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THE GENUS *MICROPERA* LINDL. (ORCHIDACEAE) IN INDIA

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ABSTRACT

The genus *Micropera* Lindl. of the family Orchidaceae, is represented by about 15 species in the South East Asia. Only 4 species occur in India. Taxonomic account including synonym, morphology, phenology and distribution etc. and key to species is represented in this paper.

INTRODUCTION

The genus *Micropera* was established by Lindley in 1832 on the basis of a drawing of the plant collected by Roxburgh from Chittagang in 1814. The plant was first named as *Aerides pallida* Roxb. *nom. nud.* in Roxburgh's Hortus Bengalensisis and was mentioned by Lindley under *Micropera pallida* as basionym. Therefore *M. pallida* is the type species of the genus and the drawing (no. 2349) is considered the only type material of the species.

Lindley (1833:219) established another genus *Camarotis* which he later (1859: 37) found congeneric with *Micropera.* Although Lindley preferred the generic epithet *Camarotis* and was followed by King & Pantling (1898), Prain (1903) and others for a long time, Tang & Wang (1951) and Garay (1972) reestablish the genus *Micropera* and made necessary transfers to the genus. Hooker (1890) followed Bentham and placed *Micropera* as a section of *Sarcochilus* Br.

Another species *M. maculata* Dalz. was excluded from the genus by Saldanha (1974) and placed under the genus *Smithsonia* Saldanha typified by *S. straminea* Saldanha.

All collections are examined in ASSAM herbarium; if otherwise mentioned.

MICROPERA Lindl. in Edw. Bot. Reg. 18: ad. t. 1522. 1832.

Epiphytes. Stem elongate, branched, with sheathed internodes. Leaves linear-oblong, coriaceous. Inflorescence lateral, leaf opposed, simple raceme, pendulous or arched, with a few small sheaths at base. Bracts minute, persistant. Sepals subequal, the laterals united to the under side of the lip. Petals

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equal or slightly smaller than sepals. Lip somewhat slipper- shaped, forming a sac towards apex; midlobe facing in wards. Column short, footless; usually rostellum forming a long projection which may be twisted or sigmoid, sometimes short. Anther terminal, 2 chambered. Pollinia 4, in 2 unequal pairs with long stipe, globose. Capsules fusiform.

Type species : Micropera pallida (Roxb.) Lindl.

About 15 species distributed in India and south east Asian countries. 4 species occur in India. *M. pallida* is the most wide spread species of the genus.

Key to the species

1a.	Stem pendulous; flowers 0.6 – 0.7 cm across	...	*1. M. mannii*
1b.	Stem erect; flowers 1-2 cm across	...	2
2a.	Flowers yellow; side lobes of lip prominent, more or less quadrangular, fleshy; beak of column short, straight	...	*3. M. pallida*
2b.	Flowers creamy white to pink; side lobes of lipinconspicuous; beak of column long twisted	...	3
3a.	Ovary papillose hairy; sac of lip yellow; rostellum projection strongly twisted	...	*2. M. obtusa*
3b.	Ovary not papillose hairy; sac of lip purplish pink; rostellum projection sigmoid, not very twisted	...	*4. M. rostratum*

1. Micropera mannii (Hook. f.) Tang & Wang in Acta. Phytotax. Sin. 1 (1): 94. 1951; Pradhan, Ind. Orch. 2: 497. 1979; Chowdhery, Orch. Fl. Arunachal Pradesh 512 1998; Pierce & Cribb, Orch. Bhutan 531. fig. 118. 2002 *Sarochilus mannii* Hook. f., Fl. Brit. India 6: 36. 1890. *Camarotis mannii* (Hook. f.) King & Pantling in Ann. Roy. Bot. Gard. Calcutta 8: 239. t. 317. 1898. **(Fig. 1)**

