

*loziella willisiana* on soil, stem creeping, light green, 6-12 mm long. Sterile shoots often flagelliform with vestigial (reduced) leaves towards the apex. Main stem 73.26-101.75  $\mu$  in diameter, cortical cells in 8-9 longitudinal rows and medullary cells 9-11 in number, thin walled. Branches ventral. Leaves obliquely inserted, distant to slightly imbricate, alternate entire, deeply bilobed usually to half, 345.95-394.79  $\mu$  long and 187.22-244.20  $\mu$  broad, variable in shape and size, oblong to ovate. Apex of the lobes acute to acuminate, epidermal cells thin walled, non-trigonous, pellucid, marginal epidermal cells 28.8-67.2  $\mu$  long and 19.2-28.8  $\mu$  broad, basal epidermal cells 38.4-57.6  $\mu$  long and 28.8-38.4  $\mu$  broad, and median epidermal cells 28.8-57.6  $\mu$  long and 19.2-28.8  $\mu$  broad. Amphigastria absent. Rhizoids very rare, if present simple, colourless and on the ventral side. Gemmae present apically in masses, pellucid, thin walled, unicelled, usually ovoid, 20.35-32.56  $\mu$  long and 16.28-24.42  $\mu$  broad, rarely spherical, 16.28-20.35  $\mu$  in diameter. The mature sporophytes are absent. Bracts in three pairs, larger than vegetative leaves, 0.86-1.34 mm long, deeply bilobed half to three-fourth, apex of each lobe acute, entire, perianth cylindrical, 3-keeled having constricted and ciliated mouth.

The Indian specimens of *Cephalozia sia-*

*ensis* closely resemble the specimens from Thailand in leaf structure, size of the cells, presence of unicelled oval gemmae, habit of the plant as well as its perianth structure which is 3-keeled. This species is quite distinct from the other Indian species, *Cephalozia gollani* as the former has oblong-ovate symmetrical leaves with lobes not connivent while the latter has obliquely suborbicular, asymmetrical leaves with connivent lobes. *Cephalozia herzogiana* Pande et Srivastava is also distinct from *C. siamensis* in sexuality (being monoicous), the much smaller thick-walled leaf cells and mouth of the perianth which is denticulate or crenulate.

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#### REFERENCES

- HATTORI, S. Anthocerotae and Hepaticae in H. Hara, *The flora of Eastern Himalaya*, 501-536. 1966.  
 KASHYAP, S. R. AND R. S. CHOPRA. *Liverworts of the Western Himalayas and the Panjab Plain*, 1932.  
 KITAGAWA, N. Studies on the Hepaticae of Thailand II, *J. Hattori Bot. Lab.* 32 : 290-305. 1969.  
 PANDE, S. K. AND K. P. SRIVASTAVA. On a species of *Cephalozia* Dum. from India : *C. herzogiana* Pande et Srivastava, sp. nov. *Fedde Rep.* 58(1-3) : 75-79. 1955.  
 STEPHANI, F. *Species Hepaticarum* III. 1906-1909.  
 ——— *Species Hepaticarum* VI. 1917-1924.

