

***Maingaya malayana*, a new genus and species record for Thailand**

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ABSTRACT. *Maingaya malayana* Oliv. (Hamamelidaceae), a new genus and species record for Thailand, is described and illustrated.

KEY WORDS: *Maingaya malayana*, Hamamelidaceae, Thailand.

INTRODUCTION

Hamamelidaceae has 29 genera and 95 species, distributed throughout the Americas, eastern and southern Africa (including Madagascar), throughout Asia, NE Australia, and the Pacific Islands (Mabberley, 2008). The family Hamamelidaceae was studied for Thailand by Craib (1928), who enumerated two taxa: *Altingia siamensis* Craib and *Bucklandia populnea* R.Br. ex Griff. Phengklai (2001) recognised five genera of Hamamelidaceae for Thailand and Suddee & Middleton (2003) reported *Rhodoleia* as a sixth genus. *Maingaya* Oliv. is here reported as the seventh genus known from Thailand. It was named after Alexander Carroll Maingay, a magistrate stationed in Melaka (SW Peninsular Malaysia) around the middle of the 19th century. Although his official job was to manage the prison, he was very keen on botany and collected around 1600 plant specimens from Peninsular Malaysia. *Maingaya* is a monotypic genus previously thought to be endemic to Peninsular Malaysia (Vink, 1957). When first described, only small populations were known to occur on Penang Hill and in hill forest in Perak, in NW Peninsular Malaysia (Whitmore, 1973). Later, another population was discovered in a pristine patch of riverine forest in Negeri Sembilan, in the SW of Peninsular Malaysia (Dransfield, 1993). In Thailand, *Maingaya* has only been found in one locality near the Thai-Malaysia border in Yala.

DESCRIPTION

MAINGAYA

Oliv., Trans. Linn. Soc. 28: 517, t.44. 1873; Ridl., Fl. Malay Penins. 1: 691. 1922; Vink, Fl. Males., Ser. 1, Spermat. 5: 366. 1957.

Evergreen tree with bisexual flowers. *Leaves* entire, penninerved. *Stipules* small, early caducous, leaving annular scars. *Flowers* in dense, globose heads, free, sessile. *Calyx* closed in bud, before anthesis circumscissile, caducous, leaving a narrow annulus. *Petals* 5, linear-spathulate. *Stamens* 5, alternipetalous; filaments very short, stout; anthers basifixed, ellipsoid-obovoid, laterally flattened, with 4 pollen sacs, 2-celled, dehiscing laterally with 4 valves; connective produced into a curved adaxial horn and two abaxial teeth. *Staminodes* 5, epipetalous, adaxially horned similar to stamens. *Disk* 10-lobed. *Ovary* half-inferior, 2 celled, each cell with 1 pendent ovule; styles 2, very short, slender, stigma apical, minute. *Fruits* shortly and stoutly pedicelled, free, ovoid, 2-celled, 4-valved, woody, to about halfway enveloped by the receptacle. *Seed* 1 in each cell, wingless.

Maingaya malayana Oliv., Trans. Linn.Soc. 28: 517, t. 44. 1873; Clarke, Fl. Brit. India 2: 428. 1878; Ridl., Fl. Malay Penins. 1: 691. 1922; Vink, Fl. Males., Ser. 1, Spermat. 5: 366. 1957; Whitmore,

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Tree Fl. Malaya 2: 240. 1973. Type: Malaysia, Penang, West Hill, 1871, *Maingay s.n.* (holotype K 000843194). Fig. 1.

Tree, 6–27 m high. *Bole* strongly fluted to 6 m. *Bark* smooth; grey-brown. *Ultimate twigs* minutely stellate-pubescent, quickly glabrescent. *Leaves* elliptic to lanceolate-oblong or lanceolate, (7–)10–25 × (2–)3–11 cm, acuminate at the apex, slightly oblique, rounded or obtuse at the base, glabrous on either side, firmly chartaceous; midrib prominent above; nerves 7–10 pairs; petioles 12–25 mm, slightly thickened at base and apex, glabrous. *Stipules* tomentose. *Flower* heads ca 15-flowered. 2–2.5 cm in diam.; peduncle 1 cm or less. *Calyx* puberulous. *Petals* 8–12 × 1.5–2 mm long; horn 0.5–0.8 mm long, provided with an adaxial tooth. *Stamens* 5, free, rarely arranged in 2 whorls; staminodes slender, laterally flattened, nearly as long as the stamens. *Disk* lobes free, oblong, small. Free part of ovary grey-hirsute; styles less than 1 mm long. *Fruits* 10–15 × 8–12 mm; pedicels ca 0.5 cm long, inserted on the thickened apex of the peduncle; endocarp separating from the exocarp. *Seeds* narrowly ellipsoid, tapering to the apex, white.

Thailand.—PENINSULAR: Yala [Betong District, Ban Piyamit, 3 Feb. 2015, *Poopath et al.* 890 (BKF!, PSU!, K!, L!, E!)].

Distribution.— Peninsular Malaysia (Kedah, Perak, Penang, Negeri Sembilan).

Ecology.— In Thailand, this species has only been found in Yala at ca 900 m elevation near the Thai- Malaysia border.

Proposed IUCN conservation assessment.— A global conservation assessment is Vulnerable (VU B2ab(iii)). Previously, this species was only from small populations on Penang Hill and in hill forest in Perak. Another population was later discovered in a pristine patch of riverine forest in Negeri Sembilan. In Thailand it is only known by one individual tree. The overall Area of Occupancy is estimated to be less than 2,000 km², the distribution is very fragmented into four populations, and some of the known habitats are disturbed and degraded by human activity.

Note.— 1) The above description is based on the only known Thai collection and from other specimens from throughout the species' distribution range. The character states of Thai specimens fit well and do not differ significantly.

2) The fruit is a small woody capsule with two chambers and four valves. They persist on the trees long after all the seeds have fallen. Its simple leaves, which are not especially small or large and are pinnately veined and glabrous with an entire margin, along with its weakly kneed petiole, provide no specific features for easy identification. Therefore, the persistent fruits come in handy as a spot character in the field.

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Figure 1. *Maingaya malayana* Oliv.: A. inflorescence; B. bark; C. fruit.