Epiphytic. Stem clothed with sheaths of fallen leaves, sometimes branched, upto 35 cm long, 0.3-0.6 cm thick. Leaves 6-14 × 0.8-1.5 cm, linear, obtuse to subacute, keeled beneath, minutely bifid at apex, coriaceous, sessile. Inflorescence opposite to leaf axil, 10-20-flowered raceme, sessile, 6-12 cm long. Flowers pale pink to whitish, 6-8 mm across, sepals and petals purple spotted at base. Bracts persistant, reflexed, ovate, acuminate, membranous, 2-3 mm long; Sepals subequal, spathulately oblong, obtuse; dorsal sepal reflexed, 3-4.5 × 1-1.5mm; lateral sepals 3.5-4.5 × 1.2 mm. Petals reflexed, spathulately oblong, obtuse, 3-4 × 1mm. Lip 4 - 5 mm long, somewhat slipper shaped, obtuse, decurved, without side lobes, yellowish in front, with 2 pink patches on the disc, sac with a strong included recurved spine under the tip. Column pale pink, very short, beak small. Pollinia globose with long stipe. Pedicel and ovary 6-7mm long. Capsule 3 cm long, slender, fusiform.

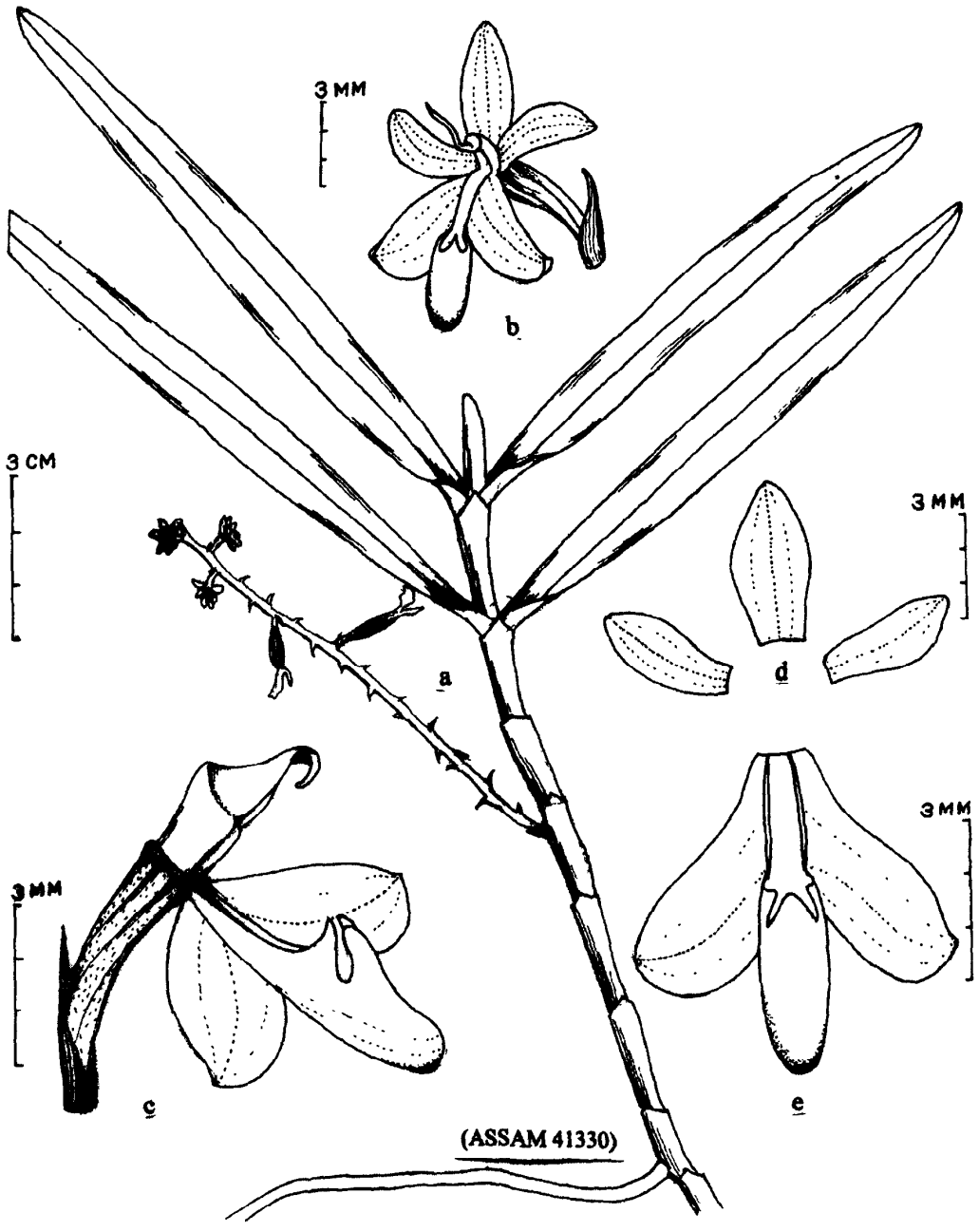


Fig. 1 : Micropera manii (Hook. f.) Tang & Wang :
a. plant; b. flower; c. column & lip with lateral sepals; d. sepals & petals; e. lip; (ASSAM-41330).

Syntype : Khasi hills, *Mann.* (K, CAL).

Fl. & Fr. : June – July.

Distrib.: India : Sikkim, West Bengal (Darjeeling), Assam, Meghalaya; Bhutan.

Specimen examined: Arunachal Pradesh : Kameng, Sessa, *A. N. Rao* 62394. ASSAM, Cachar, Katakhal R.F. 1. 9. 1957., *R. S. Rao* 9038A Meghalaya : Khasi hills, Shillong, *G. K. Deka s.n.* (ASSAM 36088); Jowai road 24.7.1957 *G. K. Deka* 10157A, Dawki to Pynursla, 17.9.1970, *P. K. Hajra* 5132; Garampani, *G. K. Deka* 5132; Jaintia hills, Molicho, *N. P. Balakrishnan* 42906.