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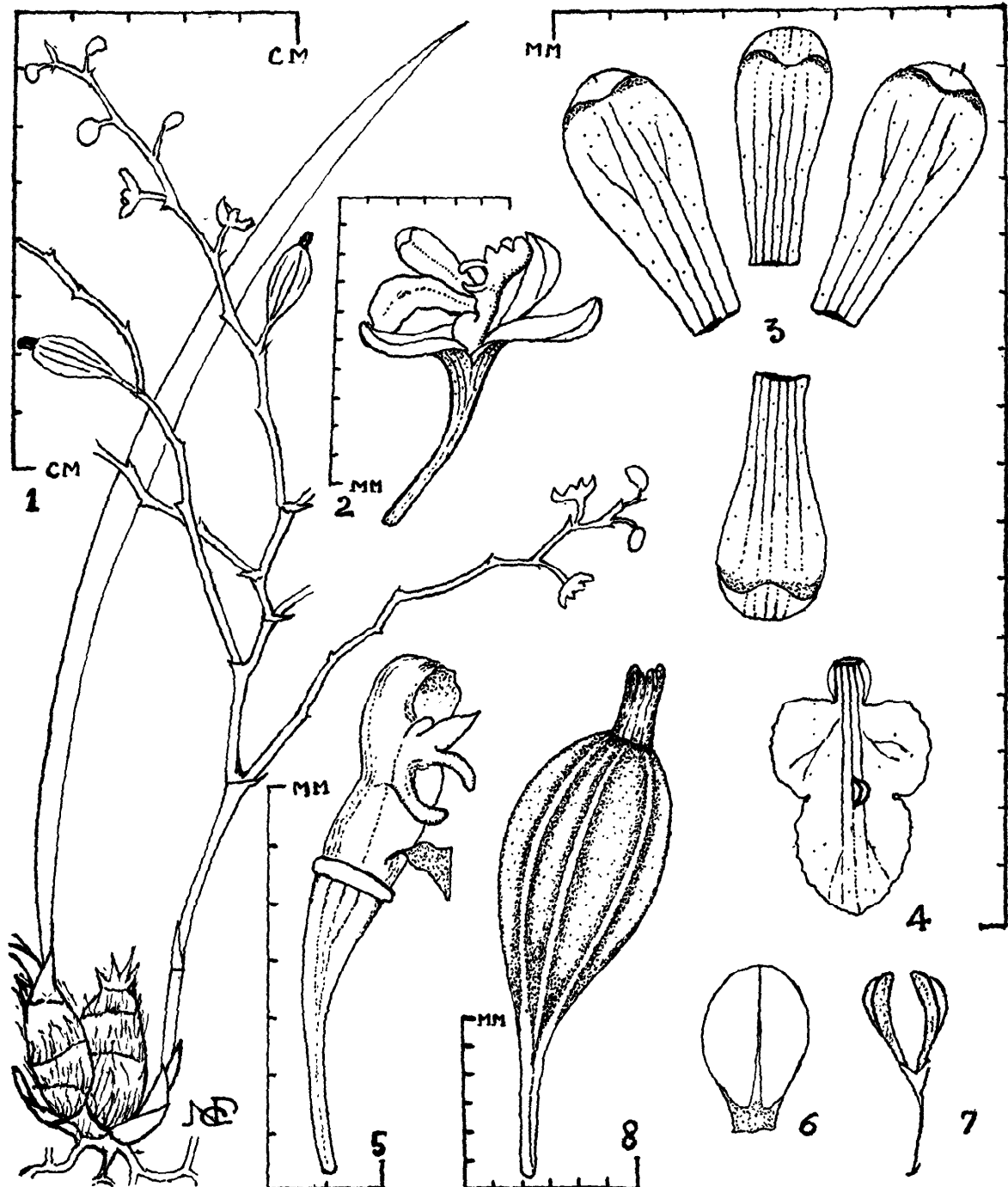
#### ACRIOPSIS INDICA WIGHT (ORCHIDACEAE)—FROM TRIPURA

During the course of a botanical exploration in Tripura State the authors collected *Acriopsis indica* Wight, an interesting and rare orchid in flowers and fruits. This orchid was found growing on trees of *Shorea robusta* Gaertn. The present collection so far away from its known localities of occurrence (Malaysia) where it is widely distributed, is interesting.

The name of the specific epithet of *A. indica* Wight is interesting and one may feel its type locality to be in India. But the earlier known localities of its occurrence are Tenasserim, Penang, Java, Laos, Cambodia and Annam.

