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A new species of *Wrightia* (Apocynaceae: Apocynoideae) from Thailand

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ABSTRACT. The new species *Wrightia siamensis* D.J.Middleton from Thailand is described and illustrated. A key to the native and commonly cultivated *Wrightia* species in Thailand is presented.

KEYWORDS. *Wrightia*, Apocynaceae, Apocynoideae, Thailand, new species.

The genus *Wrightia* R.Br. was last revised by Ngan (1965). He recognised 23 species distributed from East Africa to the Solomon Islands and from India and southern China to northeastern Australia. Since then a few new species have been described (Bahadur & Bennett, 1978; Middleton & Santisuk, 2001; Middleton, 2005), the status of some of Ngan's infraspecific taxa have been questioned (Forster, 1993; Middleton, 2005), and the species have been covered in a few regional revisions (Leeuwenberg, 1987; Forster & Williams, 1996; Middleton, 1999, 2007). It is interesting to note that within the genus there are a number of widespread species that occur in seasonal or evergreen forest and several other species with a very local distribution, mostly occuring on limestone. *Wrightia lanceolata* Kerr, *Wrightia viridiflora* Kerr and *Wrightia sirikitiae* D.J.Middleton & Santisuk are all endemic to Thailand and only found with limited distributions on limestone. A specimen from Phangnga province in southern Thailand has come to my attention and is another, currently undescribed, localised species of *Wrightia* growing on limestone.

Wrightia siamensis D.J.Middleton, **sp. nov.** Figs. 1–3. *Wrightiae lanceolatae* affinis sed corollae tubo angustiore cylindrico non leniter campanulato, coronae lobis antipetalis angustioribus et loborum alternipetalorum praesentia, et foliis magis ellipticis (non ut in *W. lanceolata* plerumque anguste ovatis) differt. Typus: Thailand: Phangnga: Muang Phangnga District, Phangnga Town, 8º 27'N, 98º 32'E, 22 April 2006, *Gardner & Sidisunthorn* ST2613 (holotype E; isotype BKF, K).

Shrub or treelet, 1–3 m tall. Twigs pubescent with curved hairs, glabrescent with age. Leaves opposite; petiole 2.5–6 mm long, puberulent with curved hairs; blade elliptic, 2.5–11.5 by 1.1–3.6 cm, 2.7–4.2 times as long as wide, apex acuminate to subcaudate, sparsely puberulent with curved hairs above and beneath, 8–13 pairs of secondary veins, slightly curved ascending to margin, tertiary venation laxly reticulate. Inflorescence terminal, 2–2.7 cm long, 3–5-flowered; pedicels 3–7 mm long, sparsely puberulent. Sepals ovate,

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3–3.2 by 1.7–1.8 mm, 1.7–1.9 times as long as wide, apex acute to obtuse, sparsely puberulent outside, with wide colleters inside, 1–2 per sepals, to 1 by 1 mm, apex dentate. Corolla rotate, pink to orange-pink; tube cylindrical, 4.8 mm long, 2.6 mm wide, glabrous outside and inside; lobes elliptic, 14–15 by 6.5–6.6 mm, 2.1–2.3 times as long as wide, apex rounded, sparsely papillose-puberulent inside and outside; corona of antipetalous lobes, alternipetalous lobes and tiny additional lobes, antipetalous lobes adnate to the corolla lobes except at margins, 4.2–4.3 mm long, apex acute, slightly dentate, glabrous, alternipetalous lobes bifid, 2.7–3 mm long, basally joined to the antipetalous lobes, additional tiny lobes at base of other corona lobes, 10 in total, ca 0.5 mm long. Stamens inserted at top of corolla tube with anthers entirely exserted, anthers adnate to the style head to form a cone-like appearance; filaments ca 1.1 mm long, almost as wide as long; anthers narrowly triangular, 7.2–7.5 by 1.8–1.9 mm, base sagittate, sparsely pubescent outside in the upper part. Gynoecium of two separate carpels united into a common style; ovaries 1.3 mm long, glabrous; style and style head 8.5 mm long. Fruit (immature) of paired follicles, 13.5–14 cm long, 4.5–5 mm wide, sparsely puberulent with curved hairs, lenticellate. Seeds not seen.

Distribution.— Only known from the type collection from Phangnga.

Habitat and Ecology.— Evergreen-deciduous forest on rugged limestone rock.

Conservation status.— This species is currently only known from one collection from Phangnga Province but in an area noted for its many limestone outcrops and islands. Most of these are fairly inaccessible and Simon Gardner (pers. comm.) reports that on the outcrop on which the collection here was found the plant is common. Therefore, at least for the time being, the conservation status should be regarded as Least Concern (LC).

