

Two new species of *Ixora* (Rubiaceae) from Thailand

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ABSTRACT. Two new species of *Ixora* (Rubiaceae) from Thailand, *Ixora phulangkaensis* and *I. megalophylla*, are described and illustrated.

KEY WORDS: *Ixora*, Rubiaceae, new species, Thailand.

INTRODUCTION

Ixora, belonging to the tribe Pavetteae (Rubiaceae, subfamily Ixoroideae), is a large genus of rain forest shrubs and small trees (De Block, 1998). This pantropical genus of circa 563 species is centred in Asia, with most species occurring in South-East Asia (Govaerts et al., 2012) and Malaysia reaching a maximum in Borneo (Bremekamp, 1937).

In Thailand, Craib (1932 and in Craib & Kerr, 1934) enumerated about 38 species and 7 varieties of *Ixora* in the *Florae Siamensis Enumeratio*. Boonbundral (1978) carried out a preliminary study of the genus *Ixora* in Thailand with 23 species and 3 varieties. More recently, Chamchumroon (2004a) revised 29 taxa of *Ixora* in Thailand followed by notes on two new *Ixora* species records for Thailand and a checklist of *Ixora* in Thailand (Chamchumroon, 2004b, Chamchumroon, 2006).

Further herbarium studies at BKF found undescribed species of *Ixora* from Khao Sok National Park, Surat Thani Province, Peninsular Thailand and from Phu Langka National Park, Nakhon Phanom Province, North-Eastern Thailand. These additional species bring the number of *Ixora* in Thailand to 29 species. The first of the new taxa, *Ixora phulangkaensis* Chamch., differs from other Thai *Ixora* species by hanging inflorescences with short peduncles, the lowermost bracts with stipules and flowers with articulated pedicels. The other new species, *Ixora megalophylla* Chamch. is

distinguished by large leaves and non-articulated pedicels.

DESCRIPTION

Ixora phulangkaensis Chamch., sp. nov.

Differing from other *Ixora* species in the pedunculate, pendulous inflorescences group with an inflorescence supported by a reduced leaf pair and differs from *Ixora pendula* Jack by its lanceolate bracteoles (vs. narrowly triangular bracteoles in *I. pendula*) and longer corolla lobes (6–7 mm long vs. 2–4 mm long) with short hairs. — Type: Thailand, Phu Langka National Park, Nakhon Phanom, 400 m alt., *S. Saengrit* 370 (holotype **BKF**). Figs. 1, 3A–B.

Shrub 2–3 m high; branchlets glabrous. *Leaves* with petioles 0.1–2 mm long, glabrous; blades elliptic-oblong, 5–15(–18) cm by 2–3.5(–4) cm; coriaceous; apex broadly acuminate; base cordate; nerves 6–8 pairs. *Stipules* with sheaths 3–5 mm long, cuspidate, glabrous outside; awn 2–3 mm long. *Inflorescences* pedunculate, pendulous, articulate compact; inflorescence supporting leaves 10–12 by 3–5 cm; axes, pedicels and calyces glabrous; central first order axis 0.5 cm long, lateral first order axes c. 1.0 cm long; ultimate flower triads with pedicellate flowers; pedicels 0.2–0.3 cm long, the pedicel of the central flower shorter than the pedicels of the lateral ones; bracteoles usually

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present, opposite at the base of the ovary, narrowly lanceolate, glabrous outside and with colleters inside, 2–3 by 1 mm. *Flowers* fragrant; pedicel 2–4 mm long. *Calyx* glabrous; tube 3–5 mm long; lobes lanceolate, 2–4 mm long. *Corolla* white or pale pinkish; tube 25–35 mm long; lobes 6–7 by 2–2.2 mm, elliptic, oblong with short spreading hairs near throat. *Stamens* anthers 3–5 mm long, pale yellowish. *Ovary* 1–2 mm; style exserted, 3–5 mm long; stigma 0.3–0.5 mm. *Fruits* globose, 7–8 mm in diam., green turning red to black. *Seeds* (1)–2 per fruit, 5–6 by 5 mm.

Thailand.—NORTH-EASTERN: Nakhon Phanom [Phu Langka National Park (*S. Saengrit* 370 – holotype **BKF**)]; Bueng Kan [Phu Wua Wildlife Sanctuary, *K. Wangwasit* 070705-36 (**BKF**)].

