

## *Nepenthes platychila* (Nepenthaceae), a New Species of Pitcher Plant from Sarawak, Borneo

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### Abstract

*Nepenthes platychila* Chi.C. Lee, a new species from the Hose Mountains in central Sarawak, Borneo, is described and illustrated.

### Introduction

The Hose Mountains is a remote and relatively isolated mountain range located in central Sarawak between the watersheds of Sungai Baleh and Sungai Balui. Botanically, the region was poorly known in the last century largely due to difficulty of access and the extremely rugged topography. Recent expeditions, however, indicate that the region is a very important centre of diversity for *Nepenthes* in Sarawak from where a total of eight taxa have been so far recorded (Lee, 2002).

During an expedition to the Hose Mountains in December 2001, on the lower slopes of Gunung Bukit Batu, plants of an unusual taxon of *Nepenthes* were found that did not match any described in Clarke (1997). The extraordinary form of the pitcher peristome immediately suggested that these plants belong to a previously unrecognized species. Specimens collected on this expedition were deposited in the Kuching Herbarium (SAR) and comparison with material from previous collections and other possibly related species, confirmed that it is new. The description below follows the conventions of Danser (1928) as maintained by Cheek and Jebb (2001).

*Nepenthes platychila* Chi.C. Lee, *sp. nov.*

*Nepenthi fuscae* Danser *similis sed peristomio lato expanso, operculo lato ovato, facie inferiore plana (sine appendice lateraliter appplanata) differt* –  
**TYPUS:** Gunung Bukit Batu, Hose Mountains, Sarawak, 30 Nov 2001, C. Lee S 87071 (SAR).