Notes.— *Wrightia siamensis* has some similarities to another limestone endemic, *Wrightia lanceolata* from Sam Roi Yot National Park in Prachuap Khiri Khan, Thailand. It differs from that species in the narrower cylindrical corolla tube rather than the somewhat campanulate tube of *Wrightia lanceolata*; the narrower antipetalous corona lobes; the presence of alternipetalous corona lobes (although as these are joined at the base to the antipetalous lobes they may not actually be due to an additional row of lobes but rather to the same lobes with a very different shape); and with more elliptic leaves rather than the generally narrowly ovate leaves of *W. lanceolata*. It is likely that the photograph labelled as *Wrightia lanceolata* in the *Flora of Thailand* 7(1), plate V, no. 2, and recorded as having been taken in Krabi is actually rather this new species although I have seen no associated herbarium material.

There are now a total of 12 species of *Wrightia* known from Thailand, one of which, *W. antidysenterica* (L.) R.Br., is only known from cultivation. *Wrightia* sp. 1 in Middleton (1999) has since been described as *Wrightia sirikitiae* (Middleton & Santisuk, 2001). Two subspecies within *Wrightia pubescens* were recognised by Middleton (2005). The subspecies found in Thailand is *Wrightia pubescens* subsp. *lanitii* (Blanco) Ngan. A completely revised key to the species is here presented.

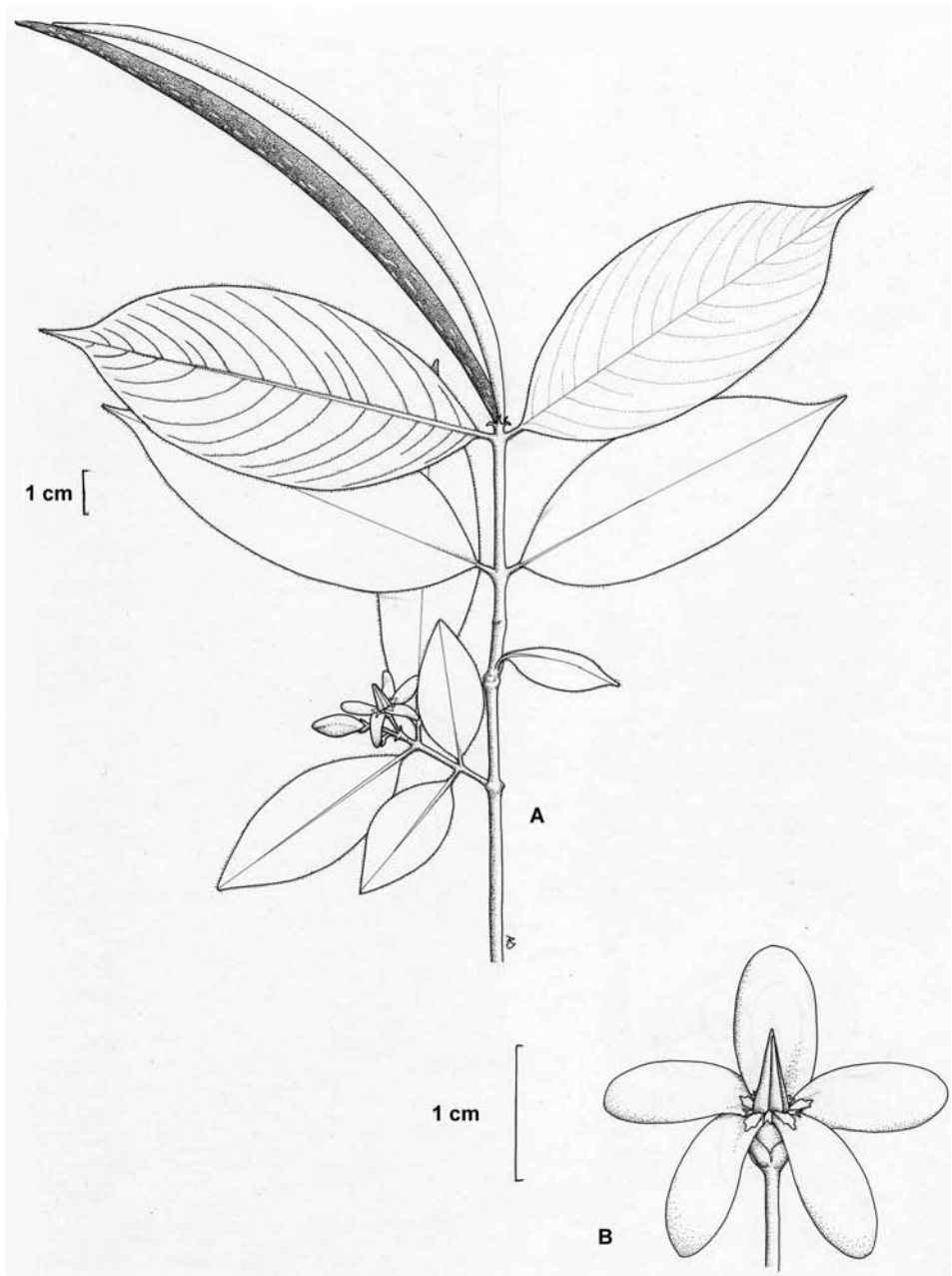

Figure 1. *Wrightia siamensis* D.J.Middleton. A. habit; B. flower. Drawn by A. Dorward.