2. **Micropera obtusa** (Lindl.) Tang & Wang Acta. Phytotax. Sin. 1.1: 94, 1951; Pradhan, Ind. Orch. 2:497. 1979; Chowdhery, Orch. Fl. Arunachal Pradesh 512. 1998; Pierce & Cribb, Orch. Bhutan 531-533. 2002. Seidenf in Op. Bot 95:126, fig. 73.1988; *Camarotis obtusa* Lindl. in Bot. Reg. 7: misc. 73. 1844; King & Pantl. in Ann. Roy. Bot. Gard. Calcutta 8: 238. t. 316. 1898. *Sarcochilus obtusus* (Lindl.) Benth. ex Hook. f. Fl. Brit. India 6: 36. 1890. **(Fig. 2)**

Epiphytic. Stems simple or branched, 25-50 cm long 3-5 mm thick, covered with sheaths of fallen leaves, internodes 1-3.5 cm long. Leaves linear–lanceolate, obtuse to slightly bilobed at apex, keeled beneath, 6-15 × 0.8–1.5 cm, sessile. Inflorescence opposite to the leaf axil, 6-20-flowered lax raceme, 4-12 cm long. Flowers opening successively, 2 to 4 at a time 12-15 mm across, pale pink to creamy white with yellow sac of lip. Bracts 2- 3 mm long, broad, acute, persistent. Sepals 6- 9 × 4 mm long, oblong, obtuse, 5–nerved, the laterals slightly broader. Petals slightly smaller than the sepals, 7 × 3 mm, oblong, obtuse, 3-5 nerved. Lip yellow, slipper–shaped, tip obtuse, decurved, 6-8 mm long; side lobes incurved; mid lobe minute, 3 toothed. Column short, with a long obliquely twisted beak. Anther 2- chambered, acute. Pollinia globose, yellow, with a long stipe and minute gland. Pedicel and ovary 7-9 mm long, papillose. Capsules 1.8–2.5 cm long, cylindric.

Type : North East India *sine loc.* Lindley's Type, missing (fide Seidenf. 1988).

Fl. & Fr. : July September.

Distrib. : India: Sikkim, West Bengal (Darjeeling, Kalimpong), Arunachal Pradesh, Assam, Meghalaya and Nagaland; Myanmar; Thailand.

