaya, Oct. 1894, Mokim 1368 (CAL); Wall. Sheet No. 8905 D (CAL).

2. *M. abyssinica* (R. Br.) Hochst. in Flora 38: 274. 1855 in obs. *Eutriana abyssinica* R. Br. ex Fresen. in Mus. Sencken. 2: 142. 1837. *Pennisetum plumosum* Hochst. ex Steud. Syn. Pl. Glum. 1: 201. 1854. *Ptiloneilema plumosum* Steud. loc. cit. 201. 1854. *Gracilea royleana* Hook. f. var. *plumosa* Hook. f. Fl. Brit. Ind. 7: 284. 1896.

Specimens examined: GUJARAT; Saurash-

FIG-I

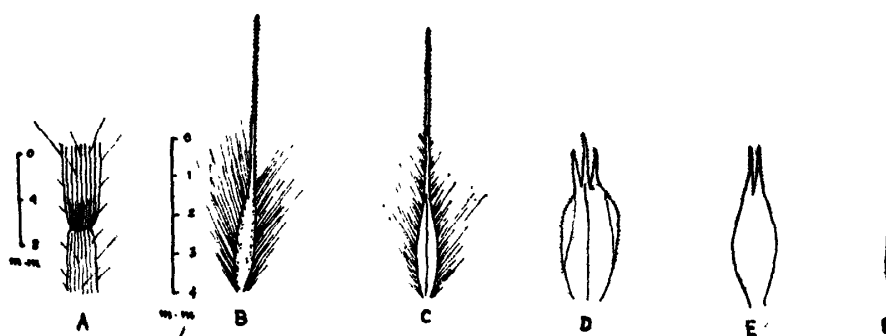


FIG-II

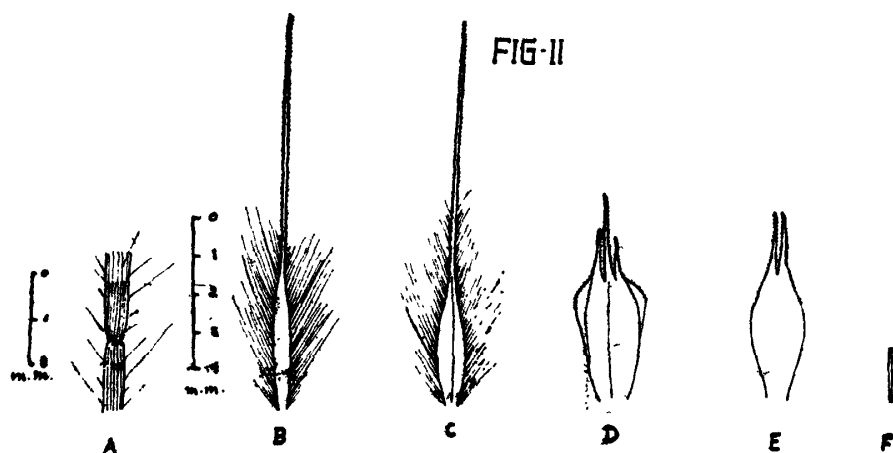


FIG-III

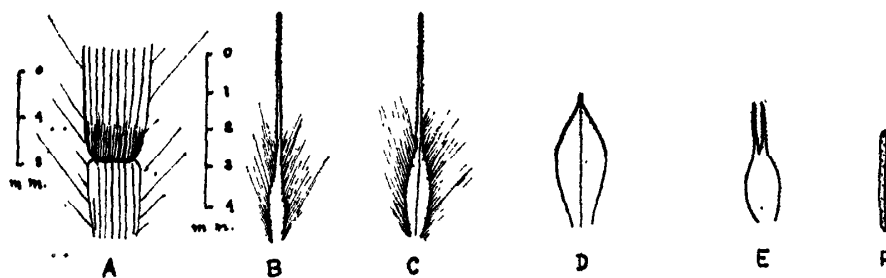


Fig. I. *Melanocenchris jacquemontii* Jaub. et Spach. A. Ligular portion of the leaf. B. Lower involucreal glume. C. Upper involucreal glume. D. Fertile lemma. E. Palea. F. Anther.

Fig. II. *M. abyssinica* (R. Br.) Hochst. A. Ligular portion of the leaf. B. Lower involucreal glume. C. Upper involucreal glume. D. Fertile lemma. E. Palea. F. Anther.

