

Heterostemma menghaiense (Apocynaceae), a new record for Laos and Thailand

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ABSTRACT

Heterostemma menghaiense is reported as a new record for the flora of Laos and Thailand. A description based on Thai and Lao collections, photographs and notes are provided.

KEYWORDS: Asclepiadoideae, Ceropegieae.

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INTRODUCTION

The genus *Heterostemma* Wight & Arn. (Apocynaceae) with 30–40 species globally (Rodda, 2016) is distributed in India, Sri Lanka, Nepal, Bangladesh, China, Myanmar, Thailand, Laos, Vietnam, the Malesian region and Australia (Swarupanandan *et al.*, 1989; Forster, 1992). In Thailand, nine species are recorded (Thaithong *et al.*, 2018; Kidyoo, 2019; Agnihotri *et al.*, 2019; Kidyoo & Thaithong, 2019; Thammarong *et al.*, 2020). In neighbouring Laos, four species of *Heterostemma* were previously recorded (Newman *et al.*, 2007; Jin *et al.*, 2016; Thammarong *et al.*, 2019; Thammarong *et al.*, 2020).

During botanical surveys in Chiang Mai Province, northern Thailand in June 2020 and Houaphanh Province, northern Laos in June 2013, an unidentified *Heterostemma* species was collected. Based on the literature (Li *et al.*, 1995, Thaithong *et al.*, 2018) as well as comparison with specimens at HITBC, IBSC and KUN, it was later identified as *H. menghaiense* (Zhu & Wang) Gilbert & Li, a species previously known only from the extreme south of Yunnan Province, China. This species is a new record for the floras of both Laos and Thailand. Specimens have been deposited in QBG, NUoL and SING herbaria.

NEW RECORD

Heterostemma menghaiense (Zhu & Wang) Gilbert & Li, Novon 5: 9. 1995.— *Heterostemma villosum* var. *menghaiense* Zhu & Wang, Acta Bot. Yunnan. 16(1): 27, f. 2. 1994. Type: China, Yunnan, Xishuangbanna, Menghai, Mengsong, 1,000 m, 6 May 1989, H. Zhu & H. Wang 2443 (lectotype: HITBC [HITBC62875]; isolectotypes HITBC [HITBC62876, HITBC62877, HITBC62878], designated by Rodda, 2016). Fig. 1.

Robust climber to 15 m long, exudate white. *Stem* and branches densely brownish-yellow pubescent to pilose, hairs retrorse; internodes 7–16 cm long. *Leaves*: blade ovate to elliptic, 5.5–8.5 × 3–6.5 cm, densely pubescent to pilose on both surfaces, base cuneate or truncate or shallowly cordate, apex acuminate; lateral veins 4–5 pairs; petiole 1.5–2.5 cm, densely pilose. *Inflorescences* subsessile, umbelliform, 1–6-flowered, with only 1–2 open flowers; all parts up to sepals densely pubescent, almost tomentose; pedicels 1.6–2.2 cm long, densely pubescent. *Calyx lobes* oblong-triangular, 2.4–3 × 1.7–2 mm, densely pubescent outside, glabrous inside, apex rounded. *Corolla* rotate, 2.2–2.8 cm in diam., yellow, often with diffuse pale reddish-brown speckles, densely to sparsely pubescent outside, glabrous inside; lobes ovate-triangular, 6–7.5 × 5–6 mm, apex subacuminate.

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Corona flat and spreading over the corolla, 4–6 mm in diam.; lobes brownish red, oblong-ovate, 2.3–2.5 × 1.3–1.5 mm, raised in the centre; outer process apex rounded; middle part thicker with short projection. *Staminal column* ca 1.2 mm in diam. *Young follicles* divergent, elliptic to slightly lunate, 2.5–5 × 0.5–1 cm, densely pubescent.

Distribution.— China, Thailand & Laos.

Ecology & Phenology.— Collected from roadsides in evergreen forest and evergreen mossy forest, between 1,550 and 1,800 m altitude. Flowering and fruiting in June.