Specimen examined : Arunachal Pradesh : Lohit distr. *A. S. Rao* 47775. Assam : Sibsagar, Garampani, Umrangshu, *S. Phukan* 60297; *B. Baruah* 66260. Meghalaya : Garo hills, Balphakram, *M. K. V. Rao* 64112; Jowai, *R. S. Rao* 2550; *G. K. Deka* 5019, 10157; Nongpoh, *DFO* 11068. Nagaland : Jafu hill, *T. M. Hynniewta* 56217.

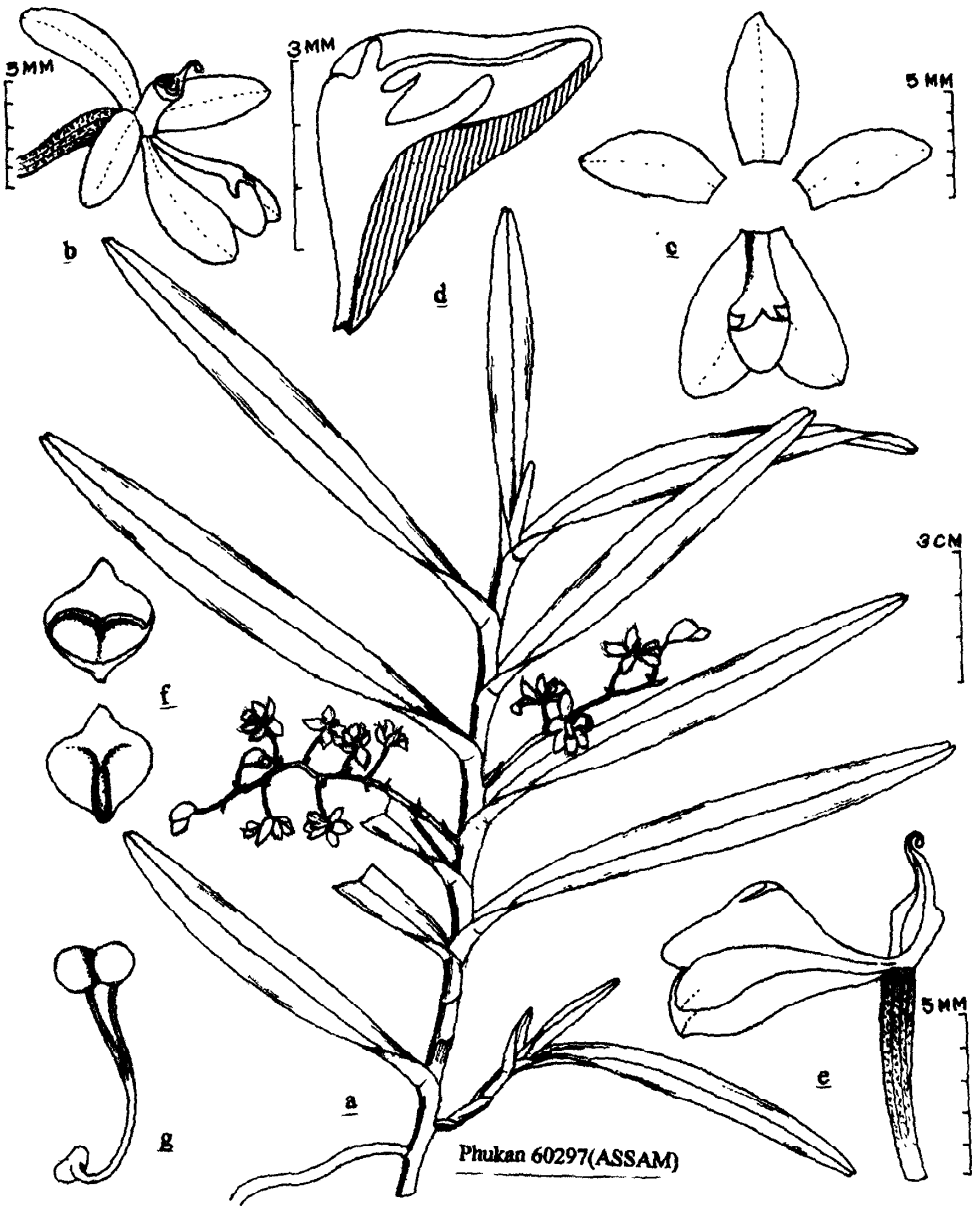


Fig. 2 : Micropera obtusa (Lindl.) Tang & Wang :
a. plant; b. flower; c. sepals, petals & lip; d. L.S. of lip; e. column & lip with lateral sepals; f. anther; g. pollinia (fig. f-g enlarged) (*Phukan*-60297).

3. **Micropera pallida** (Roxb.) Lindl. in Bot. Reg. 18: sub t. 1522. Sept. 1832 (*non* Lindl. 1833). Seidenf. in Op Bot. 95: 120. fig. 71 .1988. *Aerides pallida* Roxb. Hort. Beng. 1814: 63. *nom. nud.*; Fl. Ind. 3: 475. Oct. 1832. *Camarotis apiculata* Rchb.f. Bonpl. 5 : 39. 1857. *C. cochinchinensis* Rchb.f. Gard, Chron 740. 1876. *Sarcochilus cochinchinensis* (Rchb.f.) Nicols, Dict. 3: 360. 1886. *Saccolabium saxicolum* Ridl. in Tr. Linn. Soc. 3 : 374 .1893. *S. flaveolens* Ridl. in J. Linn Soc. 32. 360. 1896. *Sarcanthus roxburghii* Hook. f., Fl. Brit. Ind. 6 : 36. 1890. *S. apiculatus* (Rchb.f.) J. J. Sm. Fl. Buitenz. 6 : 598. Fig. 445. 1905. *Micropera cochinchinensis* (Rchb.f.) Tang & Wang. in Acta. Phytotax. Sin. 1:1: 94, 1951 (excl. syn. *Sarcanthus poilanei*). *M. apiculata* (Rchb.f.) Garay in Bot. Mus. Leafl. Harv. Univ. 23, 4: 186. 1972. **(Fig. 3)**

