

***Rothmannia macrophylla* (Rubiaceae), a new record for Thailand**

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ABSTRACT

Rothmannia macrophylla (Hook.f.) Bremek. (Rubiaceae), a new record for Thailand, is described and illustrated.

KEYWORDS: *Rothmannia macrophylla*, Rubiaceae, Thailand.

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INTRODUCTION

Rothmannia Thunb. is a genus of trees and shrubs, belonging to the tribe Gardenieae, subfamily Ixoroideae of the family Rubiaceae (Mouly *et al.*, 2014). There are about 40 species of *Rothmannia*, occurring in tropical and subtropical Africa, Myanmar, the Seychelles, Indochina, the Andaman Islands, South China, the Malay Peninsula, Java, Sumatra, Borneo and Papua New Guinea (World Checklist of Rubiaceae, 2016). Wong (1989) reported four species in Malaysia (*R. macrophylla* (Hook.f.) Bremek., *R. kuchingensis* (W.W.Sm.) K.M.Wong, *R. malayana* K.M.Wong, *R. schoemannii* (Teijsm. & Binn.) Tirveng.). Puff *et al.* (2005) reported eight species in Thailand, while Pooma & Suddee (2014) listed *R. eucodon* (K.Schum.) Bremek., *R. pulcherrima* (Kurz) Tirveng., *R. schoemanii*, *R. sootepensis* (Craib) Bremek., *R. thailandica* Tirveng., *R. uranthera* (C.E.C. Fisch.) Tirveng., *R. vidalii* Bremek. and *R. wittii* (Craib) Bremek. Here, *Rothmannia macrophylla*, is reported for the first time in Thailand after being found during fieldwork near the Thailand-Malaysia border in Yala province.

DESCRIPTION

Rothmannia macrophylla (Hook.f.) Bremek., K. Ned. Akad. Van Wet.-P60 (1): 7. 1957; Wong, Malay. Nat. J. 38: 46. 1984; Wong, Tree Fl. Malaya 4: 406. 1989; Kochummen, Tree Fl. of Pasoh Forest 385. 1997.— *Randia macrophylla* Hook. f.; Fl. Brit. India. 3: 114. 1880; Ridley, Fl. Malay Penins. 2: 78. 1923; Corner, Wayside Trees of Malaya 2: 648. 1988. Type: Malaysia, Penang, 1822, *Wallich s.n.* [Wall. Cat. no. 8304A] (lectotype **K**, K001125196, *vide* Wong, Malay. Nat. J. 38: 49. 1984). Fig. 1.

Shrub, 1–3 m high. *Bark* smooth; brownish black. *Twigs* scabrid to hispid. Branch leaves in pairs at the proximal nodes and completely vestigial at the distal nodes. *Leaves* broadly oblanceolate or narrowly elliptic to oblong, 17–33 × 3.5–13.5 cm; acute to acuminate at the apex, acumen 0.5–1 cm long, symmetric; cuneate to sometimes unequal at the base; upper surface sparsely pubescent, glabrescent to glabrous; lower surface scabrid to hispid; chartaceous to thin-coriaceous when dry; midrib on upper side slightly raised and sparsely pubescent,

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distinctly raised on lower side and pubescent, velvety hairy to hispid; secondary veins 10–21 pairs, flat to sunken on upper side and sparsely pubescent to glabrous, raised on lower side and pubescent to hispid; tertiary venation visible as a much-branched network between pairs of secondary veins; petiole subsessile or to ca 1.2 cm long, 1.5–3 mm thick, hispid to pubescent. *Stipules* broadly triangular, 10–17 × 4–9 mm, sparsely hispid to pubescent outside; long-acuminate at the apex, 8–12 mm long. *Inflorescence* a much reduced cyme; terminal but appearing axillary, 1–3 flowered; bracts broadly ovate, 7–8 × 2–5 mm, pubescent to hispid; peduncle subobsolete, to 0.2 cm long, 2–4 mm thick, pubescent to velvety hairy; pedicels very short, to 4 mm long, 2–4 mm thick. *Flowers* bisexual, calyx tube oblong-campanulate, 12–13 × 4–7 mm, pubescent, velvety hairy to hispid, hairs suberect to erect, surface distinct; calyx lobes 5–6, narrowly triangular, 12–30 mm long, pubescent to hispid; corolla infundibular, the

tube white tinged with maroon at the base on the outside, the tube 8–15 cm long, 3–3.5 cm wide at the throat, 3–5 mm wide at the base, speckled inside, outer surface pubescent to hispid, inner surface with hairy zone covering part of the tube from below the level of the anthers; corolla lobes 5, ovate to ovate-elliptic, acute at the apex, 5–5.5 × 2.2–2.3 cm, outside pubescent on the uncovered (in bud) part of the lobes, inside glabrescent to glabrous; anthers 5, fully included within the tube (inserted about 1/3 from top of tube), 20–27 mm long. *Ovary* ca 7 mm long, 2-celled, rarely 3-celled, placentas axile, numerous ovules; style ca 10 cm long, included, reaching just below the corolla mouth and the level of the anthers, pubescent to hispid or glabrous; stigma fusiform 2.6–2.7 cm long, slightly ribbed when dried. *Fruits* ellipsoid, 4–7 × 2–3.5 cm, hispid when young, becoming pubescent; fruit wall 1–2 mm thick; pedicels 0.5–3 × 3–5 mm. *Seeds* numerous, ellipsoid, 5–8.5 × 6–8 mm.



Figure 1. *Rothmannia macrophylla* (Hook.f.) Bremek.: A–B. habit and habitat; C–D. inflorescence and flowers. Photographed by Jareansak Sae Wai.

Thailand.— PENINSULAR: Yala [Klong Pado, 16 July 2011, *Wai 2087* (PSU!), Klong Wang Suda, 17 Aug. 2014, *Wai 2369* (BKF!, PSU!), Ban Sa Ho, 22 July 2015, *Poopath et al. 1260* (BKF!, PSU!)].

Distribution.— Peninsular Malaysia (Penang, type, Malacca), Singapore and Sumatra (Jambi, Central Sumatra, Riau and Riau Islands Province).

Ecology.— In Thailand, this species has only been found in lowland evergreen forest at ca 300–400 m elevation near the Thailand-Malaysia border.

Proposed IUCN conservation assessment.— *Rothmannia macrophylla* is only known from small populations scattered in West Malaysia and near the Thailand-Malaysia border, Singapore and Sumatra. The overall Area of Occupancy is estimated to be less than 2,000 km², mainly inside poorly managed protected areas and some of the known habitats are disturbed and degraded by human activity. We therefore propose the status for this species as Vulnerable (VU B2ab(iii)) according to IUCN Red list criteria (IUCN, 2012)

Notes.— This description relies heavily on other treatments, as only three specimens were available for examination in Thailand.

Notable characters of *R. macrophylla* are the leaves with very short petioles; the inflorescence a much reduced, 1–3 flowered cyme; the flower pedicels very short; the corolla infundibular, with the tube white tinged with maroon at the base on the outside, the tube 9–15 cm long, 3–3.5 cm wide at the throat, 3–5 mm wide at the base.

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