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Nepenthes alzapan (Nepenthaceae), a new species from Luzon, Philippines

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This paper forms a part of the studies towards a World Monograph of *Nepenthes* Linnaeus (1753: 955) building on a Skeletal Revision of *Nepenthes* (Jebb & Cheek 1997) and the Flora Malesiana account (Cheek & Jebb 2001). In the course of studying previously unseen specimens from the Philippines, four sheets (*Ramos & Edanõ* 45690, K, NY, UC, US), of a species previously unknown came to light from Mt Alzapan. The oblong, glabrous, ligulate, sessile leaf-blades with 5–7 pairs of nearly evenly spaced longitudinal nerves placed the species unambiguously in the Insignes group of Danser (1928) which is restricted to the Philippines apart from one species, *N. insignis* Danser (1928: 314), in New Guinea and, more ambiguously, *N. northiana* Hooker, J.D. (1881: 717) in Borneo (Cheek & Jebb 2001).

The Insignes group are also characterised by more or less broadly cylindrical upper pitchers with a length: breadth ratio of 3 or 4:1 (constricted at the waist in *N. ventricosa* Blanco (1837: 807) which bear a broad peristome, semi-circular in section, the inner edge of which is prominently toothed, the outer attenuating in thickness until it is membranous. The lower surface of the pitcher lid lacks an appendage. The nectar glands are usually transversely elliptic, non-perithecoidal and are absent from the midline, being restricted to two incurved lateral bands.

In the key to Philippine species of *Nepenthes*, Cheek & Jebb (2001) the species described below as *N. alzapan*, keys out as the small-pitchered *N. bellii* K.Kondo (1969: 653) of Mindanao. The two taxa appear similar in terms of overall dimensions of the pitchers. However, the upper pitchers of *N. bellii*, while broadly similar to those of *N. alzapan*, differ significantly in their finer peristome, and sparse lid glands (Table 1). In practice *N. alzapan* being restricted to Luzon, is unlikely to be confused with *N. bellii*, which is restricted to Mindanao. It is more likely that its leaves, stems and inflorescences might be identified as *N. ventricosa*, the only other species of this group in Luzon. However the upper pitchers of *N. ventricosa* are much larger and longer than in *N. alzapan*, 9–16 × 3–8cm and hour-glass shaped, lacking fringed wings, and the lid is narrowly elliptic 4–6 × 1.8–2.25 cm.

TABLE 1. The major characters separating *N. alzapan* and *N. bellii*

	N. bellii	***N. alzapan***
Stems	Terete, or slightly angular, 3–5 mm diam. Not winged	Sharply triangular, 5–7 mm diam. Winged
Leaf width	1–1.8 cm	1.5–2.5(–3.4) cm
Upper pitchers	Infundibuliform 7.3–7.5 × 2–2.5 cm	Subglobose to globose–infundibuliform, 6.5–6.8 × 4.2–5 cm
Peristome ribs	0.7 mm apart	1.5 mm apart
Pitcher lid nectar glands	<10	70–200+
Male inflorescence size	10–15 × 1 cm	31.5–42 × 1.5–2 cm
Flowers per inflorescence	ca. 40	80–110
Pedicel length	3–4 mm	7–8(–10) mm
Staminal column	ca. 1.5 mm long, glabrous	2–2.5 mm long, hairy

