

Myrmechis bakhimensis D. Maity, N. Pradhan & G. G. Maiti, a new species of Orchidaceae from Sikkim Himalaya

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Abstract *Myrmechis bakhimensis* D. Maity, N. Pradhan & G. G. Maiti (Orchidaceae), a new species from Sikkim Himalaya, is described and illustrated. The new species most closely resembles *M. japonica* (Reichb.) Rolfe and *M. chinensis* Rolfe with similar shape and size of lamina and the “T”-shaped epichile, but differs by the perfectly glabrous and eciliate floral bract, 5-nerved dorsal sepal, and emarginate, mucronate epichile.

Key words *Myrmechis*, *Myrmechis bakhimensis* D. Maity, N. Pradhan & G. G. Maiti, Orchidaceae, new species, Sikkim Himalaya.

A specimen of *Myrmechis* Bl. was collected by the senior author from the evergreen temperate forest at an altitude of 3400 m belonging to the jurisdiction of Kanchenjunga Biosphere Reserve, Sikkim in July 25th, 1999. Basically due to the presence of “T”-shaped epichile having emarginate and mucronate apex, this collection is not matched with that of the commonly known species *M. pumila* (Hook. f.) Tang & Wang found both in the Sikkim and Bhutan Himalayas (Pearce & Cribb, 2002; Chen et al., 2006). Further, based on studies of the genus *Myrmechis* for its described six species from South-east Asia, especially China, Japan and Thailand (Mabberley, 1997), this specimen was considered to be a new one. This collection is strikingly different from that of *Myrmechis pumila* by having “T”-shaped lip instead of “Y”-shaped nature. However, further observed characterisation of the reproductive parts reveals its affinities with *M. japonica* and *M. chinensis* where the “T”-shaped lip has subquadrate basal calli.

This new taxon is described and illustrated along with a comparison for few important characters with its two related species.

Myrmechis bakhimensis D. Maity, N. Pradhan & G. G. Maiti, sp. nov. Fig. 1

Differt a *M. japonica* (Reichb.) Rolfe bracteis floralibus perfecte glabris, eciliatis; sepalo dorsali 5-nervi; petalis obliquis; epichilio mucronato, emarginato; ovarioque glabro.

Type: India. West Sikkim, Bakhim to Dzungri, alt. 3400 m, terrestrial, along track sides, in moist, shady, humid situation, in evergreen temperate forest, 1999-07-25, *D. Maity 21921* (holotype, CAL; isotypes, BSHC, PE).

Terrestrial herb, to 12 cm tall; stem elongate, creeping at base and rhizomatous, erect above, ca. 2 mm in diam., glabrous; leaves few; lamina orbicular-ovate, 5–9 × 5–8 mm, margin entire, apex rounded, glabrous, nerves prominent, abruptly narrowed into a petiole; petioles to 5 mm long, sheathing at base, scarious; stem often interrupted by scale leaves; peduncle ca. 10 mm long, with few scattered hairs; flower solitary or two, terminal, white, resupinate; floral bracts oblanceolate-oblong, 4–4.5 × 2 mm, acute, 1-nerved, shorter than