Specimens examined.— Thailand: Chiang Mai [Fang, Doi Ang Khang, 19°52'17"N 99°03'15.1"E,

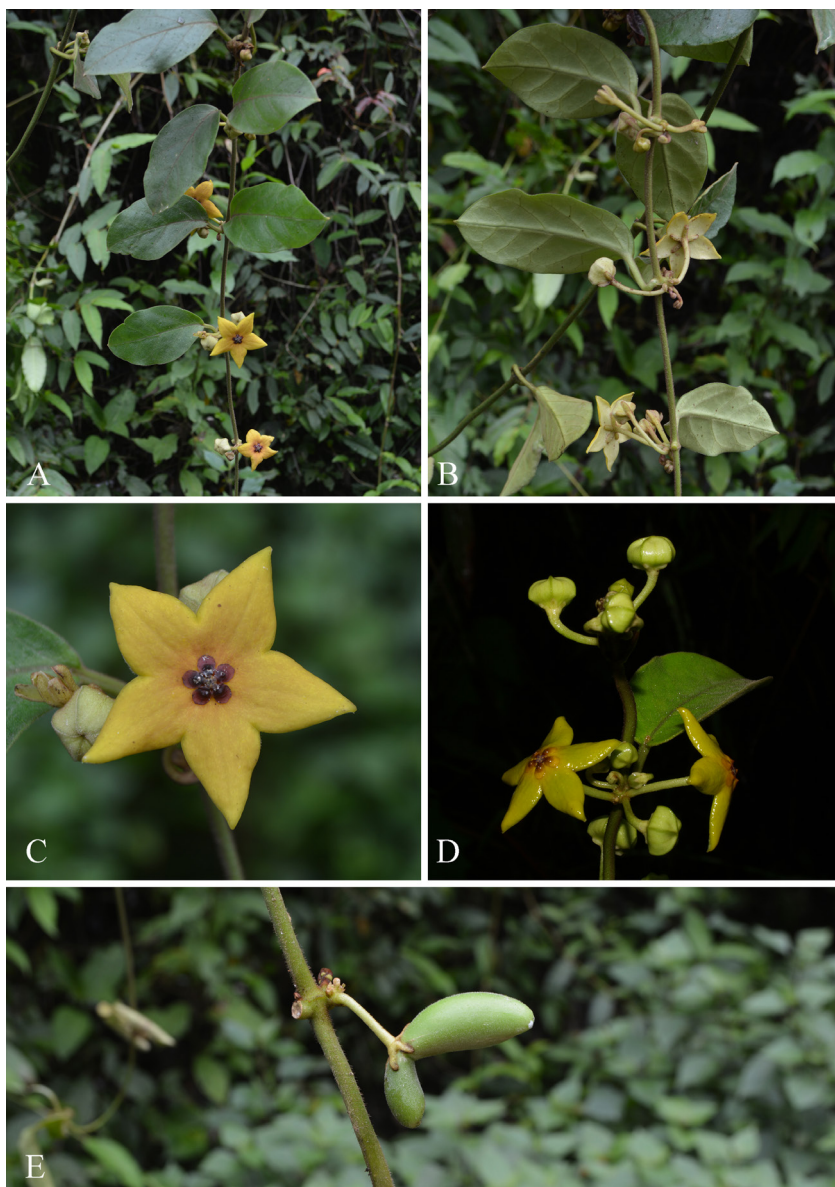


Figure 1. *Heterostemma menghaiense* (Zhu & Wang) Gilbert & Li: A. habit; B. inflorescences and leaves, from underneath; C. flower, top view; D. inflorescence and flower, side view; E. young follicle. A, B, C & E by Wittaya Pongamornkul based on Pongamornkul *et al.* 7176; D by Michele Rodda based on Leong-Škorničková *et al.* JLS-2523.

1,787 m, 16 June 2020 (fl. & fr.), *Pongamornkul et al.* 7176 (QBG)]. Laos: Houaphanh [Vieng Thong, Phou Louey side, Nam Et-Phou Louey Natural Protected Area, mt. ridges near Ban Phou Vieng, 20°04'08.5"N 103°27'35.3"E, 1543 m, 11 June 2013 (fl. & fr.), *Leong-Škorničková et al.* JLS-2523 (NUoL, QBG, SING)].

Notes.— This taxon was originally described by Zhu & Wang (1994) as *Heterostemma villosum* var. *menghaiense* from Yunnan, China at 1,000–2,000 m above sea level, occurring near streams. In Thailand, it is known only from Chiang Mai Province at 1,787 m in evergreen forest. In Laos, it was found in northern Laos, Houaphanh Province, along a ridge at 1,543 m, in evergreen mossy forest. It is similar to *Heterostemma succosum* Kerr, a species occurring in Thailand and Laos (Thammarong *et al.*, 2019), as both species have sessile or shortly pedunculate inflorescences, large (> 2 cm diam. when fresh) rotate yellow corollas, often with diffuse pale reddish-brown speckles. The two species can be separated because *H. menghaiense* has densely pubescent stems, leaves, petioles, pedicels and calyx, while *H. succosum* has only sparsely pubescent stems, leaves, petioles, pedicels and calyx. Further, the outer process of the corona lobe of *H. menghaiense* is rounded, while in *H. succosum* it is truncate to slightly retuse.

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