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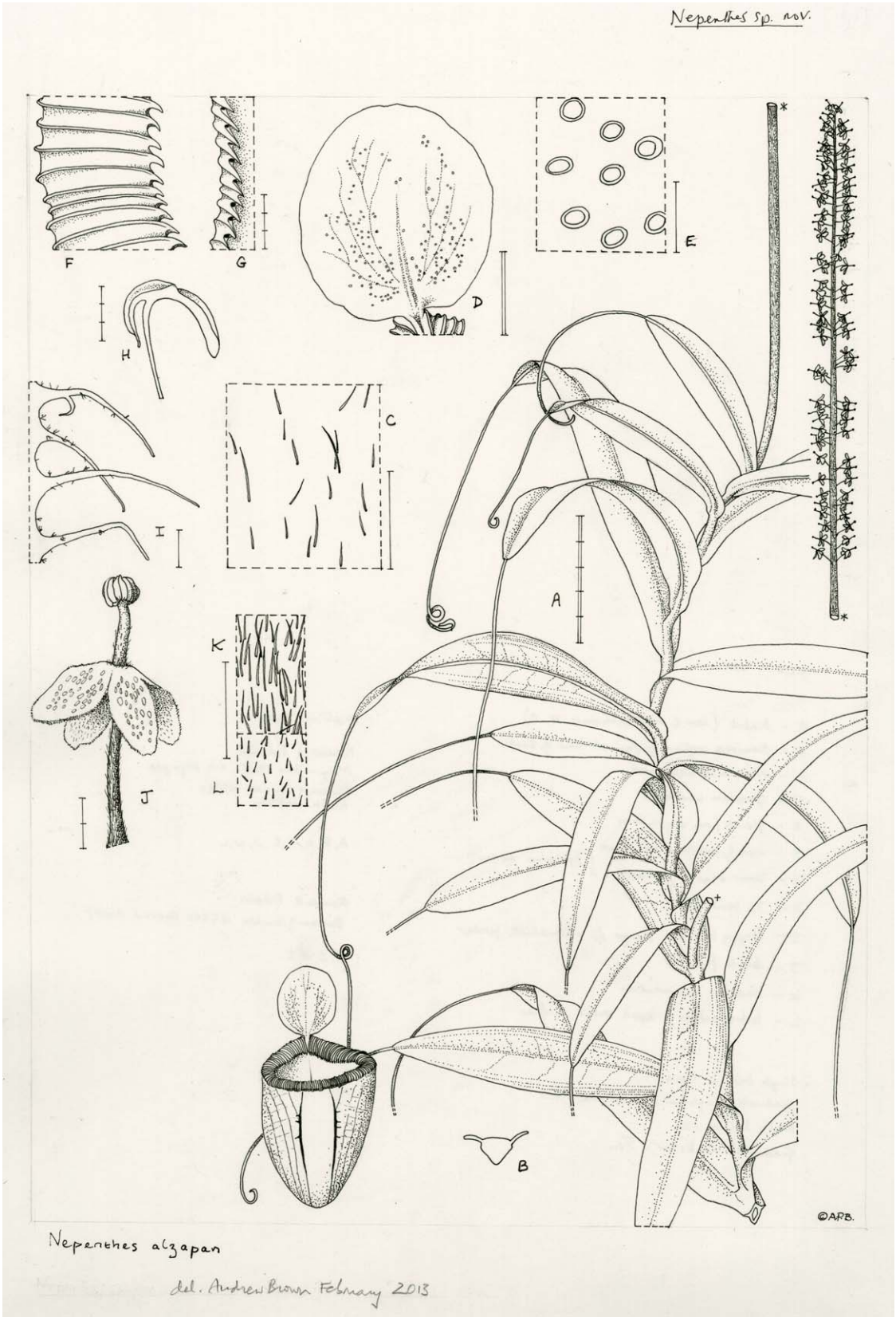

FIGURE 1. Nepenthes alzapan **A** habit, with upper pitcher and male inflorescence; **B** transverse section of stem at base of leaf insertion; **C** hairs on outer pitcher wall; **D** lid of upper pitcher, lower surface; **E** nectar glands from lower surface of lid; **F** peristome, view from above; **G** peristome, inner edge, showing teeth; **H** peristome, transverse section, inner edge to right; **I** detail of fringed wings of upper pitchers; **J** male flower; **K** rhachis indumentum; **L** tepal indumentum, outer surface.**A–E** & **J–L** from Ramos & Edanõ in BS 45690 (NY)**; F–I** from Ramos & Edanõ in BS 45690 (K). Scale bars: single=1 mm; graduated single bar = 2 mm and 3 mm; double = 1 cm; graduated = 5cm. All drawn by ANDREW BROWN.

Nepenthes alzapan Jebb & Cheek, *sp. nov.* Type:—PHILIPPINES. Luzon, "Tayabas Prov., Mt Alzapan", male fl. 7 June 1925, *Ramos & Edanõ 45690* (holotype K!; isotypes NY!, UC!, US!) (Fig. 1).