Epiphytic. Stems simple or branched upto *ca* 1m long, 3-5 mm thick, covered with sheaths of fallen leaves; internodes 1-2 cm long. Leaves 5-10 × 0.6 –1.0 cm, linear to oblong-lanceolate, obtuse, notched at apex. Inflorescence opposite to the leaf axil, 10-15cm long, 15-25–flowered, with 2-3 sterile bracts on the peduncle. Bracts persistent, small. Flowers 8-10 mm across, creamy- white to yellowish or brownish. Sepals and petals 7-9 mm long, oblong, obtuse. Petals slightly narrower than sepals, oblong, obtuse. Lip 7-9 mm long, slipper shaped, laterally compressed, 3- lobed; side lobes prominent, more or less quadrangular, fleshy; midlobe with fleshy bifurcate callus. Column short, beak of column straight. Pollinia globose, with a long stipe. Capsules 4-6 × 0.2- 0.3 cm, narrowly fusiform.

Type : Bangladesh, Chittagong. Roxburgh drawing 2349 (K),(fide Seidenf.1988).

Fl. & Fr. : May – June.

Distrib. : India : West Bengal Arunachal Pradesh, Assam, Meghalaya; Bangladesh; Myanmar; Thailand; Laos; Vietnam; Malaya; Sumatra; Java.

Specimen examined: Arunachal Pradesh : Subansiri, Khuni Pahar, *G. Panigrahi* 19534. Assam : Naharani R. F, *D. M. Verma* 46389; Jeypur, *G. K. Deka s.n.* (ASSAM 3861); Garampani, *G. Panigrahi* 9419; *G. K. Deka s.n.* (ASSAM 36096,36097,36098); Kaddam R. F., *G. Panigrahi* 27792 (ASSAM); Kamrup, Rajapara, S. *Phukan* 102826. Meghalaya : K & J hills, *S. K. Kataki* 34584; Khasi hills, Pongtung , *G. K. Deka s.n.* (ASSAM 36099). Bangladesh, Sylhet, Kamalgonj, *G. K. Deka s.n.* (ASSAM 36094, 36095).