Distribution.—Endemic to Thailand and only known from Bueng Kan and Nakhon Phanom.

Ecology.—Near streams in dry evergreen forest; 100–200 m altitude.

Vernacular.—Khem kon pit (เข็มกันปีด) (General).

Etymology.—The species is named after the type locality.

Proposed IUCN conservation assessment.—Although this species is only known from two localities, as one is in a National Park and the other in Wildlife Sanctuary it has been assigned a conservation status of data deficient (DD).

Notes.—The species was recognized as *Ixora* sp. 3 in Chamchumroon (2006). *Ixora phulangkaensis* Chamch. belong to pendulous inflorescence group differs from *Ixora pendula* Jack by the cordate leaf base and lanceolate bracteoles (vs. narrowly triangular bracteoles in *I. pendula*) and longer corolla lobes (6–7 mm long vs. 2–4 mm long) with short hairs. The collection by *Pooma et al.* 2800, 27 Aug. 2001 but incompletely known (only young fruits and fallen flowers seen), might be allied to *I. lucida* but differs by being densely puberulous on the inflorescence.

***Ixora megalophylla* Chamch., sp. nov.**

Differing from other Thai species with sessile inflorescences by non-articulated pedicels, and distinguished from *Ixora butterwickii* Hole by its lanceolate calyx lobes (vs. narrowly triangular

lobes in *I. butterwickii*), broader corolla lobes (5–6 mm long vs. 1–1.5 mm long) and pedicels not articulated. — Type: Thailand, Khao Sok National Park, Surat Thani, 400 malt., *P. Panichyupakaranant* & *J. Panyo s.n.* (holotype **BKF**). Figs. 2, 3C–D.

Shrub 3–4 m high; branchlets glabrous. *Leaves* petioles 25–30 mm long, glabrous; blades coriaceous, elliptic-oblong, 29.5–41(–42) cm by 9.5–15(–16.5) cm; apex broadly acuminate; base cuneate; nerves 14–16 pairs. *Stipules* with sheaths 5–7 mm long, cuspidate, glabrous outside; awn 4–5 mm long. *Inflorescences* sessile, non-articulate, compact; axes and pedicels; central first order axis c. 0.5 cm long, lateral first order axes c. 2.0 cm long; ultimate flower triads with flower pedicellate; pedicel 0.2–0.3 cm long, the pedicel of the central flower shorter than the pedicels of the lateral ones; bracts lanceolate, 3–4 mm; bracteoles usually present, opposite at the base of the ovary, narrowly triangular to filiform, glabrous outside and with colleters inside, 0.2–0.3 by 0.1–0.2 cm. *Flowers* fragrant ovary and calyx densely pubescent with short hairs; calyx tube 2–3 mm long; lobes lanceolate, 2–4 mm long. *Corolla* white or pale pinkish, densely pubescent with short hairs; tube 25–35 mm long; lobes 5–6 by 5–6 mm, ovate, with long spreading hairs near the throat, tip obtuse or rounded. *Stamens* sessile, anthers 5–7 mm long, pale orange. *Ovary* 1–2 mm; style exserted for 9–10 mm; stigma 0.3–0.5 mm long. *Fruits* globose, 7–8 mm in diam., green turning red to black. *Seeds* (1)–2, usually 5–6 by 5 mm.

Thailand.—PENINSULAR: Surat Thani [Khao Sok National Park, *P. Panichyupakaranant* & *J. Panyo s.n.* (**BKF**)].

Distribution.—Endemic to Thailand, only known from Surat Thani.

Ecology.—evergreen forest; 100–200 m altitude.

Vernacular.—Khem yai (เข็มใหญ่) (General).

Etymology.—The species is named after the large leaves.

Proposed IUCN conservation assessment.—Although this species is only known from the type locality, as it is in a National Park it has been assigned a conservation status of data deficient (DD).

