

GASTRODIA EXILIS HOOK. F.—A RARE AND INTERESTING ORCHID FROM KHASI AND JAINTIA HILLS, MEGHALAYA, INDIA

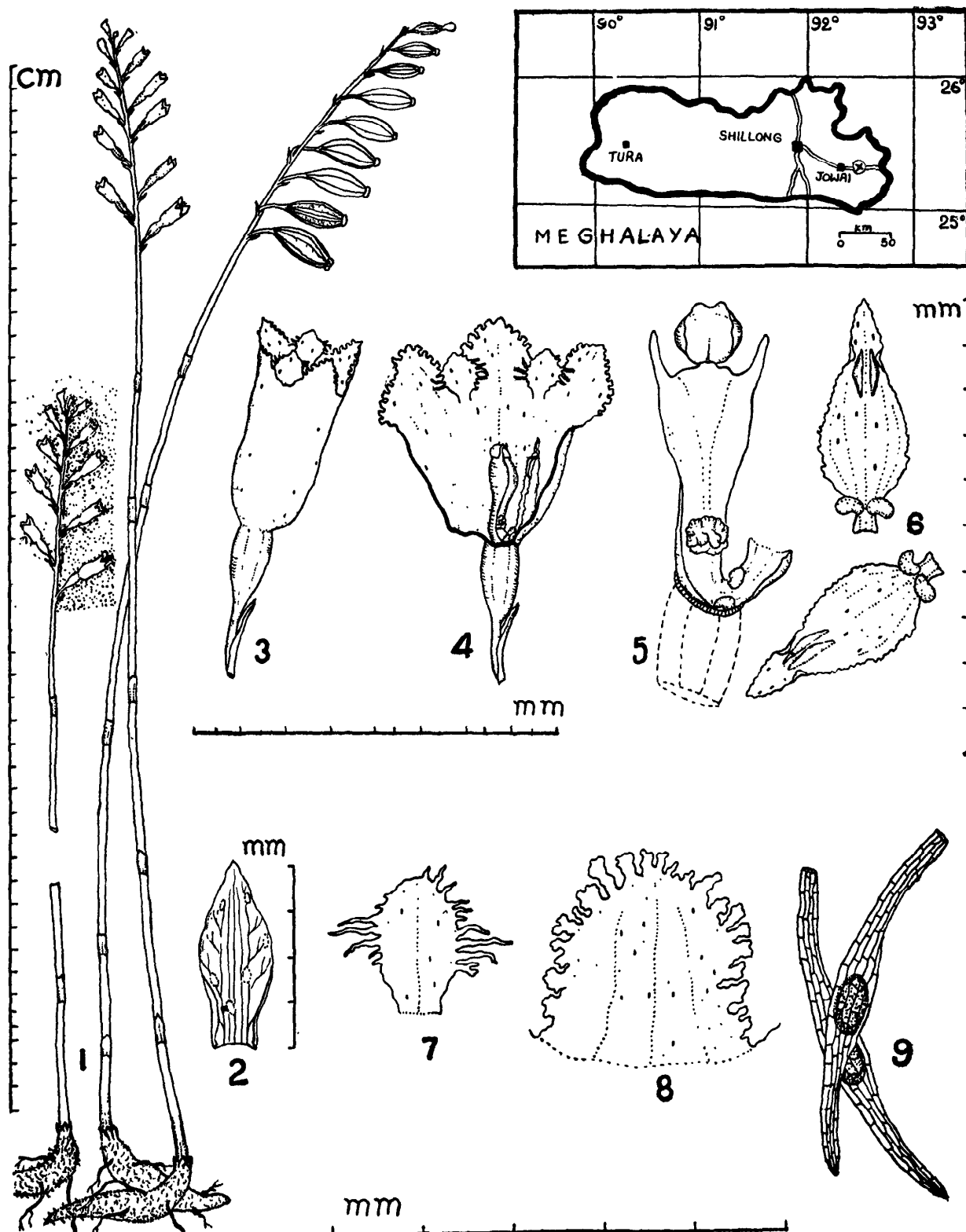
A saprophytic orchid in the dense humus-covered forest floor, collected at Raliang in the Jaintia hills of Jowai district, Meghalaya, proved, on detailed study to be *Gastrodia exilis* Hook. f. described on a collection of Hooker from Amwee in September 1850, also in the Jaintia hills (the reference to Khasi Hills in Fl. Brit. Ind. 6: 123. 1890 and in Ic. plant. Pl. 2196. 1892, is not correct. See Hooker's Himalayan Journals, p. 308. 1854). Seidenfaden in his study of a similar orchid from Thailand, preferred to keep his plant under *G. siamensis* Rolfe ex Downie, with the remark that he dare not spoil the type specimen by dissecting and that until *fresh material is available* from Khasi hills (underlining ours) we will have to rely on Hook. f.'s figure (Ic. Pl. 2196). Apart from the type, Seidenfaden had seen a specimen of Prain at Kew. Hooker himself had remarked that he "had great difficulty in analysing the flowers of this singular species". At the Calcutta Herbarium there is a suit of 9 specimens (each sheet with 2-6 plants) of Dr. Prain's collector (*alung Lepcha*) 26 from Shillong gathered in 1899. Two of these bear indications of having been referred by Dr. Prain to Rolfe at Kew, who had compared with Hooker's specimen and Icones. The single Prain specimen at Kew is evidently one of this batch. After the long intervals of 1850 and 1899, this is the first collection of this rare orchid. Incidentally, this is almost a parallel to a similar rare collection of a closely related saprophytic orchid *Didymoplexis* (Rao et al. in Bull. Bot. Surv. Ind. 21: 151-155. 1980).