4. **M. rostratum** (Roxb.) Balakr. in. J. Bombay nat. Hist. Soc. 67. 1: 66.1970. Pradhan, Ind. Orch. 2: 498. 1979; Chowdhery, Orch. Fl. Arunachal Pradesh 512. 1998; Seidenf. in Op Bot. 95: 126. fig. 74. 1988. *Aerides rostratum* Roxb. Hort. Beng. 1814: 63 *nom. nud.* Fl. Ind. 3 : 474. Oct. 1832. *Camarotis purpurea* Lindl., Gen. & Sp. Orch. 219. 1833. *C. pallida* (Lindl.) Lindl. in J. Linn. Soc.3 : 219 .1859. *C. rostratum* (Roxb.) Rchb. f., in Walp. Ann. Bot. Syst 6 : 881. 1864. *Sarcochilus*

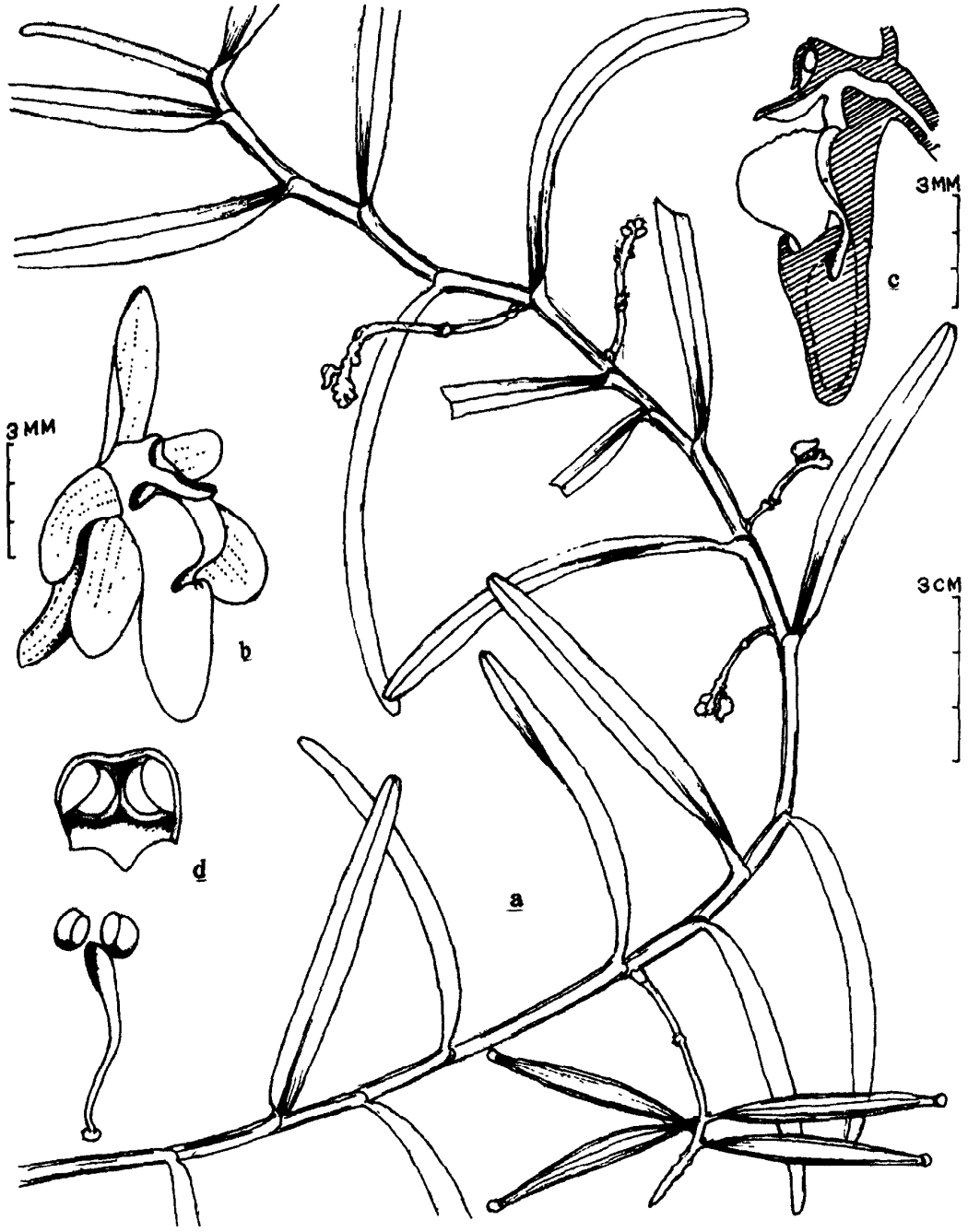


Fig. 3 : Micropera pallida (Roxb.) Lindl.:
a. plant; b. flower; c. I.S. of lip; d. anther; e. pollinia and stipe (fig. d-e enlarged) (*Kataki*-34584).

purpureus (Lindl.) Benth. ex Hook. f., Fl. Brit. India 6: 36. 1890. *Micropera purpurea* (Lindl.) Pradhan, Ind. Orch. 2: 498, 619. 1979. **(Fig. 4)**

Epiphytic. Stem simple or branched, upto 90 cm long, 0.3–0.6 cm thick, covered with sheaths of fallen leaves. Leaves 5-11 × 0.9-1.5 cm, linear, coriaceous, bilobed, toothed or notched at apex. Inflorescence opposite to the leaf axil, 8-22- flowered, 5-14 cm long. Bracts very small, persistent. Flowers 