Fig. III. *M. monoica* (Rottl.) C.E.C. Fisch. A. Ligular portion of the leaf. B. Lower involucreal glume. C. Upper involucreal glume. D. Fertile lemma. E. Palea. F. Anther.

tra, Hirashal vidi 5 Sept. 1955, P. C. Nanda 8 (CAL).

3. *M. monoica* (Rottl.) C. E. C. Fisch. in Gamble, Fl. Madras, 1831. 1934. *Pomerul-la monoica* Rottl. in Ges. Natur. Freuude Berlin Neue Schr. 4: 218. 1803. *Gracilea*

nutans Koenig ex Rottl. loc. cit. 218 (1803); *Melanocenchris perrottetii* Jaub. et Spach, Ill. Or. 4: 38. 1851. *Melanocench-ris rothiana* Nees in Proc. Linn. Soc. 1, 95, (1841).

Specimens examined: MADRAS: 10 Oct.

1899, *Bowha* 3147 (CAL); Mar. 1866, *Wight* s. n. (CAL); Kambakaham R. F., 24 Oct. 1956, *B. D. Patil* 576 (CAL); Camalapuram Feb. 1883, *J. S. Gamble* 11200 (CAL); *Wall. Sheet* No. 8905 A.

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TAXONOMIC STUDIES ON MYRSINACEAE OF INDIA—I. A NEW SPECIES AND REVIEW OF GENUS *SADIRIA* MEZ

Mez (1902) reduced DeCandolle's genus *Pimelandra* to a sub-genus of *Ardisia* and the following species, *Pimelandra griffithii* Clarke, *P. eugenifolia* (Wall.) Hook. f. and *P. erecta* Clarke which could not be assigned to the genus *Ardisia* were segregated to form a new genus *Sadiria* Mez.

The genus *Sadiria* is related to *Antistrophe* DC. but differs in having petals united above the middle while in the latter the petals are united only at the base. So

far five Indian species have been reported under the genus *Sadiria* mainly from Eastern Himalaya and Khasi Hills, all restricted within Eastern India and Indo-Burmese border [*S. solanifolia* Mez, *S. eugenifolia* (Wall.) Mez, *S. griffithii* (Clarke) Mez, *S. erecta* (Clarke) Mez, *S. boweri* Dunn.]. A new species *S. subsessilifolia* Nayar et Giri and a variety *S. eugenifolia* (Wall.) Mez var. *burmanica* Nayar et Giri are described for the first time.

KEY TO THE SPECIES

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|--|----|------------------------------|
| I. Petals connate up to 5/6 of the corolla tube | .. | 1. <i>S. solanifolia</i> |
| I. Petals united up to 3/4 of the corolla tube | | |
| II. Sepals triangular ovate, margin ciliate or serrulate | | |
| III. Leaves subsessile | .. | 2. <i>S. subsessilifolia</i> |
| III. Leaves distinctly petiolate : | | |
| IV. Anthers ovate, apex long caudate | .. | 3. <i>S. eugenifolia</i> |
| IV. Anthers lanceolate, or ovate-lanceolate, apex acute : | | |
| V. Branches, leaves rusty puberulous, sparsely gland-dotted ; petiole short 0.5-0.8 mm long ; sepals ciliate | .. | 4. <i>S. griffithii</i> |
| V. Branches, leaves glabrous or glabrate, petiole longer, 1.5-5 cm long ; sepals serrulate | .. | 5. <i>S. boweri</i> |
| II. Sepals elliptic, minutely ciliate : | .. | 6. <i>S. erecta</i> . |

Sadiria solanifolia Mez in Engl. Pflanzenreich 9 (iv. 236): 182. 1902:

Type: Bhutan *Booth* s.n. (K). Not seen.

S. subsessilifolia Nayar et Giri sp. nov. Affinis *S. griffithii* (Clarke) Mez, sed foliis subsessilibus, margine foliorum valde sinuatis, pedunculis robustis differt.

Frutex lignosus, teretis, glaber. *Folia* subsessilia, magna, oblanceolata, 10-20 cm

longa, 4-7.5 cm lata, basi valde cuneata, apice abrupte acuminata vel acuta, margine sinuta, pellucido-punctata, supra glabra, infra ad nervos puberula, membranacea, nervis principalibus prominentis, nervis lateralibus 10-18 paribus, distinctis. *Inflorescentiae* axillares, subfasciculatae vel condense subpaniculatae, 2-3 cm longae, dense puberulae. *Flores* parvi, 5-meri, puberuli ;