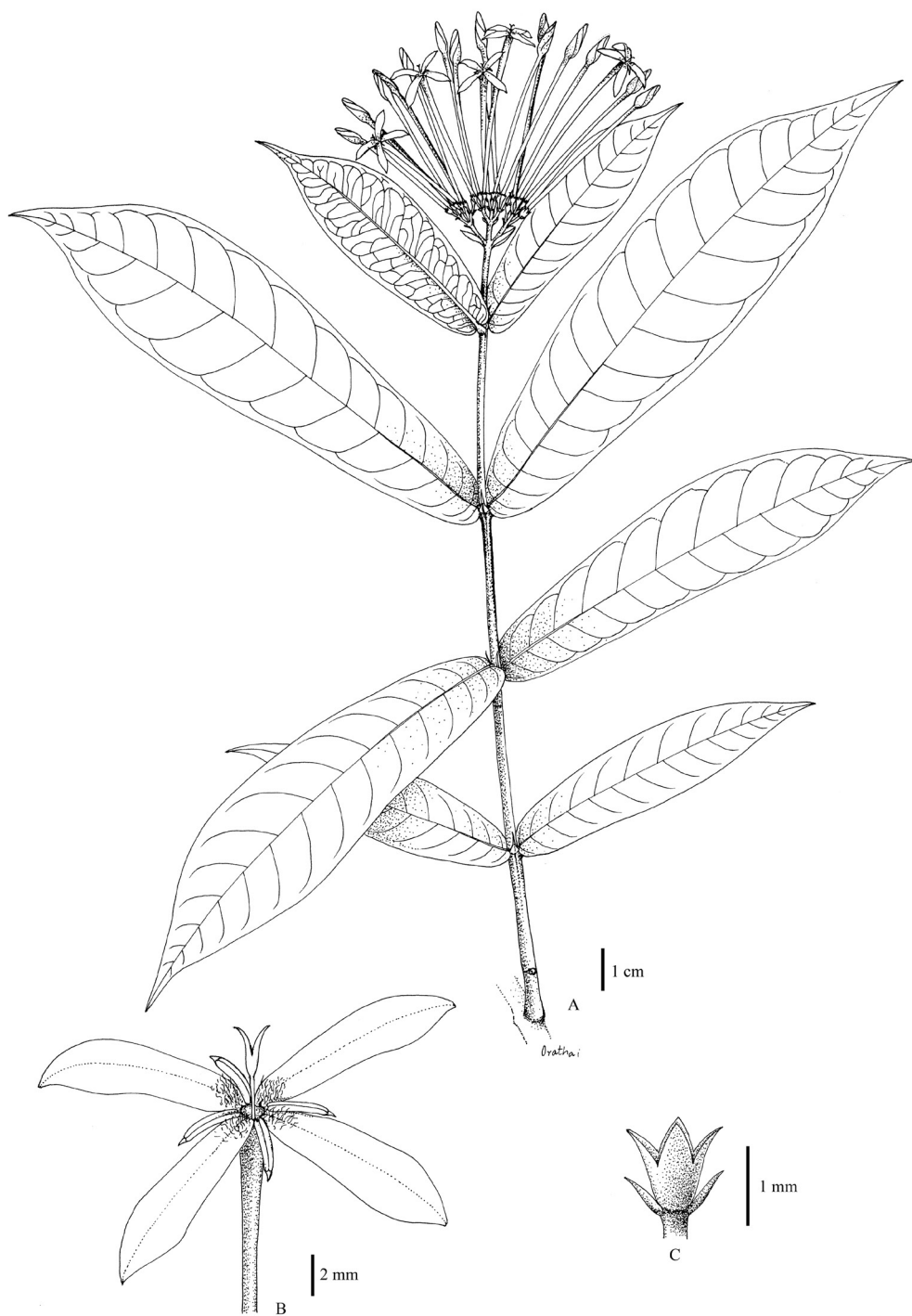


Figure 1. *Ixora phulangkaensis* Chamch. A. Leafy twig with flowers; B. top of flower; C. calyx and bracteoles; all from S. Saengrit 370 (BKF). Drawn by Orathai Kerdkaeo.