1.5–2 cm across, pale-purple or pink. Sepal 8-10 × 2-3 mm, oblong, obtuse. Petals 8-10 × 3-4 mm, oblong, obtuse, 3-5-nerved. Lip 7-10 mm long, strongly laterally compressed, hatchet shaped, without side lobes, the sac with a strong, included recurved spine under the tip. Column very short, beak of column 6-8 mm long, sigmoid. Pollinia globose, stipe 6-8 mm long. Pedicel and ovary 8-15 mm long, glabrous.

Type : Bangladesh, Sylhet, *M. R. Smith Ann.* 1811, Roxburgh drawing no. 2348.

Fl. & Fr. : May – June.

Distrib. : India: Arunachal Pradesh, Assam, Meghalaya, Mizoram; Bangladesh; Thailand.

Specimen examined : Assam : Mandakata, Kurua R.F., *P. Kalita* 756 (ASSAM). Kamrup, Lokra, *G. Panigrahi* 9631. Meghalaya : Khasi hills, Mumloo, 12.5.64, *A. S. Rao* 36759; Cherrapunjee, 26.6.68, *S. K. Kakati* 37212, 36759; June 2000, *S. Phukan* 60269; *A. S. Rao* 50815; Mowsmai, *G. K. Deka s.n.* (ASSAM 36091, 36092); *T. M. Hynniewta* 50880; Umkhlaw, 31.5.1965, *N. P. Balakrishnan* 42562; Jaintia hills, Jowai–Jorain, 20.5. 1970, *N.P. Balakrishnan* 50247 (ASSAM). Nagaland : Kohima, *T. M. Hynniewta s.n.* (ASSAM 56083).