Diagnosis:—*A* Nepenthes bellio *caulibus acute trigonis atque conspicue alatis (nec teretibus nec leviter angularibus, nec alatis), ascidiis superioribus globosis, 6.5-6.8 x 4.2-5cm, (nec infundibuliformis, 7.3–7.5 × 2–2.5cm); inflorescentia masculi 31.5–42 × 1.5–2cm (nec 10–15 x 1 cm) differt.*

Description:—*Terrestrial climber* (probably) to at least 0.4 m tall. *Stems* alabaster to pale brown-coloured, acutely triangular in transverse section, 5(–7) mm diam., two of three angles extended into wings up to 3–4 mm wide, decurrent from the leaves, internodes 1.3–2 cm long, glabrous but with scattered sessile red -coloured glands. *Leaves* coriaceous, sessile, ligulate–oblong, (7–)8–13.5 × 1.5–2.5(–3.4) cm, apex acute, base clasping the stem for 2/3 its circumference, decurrent almost to the node below as a wing up to 4mm wide. Longitudinal nerves 5–7 on each side of the midrib, almost evenly scattered. Pennate nerves irregular, oblique. Indumentum as stem. *Lower pitchers* not recorded. *Upper pitchers* subglobose to globose-infundibuliform, 6.5–6.8 × 4.2–5 cm, with moderately sparse appressed simple hairs 0.2–0.5 mm long; wings present only for 5–17 mm of the pitcher length, at the midpoint or apex, 1–2 mm wide, with fringed elements 1.5 mm apart, 3–4mm long with moderately sparse simple or basally 2–3-branched hairs 0.1–0.15 mm long; mouth suborbicular, forming the broadest part of the pitcher; peristome subcylindrical to flattened, 6–10(–14)mm broad, ribs 1.5 mm apart, about 0.25 mm high, outer margin entire, revolute, inner margin dentate, teeth curved, 0.5–0.75 mm; lid elliptic, 2.5–2.7 × 2.2–2.3 cm, apex rounded, base truncate; lower surface lacking appendages, midline thickened and lacking nectar glands which occur only in two curved lateral bands, each with 35–110 glands, densest at base of the lid, where 3 per mm², nectar glands slightly transversely elliptic or suborbicular 0.3–0.5 × 0.3–0.5mm, with a thin marginal rim 0.05 mm thick; sessile red-coloured glands 0.05–0.07 mm in diameter, about 4 per mm², spur not recorded. *Male inflorescence* 31.5–42 × 1.5–2.5 cm, indumentum dense, completely covering the surface, hairs simple, bronze-coloured, 0.15–0.35 mm long; peduncle 20–22.5 cm long, 3–4.5 mm diam.; rhachis 11.5–20 cm long, with partial-peduncles 80–110, 1-flowered; bracts inconspicuous, at apex of inflorescence only, about 0.2 mm long, inserted 0.3–1.5 mm from junction with rhachis; pedicels 7–8(–10) mm long; tepals red, narrowly elliptic, 3.5 × 1.5–1.8 mm, lower surface and margins completely covered in sinuous thin-walled bronze-coloured hairs about 0.1 mm long, apices round; staminal column 2–2.5 mm long, with thinly scattered ± patent copper-coloured hairs 0.25–0.35 mm long; anther-head globose, about 1.5 mm diam. Female inflorescences, infructescences and seed unknown.

Etymology:—The epithet *alzapan* refers to Mt. Alzapan, the type locality.

Distribution & ecology:—Philippines, Luzon, Sierra Madre Mts., Mt Alzapan, submontane mossy forest, 1800 m a.s.l.

Conservation:—*Nepenthes alzapan* is known only from three individuals at most, at a single location on an island which has seen high-levels of habitat-loss in the twentieth century (Sohmer & Davis 2007). The species appears not to have been seen alive since 1925, and may already be extinct as is thought to be the case with *N. robcantleyi* Cheek (2011: 678). *Nepenthes alzapan* is here assessed as Critically Endangered under IUCN (2001), Criterion D. It is to be hoped that the species will be rediscovered at the type location and perhaps additional locations and that it will not prove to be so rare or as threatened as existing data suggest. However Sohmer & Davis (2007) document two other species, *Psychotria alzapaniensis* Sohmer & A. Davis (2007: 123) and *Psychotria longissima* Quisumbing & Merrill (1928: 206) which are also known only from *Ramos & Edanõ* type specimens made in 1925 at the same location. Both species they assess as Critically Endangered, if not extinct (Sohmer & Davis 2007).

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