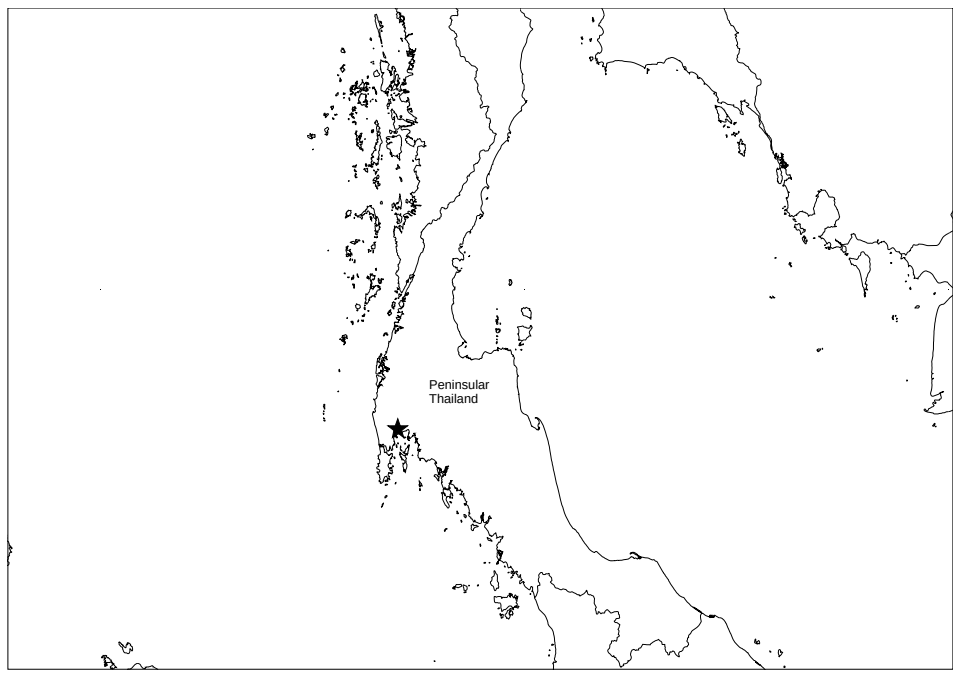

Figure 2. Distribution of *Wrightia siamensis* D.J.Middleton.

Figure 3. *Wrightia siamensis* D.J.Middleton. A. Flower; B. Fruit.

KEY TO NATIVE AND COMMONLY CULTIVATED *WRIGHTIA* SPECIES IN THAILAND

1. Corolla infundibuliform; stamens completely included in the corolla tube **W. dubia**
1. Corolla rotate or salverform; stamens clearly exserted from the corolla tube.
   2. Corolla salverform, tube > 10 mm long.
      3. Leaves densely pubescent beneath; tree to 6 m tall; fimbriate corona lobe apices each slightly swollen; native **W. sirikitiae**
      3. Leaves glabrous beneath; shrub or treelet to 2 m tall; corona lobe apices not swollen; cultivated **W. antidysenterica** [cultivated]
   2. Corolla salverform, rotate or subrotate, tube < 8 mm long.
      4. Corona absent **W. religiosa**
      4. Corona present at base of corolla lobes.
         5. Carpels fused, fruits consequently appearing solitary.
            6. Corona of one antipetalous whorl only **W. coccinea**
            6. Corona of two whorls: antipetalous and alternipetalous.
               7. Antipetalous corona lobes about as long as stamens, puberulent inside; fruit not lenticellate, usually minutely puberulent **W. pubescens**
               7. Antipetalous corona lobes much shorter than stamens, glabrous inside; fruit lenticellate, usually glabrous **W. arborea**
         5. Carpels free, fruits consequently paired.
            8. Corolla tube < 3 mm long; corona at least partly fimbriate.
               9. Alternipetalous corona lobes clearly shorter than the antipetalous; anthers glabrous on back **W. viridiflora**
               9. Alternipetalous corona lobes ± same length as antipetalous; anthers usually pubescent at base on back **W. laevis**
            8. Corolla tube ≥ 3 mm long; corona not fimbriate.
               10. Corolla white; corona ca 1 mm long **W. lecomtei**
               10. Corolla orange, red or pink; corona > 2 mm long.
                  11. Corolla tube cylindrical; antipetalous corona lobes ca ½ width of corolla lobes; 10 tiny additional corona lobes present **W. siamensis**
                  11. Corolla tube somewhat campanulate; antipetalous corona lobes more than ¾ width of corolla lobes; additonal corona lobes absent **W. lanceolata**

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