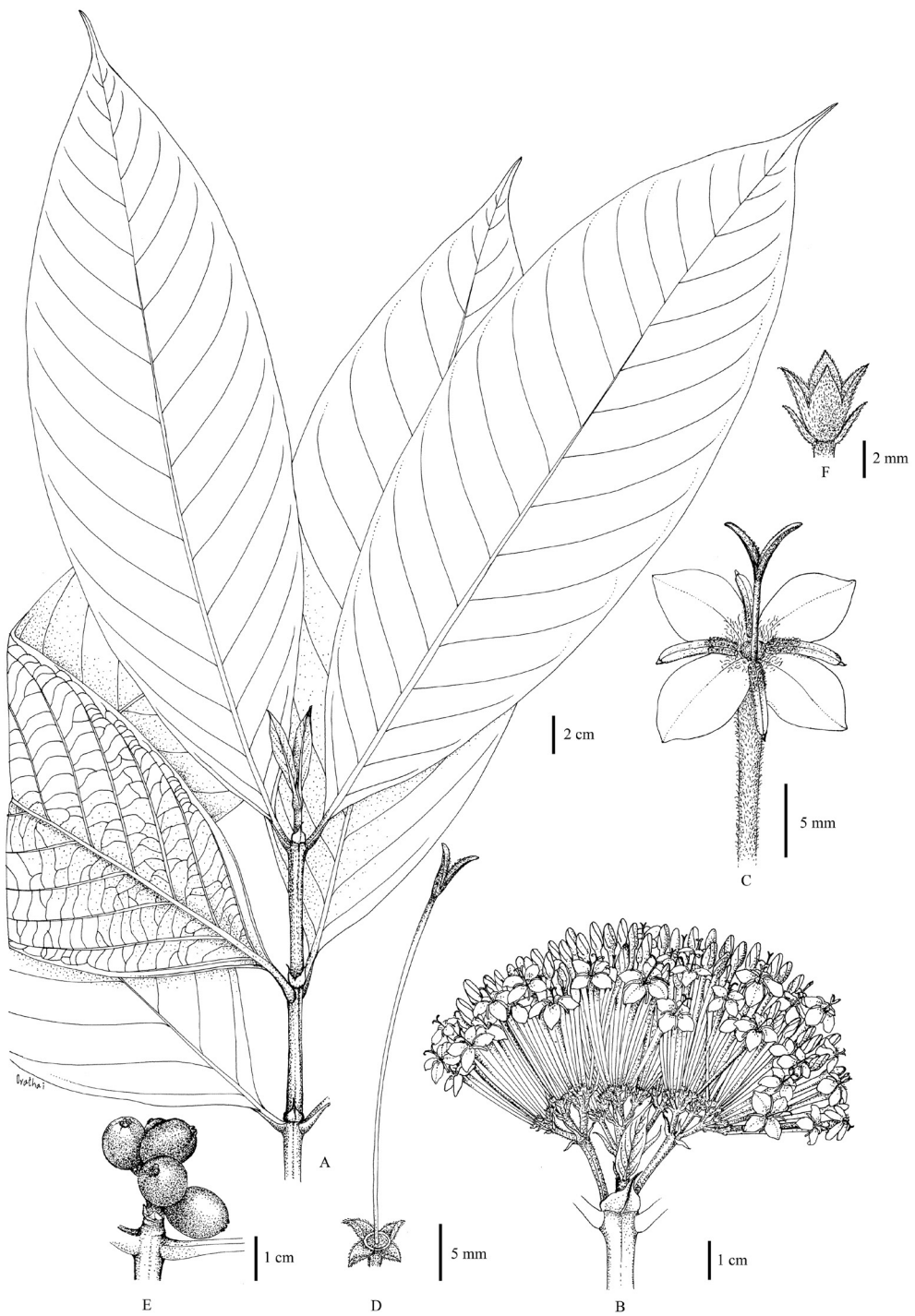


Figure 2. *Ixora megalophylla* Chamch. A. Leafy twig; B. inflorescence; C. top of flower; D. flower with corolla and androecium removed; E. fruits; F. calyx and bracteoles; all from P. Panichyupakaranant & J. Panyo s.n. (BKF). Drawn by Orathai Kerdkaeo.



Figure 3. *Ixora phulangkaensis* Chamch.: A. habit; B. inflorescences; *I. megalophylla* Chamch. C. habit; D. inflorescences.

Notes.— This species is very attractive due to pinkish flowers. It is most similar to two other species: *Ixora butterwickii* Hole but is distinguished by the larger leaves and non-articulated pedicels. *Ixora cibdela* Craib differs by the ovary and calyx being densely pubescent with short hairs and having non-articulated pedicels.

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