Hooker (1890) also writes "Wight who had lost the locality of the species *A. indica* Wight, he figured, probably received it from

Griffith. (Griffith's type specimen was most likely collected in 'Moulmein'—an old part of the British Empire). In a drawing by Parish the flowers are yellowish-green, faintly blotched with purple. Wight's figure (t. 1748) of the lip is quite unlike that of the speci-



*Acriopsis indica* Wight

Figs. 1-8: 1. Habit. 2. Flower. 3. Perigone. 4. Lip spread out. 5. Column with ovary. 6. Anther. 7. Pollinia. 8. Capsule.

men he depicted which is now in Herb. Kew".

Detailed description and illustration of this orchid based on living specimens are given below. The specimens are preserved in the Herbarium, Eastern Circle, Botanical Survey of India, Shillong.

**Acriopsis indica** Wight Ic. 5: 1748. 1851; Hook. f. Fl. Brit. India 6: 79. 1890; Holttum, Rev. Fl. Malaya 1: 557. 1957; Backer & Bakhuizen, Fl. Java 3: 398. 1968.

Epiphytes on *Shorea robusta* Gaertn. *Pseudobulbs* densely tufted, ovoid, covered with scarious fibres, annual rings pinkish. *Roots* white, branched, spreading copiously, spongy. *Leaves* deciduous,  $7.3-18.3 \times 5-5.6$  cm, narrowly linear, acute. *Inflorescence* a panicle, dark green, lateral, erect from the base of the pseudobulb, broad and laxly-flowered, 8-14 cm long. *Scape* stout, 3.5-8 cm long (Fig. 1). *Flowers* (Fig. 2) small, greenish-yellow, suberect, pedicelled. *Pedicellate ovary* 7 mm long. *Bracts* small, ovate, acute. *Sepals* and *petals* (Fig. 3) faintly blotched with purple, spathulately obovate, gland-dotted; *dorsal sepal* arched,  $4 \times 1.75$  mm, 5-nerved; *laterals* connate, incurved,  $4 \times 1.75$  mm. *Petals* equal,  $5 \times 2.5$  mm, 3-nerved. *Lip*  $4.5 \times 2.5$  mm, constricted above the middle, obtuse, adnate to the basal half of the column by a short claw forming a narrow tube (Fig. 4), 3-nerved, blade white with a few violet spots and two erect lamellae on the disc about the middle, gland-dotted, margins undulate; *column* erect (Fig. 5), with two slender decurved proces-

ses on either side of the stigma, 4 mm high; *rostellum* beaked; *anther* oblong (Fig. 6); *Pollinia* 2, with longitudinal furrow (Fig. 7) on a common slender stipe with minute gland; *ovary* pedicelled, *pedicel* 5 mm (Fig. 5); *capsule* oblong, 10 mm long, 6-ridged, sub-erect, smooth, green (Fig. 8).

*Flowers and Fruits*: March.

*Distribution*: Northern Thailand, Tenasserim, Malaya (Penang, Kedah, Frasers' Hill), Java, Vietnam and Laos.

*Specimens examined*: C. L. Malhotra 58109 (Assam), Garjee Forest, South Tripura, March 26, 1974.

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#### REFERENCES

- BACKER, C. A. AND BAKHUIZEN VAN DAN BRINK. *Flora of Java* 3: 397-398. 1968.  
HOLTTUM, R. E. *A revised Flora of Malaya* 1: 557. 1957.  
HOOKER, J. D. *Flora of British India* 6: 79. 1890.  
SEIDENFADEN, GUNAR AND TEM SMITINAND. *The Orchids of Thailand-A preliminary list* Pt. 3. 514-515. 1961.

#### A REPORT ON *MONOGRAMMA PARADOXA* (FÉE) BEDD. IN MALAYA

Beddome (1883) and Christensen (1906) give the distribution of *Monogramma paradoxa* (Fée) Bedd., as Ceylon, Malaysia, Polynesia and tropical Australia. According to Rosenburg (1908) it is distributed from Ceylon to Hawaii and Australia. Again Bed-

dome (1892) mentions its occurrence in Malaya on the authority of Father Scortechini's collections from Perak. Holttum (1954), however, reported the occurrence of only two species of *Monogramma* from Malaya viz. *M. dareicarpa* Hook. and *M.*