A study of the available old material, dissection of freshly collected flowers in comparison with the illustrations, including that of Seidenfaden has led us to conclude that *G. siamensis* is only *G. exilis*, and to

present the following detailed description and illustration.

Gastrodia exilis Hook. f. Fl. Brit. Ind. 6: 123. 1890 & Ic. plant. Pl. 2196. 1892. *G. siamensis* Rolfe ex Downie in Kew Bull. 416. 1925 syn. nov.; Seidenf. in Bot. Tidskrift 65: 106. f. 4. 1969 & in Dansk. Bot. Arkiv 32(2): 181. 1978.

Leafless, tender saprophytes in dense humus of forest floor. *Tubers* 1.0-5.5 × 0.5-1.0 cm, single, spindle shaped, horizontal, tomentose. *Roots* sparse, long, slender, branched. *Inflorescence* a terminal raceme, 3-20 cm long, 3-25-flowered, lax, subsecund, long scaped. *Scape* 20-112 cm high, 2-4 mm thick, erect, dark brown, with 3 or 4 imbricating bracts at the base and 5-10 tubular sheathing bracts above. *Floral bracts* ca 4.0 × 1.5 mm, ovate-lanceolate, obtuse to acute, shorter than the ovary plus pedicel, brown. *Flowers* ca 1.5 cm long, tubular, milky white; perianth sparsely gland dotted. *Ovary with pedicel* ca 9 mm long, slightly curved. *Sepals* connate into a ventricose tube with 3 lobes at the mouth; tube ca 10 × 5 mm; lobes ca 2 × 2.0-2.5 mm, triangular or ovate, longer than the petals, irregularly laciniate and crisped at margins (lacinations more and shorter than those of petals), 3-nerved. *Petals* ca 1.5 × 1.0 mm, inserted on the tube alternating the sepaline lobes, subrhomboidal or obovate, obtuse, irregularly laciniate and crisped at margins, 1-nerved. *Lip* ca 4.5 × 1.5 mm, much shorter than the sepaline tube, as long as the column, thick, included, with a subterminal constriction, ovate-lanceolate, obtuse to acute, shortly clawed at base, erose at margins, 5-nerved, with two parallel erect short median oblong lamellae in the distal half within and 2 suberect fleshy, short, stout, conspicuous, sub-



Castrodia exilis Hook. f.

Figs. 1-9 : 1. Habit. 2. Bract. 3. Flower. 4. Flower split open, showing column & lip. 5. Column spread out. 6. Lip in two views showing the basal calli and the distal pair of lamellae. 7. Petal. 8. Sepaline lobe. 9. Seeds (much enlarged). The inset map of Meghalaya shows locally of collection. (A. N. Rao 73600, ASSAM)

globose or reniform outgrowths (calli) towards the base on the claw. *Column* ca 4.5 mm long, winged at the margins, with two erect short acute teeth; *anther* terminal, hinged to the column, 2-celled; *pollinia* granular, in two groups, yellow; *stigma* towards the base of the column, its surface lobed. *Capsules* ca 4.0 × 0.8 cm, sub-secund, long stalked, 3-20, obovoid-ellipsoid, prominently 3-ribbed, with persistent bracts, grey coloured, dehiscing by six vertical sutures; *seeds* ca 1 mm long, slender, fusiform; testa cells rectangular, in vertical rows and with spirally thickened walls.

Flowering and Fruiting: Oct.-Nov.

MEGHALAYA: Jaintia Hills, Raliang (ca 500 m), 27.10.1980. A. N. Rao 73600, 77234—flowering and A. N. Rao 77235—fruiting (ASSAM).

In the lip being free from the tube of perianth and erose at margins, *G. exilis* dif-

fers from *G. orobanchoides* Benth., the lip of which adnates to the tube of perianth at base and entire at margins. However, *G. exilis* is closer to *G. dyeriana* K. & P. reported from Sikkim but differs in the flowers being suberect instead of pendulous; in the sepaline lobes and petals being lacinate instead of entire.

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J. JOSEPH, N. R. ABBAREDDY

Botanical Survey of India, Shillong

AND

K. HARIDASAN

North Eastern Hill University, Shillong

NOTES ON SOME RARE PLANTS FROM SOUTH INDIA

Fuirena trilobites C. B. Clarke in Hook. f. Fl. Brit. Ind. 6: 666. 1893 & Ill. Cyper. t. 59. f. 5. 1909; Saldanha & Nicolson, Fl. Hassan 683. 1926. (CYPERACEAE)

Clarke described this species from its type locality Secunderabad in Andhra Pradesh. Recently, Saldanha & Nicolson reported it from Hassan District, Karnataka. In a scrutiny of specimens in the folders of *F. ciliaris* (L.) Roxb. in MH, a few specimens were found to be of *F. trilobites* C. B. Clarke. One of the two specimens collected by Cherian Jacob from Salem District under 018007 turned out to be this species. It may be the close external similarity which had made him give the same number to the two specimens. The constant reliable character to distinguish the two species is the tip of

the hypogynous scales. In *F. trilobites* it is anchor shaped whereas in the other species it is clearly quadrate. The present observation suggests a strong possibility of its wider distribution than what is known now.

Specimen examined: TAMIL NADU: Salem Dt., Hoganakal, Cherian Jacob 018007 A (MH).

Hedyotis bourdillonii (Gamble) Rolla Rao & Hemadri, Ind. For. 99: 378. 1973. *Oldenlandia bourdillonii* Gamble in Kew Bull. 1919: 404. 1919 & Fl. Pres. Madras 2: 422. 1957 (repr. ed.). (RUBIACEAE)

J. S. Gamble established this species based on the collection of Bourdillon from Travancore in 1857. This, forming the type (isotype in MH), happens to be the only known collection of this plant till now. The pre-