

Paraboea middletonii (Gesneriaceae), a new species from Thailand

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ABSTRACT. *Paraboea middletonii* Triboun, a new species from Thailand, is described and illustrated.

KEY WORDS: Gesneriaceae, new species, *Paraboea*, Thailand.

INTRODUCTION

The genus *Paraboea* (C.B. Clarke) Ridl. was revised recently (Xu *et al.*, 2008) and was subsequently expanded to include *Trisepalum* C.B. Clarke and *Phylloboea* Benth. (Puglisi *et al.*, 2011). Since then ongoing work to revise the genus for the Flora of Thailand has already led to the description of twenty new species (Triboun & Middleton, 2012) and recent collections suggest there are yet more species to be described. These recent efforts have mainly focused on the collection of flowering material from localities from which earlier but inadequate (usually only fruiting) and unidentifiable herbarium material was known. One such collection was made during a 2012 expedition to Northern Thailand with the recollection of flowering material from a limestone rock near the road to the head office of Doi Phu Kha National Park. This new material, with both flowering and fruiting specimens, is used here to describe a new species, *Paraboea middletonii*. I name it in honour of Dr D. J. Middleton, a plant taxonomist from the Royal Botanic Garden Edinburgh and the leader of the Thai Gesneriaceae research team.

Paraboea middletonii Triboun, *sp. nov.*

Similar to *Paraboea tomentosa* Barnett in its moderate size, coriaceous leaves, dense covering of multicellular glandular hairs on the leaves above, dense covering of brownish wooly hairs beneath,

congested compound dichasium, and twisted fruits but differs in its prominent and finely reticulate tertiary venation on the underside of the leaves, showy leafy bracts and white corolla. — Type: Thailand, Nan, Doi Phu Kha National Park, 1210 m alt., 15 Aug. 2012, *Middleton, Karaket, Suddee & Triboun 5606* (holotype **E!**, isotypes **BK!**, **BKF!**). Fig. 1.

Lithophytic perennial herb. *Stem* erect, 10–30 cm tall, 1–1.3 cm in diam., densely covered with long multicellular glandular and brown arachnoid hairs. *Leaves* 4–10, opposite decussate, congested at the apex of the stem; petiole (2–)4–7(–12) cm long, sulcate, densely covered with long multicellular glandular hairs; blade coriaceous, oblong, elliptic or ovate, 7–16 x 3–8.5(–10) cm, apex acute, base cordate, cuneate or obtuse, margin serrate or crenate, densely covered with multicellular glandular hairs above, densely covered with brown hairs beneath, secondary veins 7–9 on each side of midrib, tertiary veins reticulate, prominent beneath, venation densely covered with long multicellular glandular hairs. *Inflorescences* 1–6, axillary near apex, compound dichasia, ca 3 orders of branching; peduncle 5–9.5 cm long, 2.5–4 mm in diam., densely covered with brown arachnoid hairs; bracts leafy, orbicular to elliptic, 1.5–2 x 1–1.8 cm, apex obtuse or rounded, densely covered with light brown arachnoid hairs; the first order branch axis 3.5–4 cm long, ca 2 mm in diam., densely covered with light brown hairs, subtended

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Figure 1. *Paraboea middletonii* Triboun: A. Habitat; B. Habit; C. Inflorescence; D. Young infructescence. Photographed by Pramote Triboun.

by leafy bracts, with or without a paired flower at the branching point, the upper orders densely congested, 1–1.5 cm long; flowers paired; pedicels 0.7–1 cm long, densely covered with light brown hairs. *Calyx* 5-lobed, equal in size, covered with multicellular hairs, lobes fused at base for ca 1 mm; lobes narrowly linear, 3–4 x 1–1.3 mm, acute, brownish green. *Corolla* white, campanulate, tube 0.8–1.2 cm long, white except at the connection of the filaments to the tube where there are pinkish spots; lobes widely ovate to suborbicular, ca 3.5 x 4–5.5 mm. *Stamens* 2, inserted near base of corolla tube; filaments white, ca 6 x ca 2 mm, slightly curved; anthers white, 4–4.5 x ca 1.5 mm; staminodes 3, ca 2 mm long, the median one not apparent. *Ovary* 4–5 mm long, light green, glabrous; style enantiostylous, ca 6 mm, white; stigma capitate, white. *Capsule* narrowly cylindrical, 1.8–2.5 cm long, 1.5–2 mm in diam., twisted, glabrous. *Seeds* numerous.

Thailand.— NORTHERN: Nan.

Distribution.— Endemic to Thailand.

Ecology.— In shade on limestone rock, alt. 1,000–1,210 m.

Vernacular. — Sawet daen sruang (เสวตแดนสรวง) (coined by the author).

Proposed IUCN conservation assessment.— Critically Endangered (CR B1ab(iii)). This species is only known from the type locality, which is a small limestone outcrop right beside the road on the boundary of Doi Phu Kha National Park and with extensive agricultural areas beyond. The basal area of the outcrop shows considerable disturbance. There are estimated to be fewer than 500 plants in the population.

Additional specimens examined.— NORTHERN: Nan [Doi Phu Kha National Park, 2 Sept. 1999, *Middleton, Argent, Santisuk, Chayamarit, Pooma, Wongprasert, Pattarahirankanok, Ngernsangsarua, Boonthavikoon, Pasitpirom & Phonhai 144 (E!)*; *ibid.*, 15 Aug. 2012, *Middleton, Suddee, Karaket & Triboun 5606 (BK!, BKF!, E!, P!)*; *ibid.*, 7 Sept. 2011, *Triboun & Yothakaew 2413* in spirit collection (BK!).

Notes.— This species belongs to the *Paraboea rufescens* (Fanch.) B.L.Burt group of species with campanulate corollas, axillary cymes and an enantiostylous arrangement of stamens and pistil. Within this group of species it is closest to *Paraboea tomentosa* Barnett but differs in the characters given in the diagnosis above. *Paraboea tomentosa* was recognised as a variety of *P. rufescens* by Xu et al. (2008) but I raise it back to species rank based on the same morphological characters that Xu et al. used to distinguish the two varieties of *P. rufescens* (i.e. differences in indumentum, the size of the bracts, and the structure of the inflorescence) plus more recent observations that the corolla colour in *P. tomentosa* is always pinkish or reddish and that of *P. rufescens* is always bluish or purplish. From the *Paraboea rufescens* group as a whole, *P. middletonii* is most readily distinguished by the white flowers, the tertiary venation distinctly reticulate, the pinkish spots at the connection of the filaments to the corolla tube marks, and the shorter and slender capsules.

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