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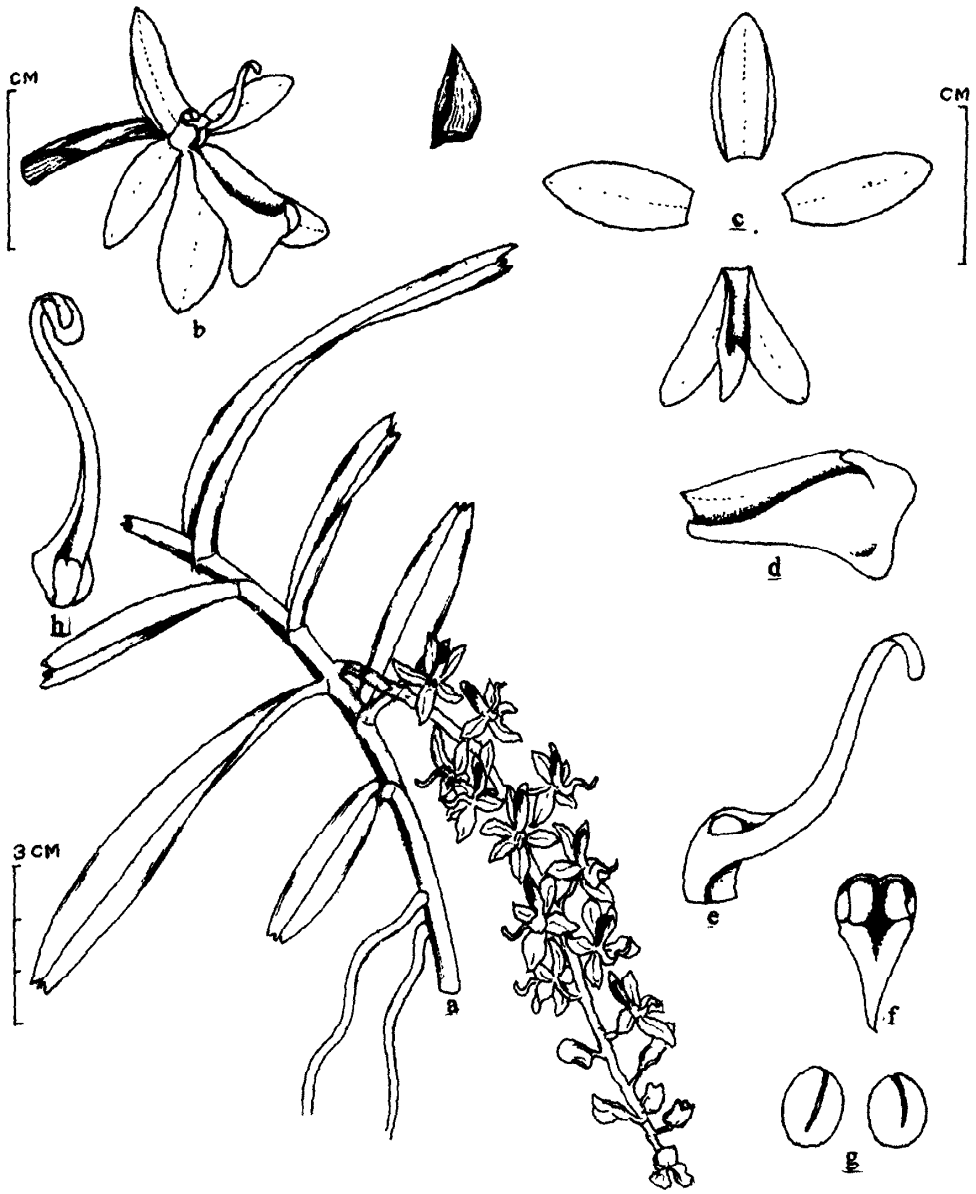


Fig. 4 : Micropera rostratum (Roxb.) Balakr.:
a. plant; b. flower; c. sepals & petals; d. lip; e. column; f. anther; g. pollinia; h. stipe of pollinia (fig. d-h enlarged).

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भारत में जीनस माइक्रोपेरा लिंडल (आर्किडेसी)

संध्याज्योति फूकन

भारतीय वनस्पति सर्वेक्षण, पूर्वी परिमंडल, शिलांग

सार संक्षेप

आर्किडेसी कुल के जीनस माइक्रोपेरा लिंडल की दक्षिण पूर्व एशिया में व्याप्त लगभग पन्द्रह जातियों में मात्र चार जातियाँ भारत में है । इस शोध पत्र में उसके पर्यायवाची, आकारिकी, फेनोलोजी एवं व्याप्ति सहित टैक्सोनॉमिक विवरण दिए गए है ।