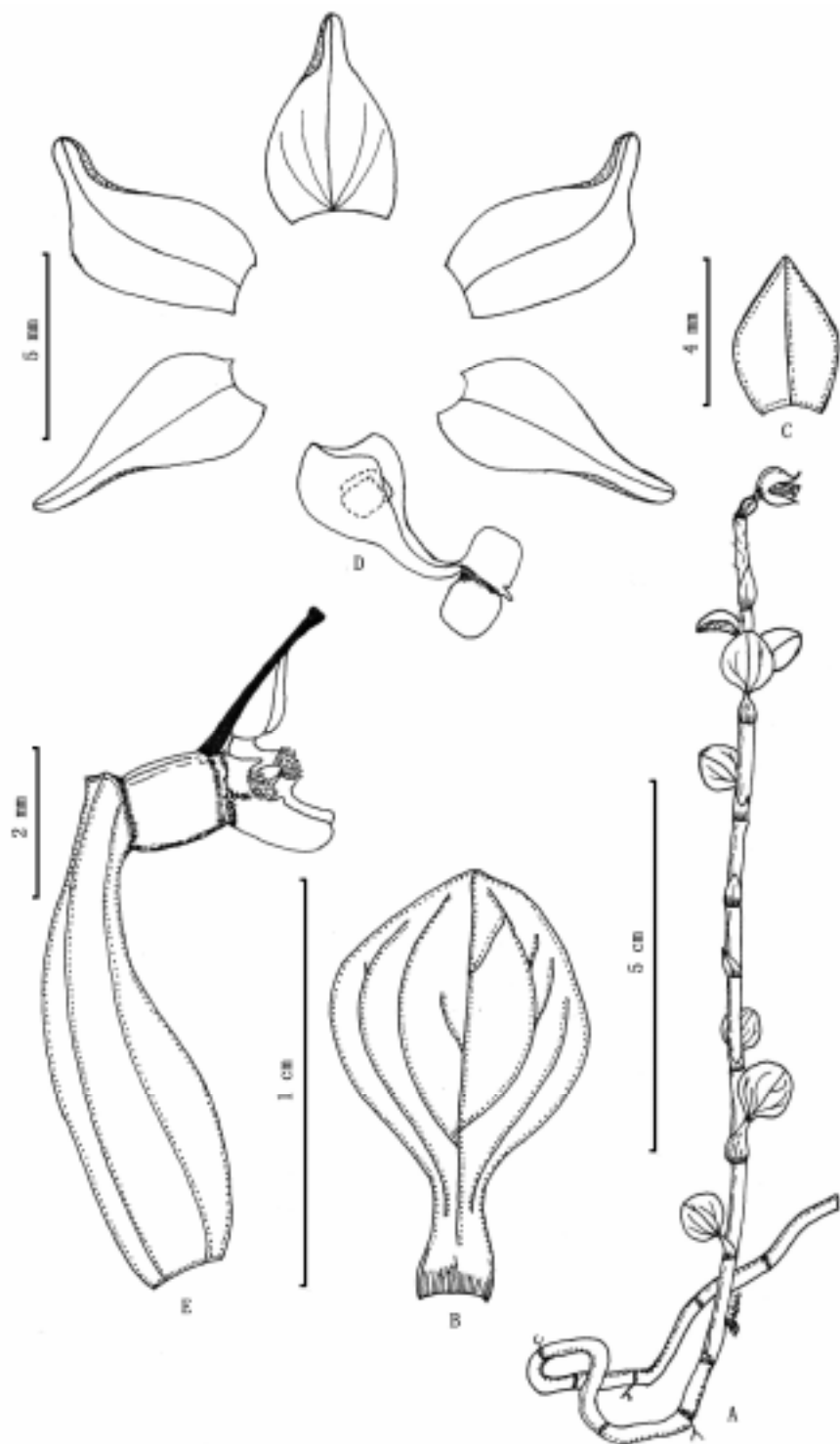


Fig. 1. *Myrmechis bakhimensis* D. Maity, N. Pradhan & G. G. Maiti. A, habit; B, leaf (magnified); C, floral bract; D, floral parts; E, column with ovary. Drawn by D. Maity from the holotype, *D. Maity 21921*, CAL.

ovary, perfectly glabrous, eciliate; sepals connate at base to 1 mm; dorsal sepal ovate, 5–5.5 × 3 mm, concave, apex obtuse, 5-nerved; lateral sepals obliquely ovate, 6–6.5 × 3 mm, apex obtuse, 1-nerved; petals oblong-elliptic with abruptly narrowed apex, oblique, ca. 6 × 3 mm, entire, apex obtuse, recurved, 1-nerved; lip 3-partite, ca. 6 × 3 mm; hypochile widely saccate at base, with two quadrate calli adaxially; mesochile ca. 2.5 mm long, narrowly clawed, convolute, smooth, glabrous; epichile divided into 2 quadrate lobes, “T”-shaped with the mesochile, ca. 3 × 1.5 mm, apex slightly lobed with a distinct mucro; mucro 0.5–0.7 mm long; column cylindric, ca. 1 mm long; ovary terete, twisted, ca. 6.5 × 2 mm, glabrous. Fl. Jul.

This new taxon, *Myrmechis bakhimensis*, is closely related to *M. japonica* (Reichb.) Rolfe and *M. chinensis* Rolfe in respect of shape and size of lamina and the “T”-shaped epichile, but differs in features of floral bract, nervation of dorsal sepal and apex of epichile. In *M. bakhimensis* the floral bract is perfectly glabrous with eciliate margin while in *M. japonica* and *M. chinensis* it is sparsely villous and ciliate. The dorsal sepal is 5-nerved in the new species but 1-nerved in other cases. Moreover, the shape of petal is oblong-elliptic in the new taxon but ovate and ovate-oblong in *M. chinensis* and *M. japonica*, respectively. The new species is also distinct by having smooth, glabrous mesochile and much wider epichile (ca. 3 mm wide) with its emarginate, mucronate apex.

The size of epichile (3–3.5 mm wide) is alike in *M. japonica* and the new taxon but narrower (1–1.5 mm wide) in *M. chinensis*. The emarginated and mucronate nature of epichile signifies the independent status of the new taxon from its closely allied species.

This new taxon possesses some similar features with that of *M. glabra* Bl. by having glabrous bract and truncate epichile, while it is distinctly different by the presence of orbicular-ovate lamina with rounded apex and the scattered hairy scape. *M. glabra* is with ovate-cordate lamina having acute apex and glabrous scape and bract.

This species is known only from its type locality, Bakhim, West Sikkim. The specific epithet refers to the type locality of the species.

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References

- Chen X-Q, Zhu G-H, Ji Z-H, Lang K-Y, Luo Y-B, Cribb P C. 2006. Orchidaceae. In: Wu Z-Y, Raven P H eds. Flora of China. Beijing: Science Press; St. Louis: Missouri Botanical Garden Press.
- Mabberley D J. 1997. The Plant Book: A Portable Dictionary of Vascular Plants. 2nd ed. Cambridge: Cambridge University Press.
- Pearce N R, Cribb P C. 2002. Flora of Bhutan 3 (3. The Orchids of Bhutan). Royal Botanic Garden, Edinburgh. 99–101.