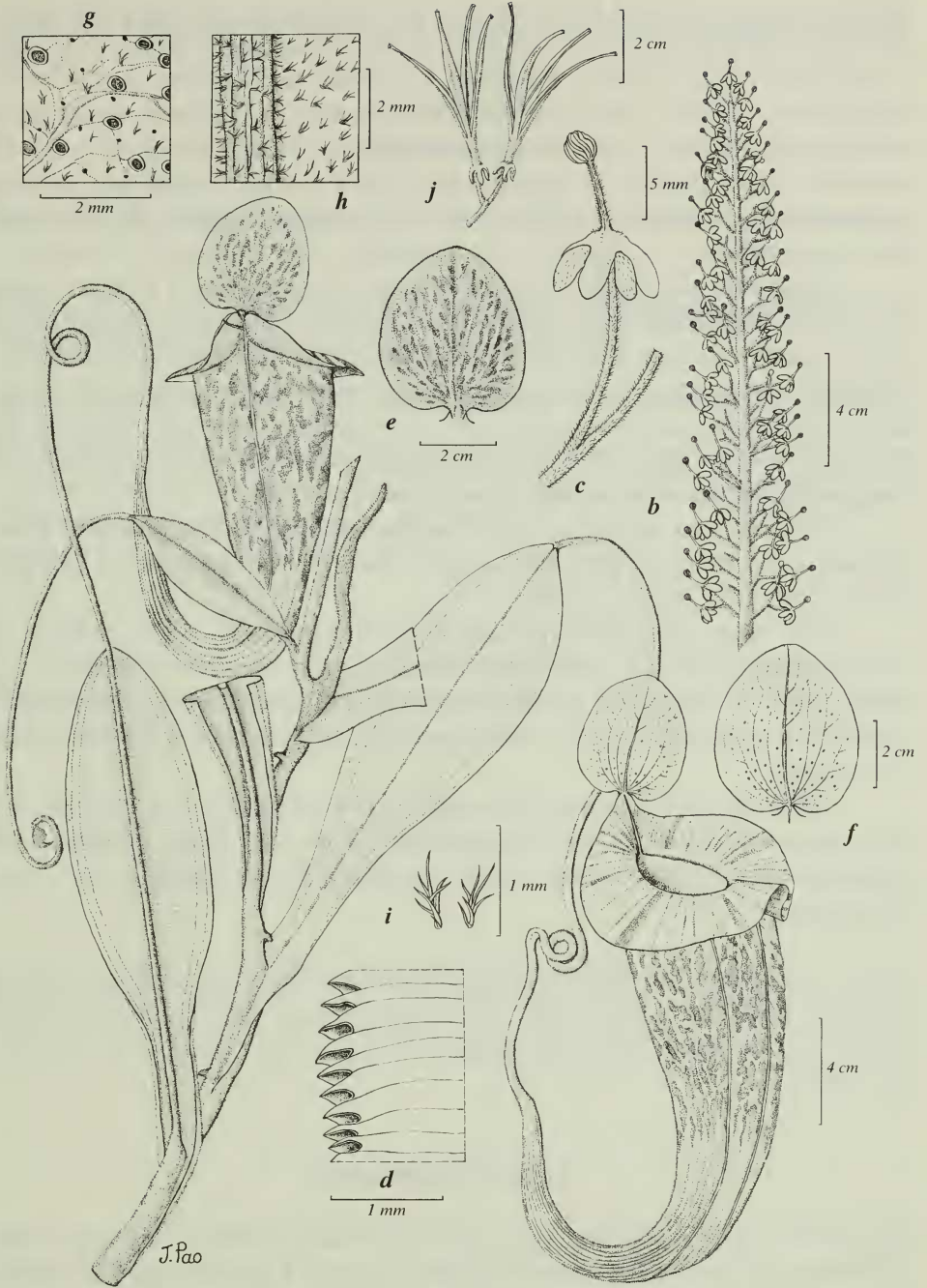
**Figure 1**

Terrestrial or epiphytic climber to 4 m tall. Indumentum present on all parts, very dense on stems, tendrils, young pitchers and inflorescence, consisting of red-brown hairs 0.5–1 mm long, branched at the base; upper surface of leaf lamina fairly densely pubescent with short white stellate hairs 0.1–0.3 mm long. Climbing stems terete, 5–8 mm diam., internodes 6.5–8.5 cm long, axillary buds spike-like. Leaves of the climbing stems coriaceous, blade oblong-elliptic, 10.5–18 by 3.8–4.6 cm, dark greyish-green occasionally purple-green, upper pitchers light-green with abundant red streaks, peristome yellowish-green with numerous purple-red streaks of varying width, apex usually obtuse, occasionally sub-peltate, base clasping the stem for 1/2–2/3 its circumference and decurrent for more than half the internode, gradually attenuate into the winged petiole; longitudinal veins 2 or 3 on each side of the midrib, pennate veins reticulate and inconspicuous. Lower pitchers unknown. Upper pitchers narrowly infundibular in lower half, broadly infundibular in upper half; 12.5–16.5 by 5.1–6.5 cm; ventral ridges indistinct; mouth sub-orbicular to slightly ovate, horizontal in front and elevated towards lid; peristome flattened and expanded, to 3.3 cm wide, ribs indistinct; inner surface glandular throughout; spur inserted 1 mm from base of lid, 2 mm long; lid ovate or orbicular-ovate, rounded or slightly cordate at base, to 4.8 x 4.4 cm, lower surface without appendages, often slightly keeled in the basal part of the midrib, with scattered small crater-like glands most abundant on either side of the midrib. Bracts absent. Male inflorescence: peduncle 8 cm long, rachis 23 cm long; partial peduncles 2-flowered, to 4 mm below the branch, with each branch to 12 mm long; sepals ovate-elliptic, 3–4 mm long; staminal column 4–5 mm long. Female inflorescence not seen. Infructescence similar in structure to the male inflorescence, bearing up to c. 100 fruits; peduncle to 12.5 cm long, rachis to 16 cm long; mature fruits 3.5–4.5 cm long.

*Distribution:* Borneo: SARAWAK - Kapit Division, Hose Mountains, Gunung Bukit Batu and Bukit Sindap.

*Habitat:* Growing epiphytically in moss forest or terrestrially on steep sandstone slopes among *Dicranopteris* and *Dipteris* ferns, 900–1400 m elevation.

*Notes:* This species is readily distinguished by the unique form of its peristome, which is greatly expanded and almost completely smooth on its upper surface. The size of the peristome is variable within the species, but, in its most extreme form, it is so wide that the entire pitcher is hidden



**Figure 1.** *Nepenthes platychila* Chi.C. Lee

a. Habit with upper pitchers; b. male inflorescence; c. male flower; d. detail of peristome, internal view; e. upper surface of lid; f. underside of lid; g. detail of glands of lower lid surface; h. detail of hairs on underside of lid; i. detail of hairs; j. fruit. (a-i from S 87071, j from S 87074).

beneath it when viewed from above. The only other species in the genus bearing a similar peristome structure is *Nepenthes jacquelineae* C. Clarke, T. Davis & Tamin of West Sumatra, but these two species appear to be otherwise unrelated. It is unclear what purpose the unusual structure of the peristome serves, but it may provide a convenient landing platform for potential insect prey or as suggested by Clarke (2001) for *N. jacquelineae* assist in luring insects by making the pitcher mouth appear brighter than the surroundings.

*Nepenthes platychila* is clearly a member of Danser's Regiae group, and within this group it is probably most closely related to *N. fusca* Danser by the similar pitcher shape and other vegetative features. However, the distinctive peristome and broad lid without appendages separate these two taxa, and indeed serve to distinguish this species from all others in the Regiae group. Other unusual characteristics of this species include the long pedicels and extraordinarily large mature fruits.

Observations in the field, and the fact that no rosette plants or lower pitchers have yet been collected, suggest that this species enters a climbing stage relatively early in growth.

This species is sympatric with *Nepenthes fusca*, *N. pilosa* Danser, *N. reinwardtiana* Miq., *N. tentaculata* Hook f., and *N. veitchii* Hook f. A single plant at the type locality displaying characteristics intermediate between *N. platychila* and *N. fusca* may be a natural hybrid between these two species.

Although so far known from only a few localities, it is unlikely that this species is restricted to Gunung Bukit Batu and Bukit Sindap, since suitable habitat conditions occur extensively throughout the Hose Mountains.

*Other specimens examined:* SARAWAK: Hose Mountain, Sungai Temiai, Mujong, 1260 m, 6 Dec 1991, *Lai, Jugah, Awg. Enjah S 64084* (KEP, SAR); Bukit Sindap, Hose Mountains, 1100 m, 1 Dec 2001, *C. Lee S 87074* (K, SAR).

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