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Willughbeia tenuiflora (Apocynaceae: Rauvolfioideae), a new record for Thailand

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ABSTRACT. *Willughbeia tenuiflora* Dyer ex Hook.f. is newly recorded for Thailand. A key to the five species of *Willughbeia* in Thailand is provided.

KEY WORDS: *Willughbeia tenuiflora*, Apocynaceae, new record, Thailand.

INTRODUCTION

The account of the Apocynaceae for the Flora of Thailand was published by Middleton (1999) and an update, to include new records and species found since 1999, was published by Middleton (2009). In addition several more new species of Apocynaceae have also been published (Middleton, 2010). None of these new records or species included additions to the genus *Willughbeia* but during field work by the first author in the Sankalakhiri Range in Betong District, Yala, *Willughbeia tenuiflora* Dyer ex Hook.f., previously known from Peninsular Malaysia, Singapore and Sumatra, was discovered. This species can be identified using the key below.

KEY TO THE *WILLUGHBEIA* SPECIES IN THAILAND

1. Corolla tube inflated and much wider than head in bud, 1.2–3 mm long; inflorescence delicate **W. angustifolia**
1. Corolla tube inflated only around anthers, not noticeably wider than head in bud, mostly more than 3.5 mm long; inflorescence robust
  2. Leaves with conspicuous tertiary veins parallel to the major secondary veins **W. edulis**
  2. Leaves without conspicuous tertiary venation or with tertiary veins perpendicular to the secondary veins
    3. Leaves with 17–30 pairs of secondary veins; inflorescence rufous-brown pubescent; calyx lobes rufous-brown pubescent **W. tenuiflora**
    3. Leaves with 5–20 pairs of secondary veins; inflorescence glabrous or white puberulent; calyx lobes glabrous or white puberulent
      4. Leaves not glaucous beneath; corolla tube < 9 mm long, lobes < 11 mm long **W. coriacea**
      4. Leaves glaucous beneath; corolla tube > 9 mm long, lobes > 12 mm long **W. grandiflora**

Willughbeia tenuiflora Dyer ex Hook.f., Fl. Brit. India 3: 625. 1882; Ridley, J. Straits Branch Roy. Asiat. Soc. 33: 83. 1900; Boerl., Bull. Inst. Bot. Buitenzorg 5: 6. 1900; King & Gamble, J. Asiat. Soc. Bengal 74, 2: 396. 1907; Merrill, Bibl. Enum. Born. Pl.: 496. 1921; Ridley, Fl. Malay Penins. 2: 325. 1923; Masamune, Enum. Phan. Born.: 626. 1942; Markgr., Blumea 20: 413. 1973; Middleton, Blumea 38: 18. 1993; Turner, Gard. Bull. Singapore 45: 37. 1993; Turner, Gard. Bull. Singapore 47: 131. 1997 (‘1995’); Middleton, Fl. Males. ser. I, 18: 435. 2007; Middleton, Fl. Penin. Malaysia, ser. II, Seed Plants 2: 112. 2011.— *Ancylocladus tenuiflorus* (Hook.f.) Kuntze, Rev. Gen. Pl. 1: 412. 1891. – Type: *Maingay 1049* (lecto. **K**, designated by Middleton (1993); iso. **L**, **A**, **K**), Peninsular Malaysia. Fig. 1.

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Woody climber with white latex. *Branchlets* terete to subquadrangular, rufous-brown pubescent to glabrous; branches lenticellate. *Leaves* simple, opposite; petiole 1–1.7(–2) cm long; blade oblong, rarely elliptic or obovate, 5–12(–22.5) by 1.5–5.5(–9.3) cm, 2.3–3.4 times as long as wide, apex acuminate, rarely obtuse or retuse, base cuneate, margin entire or undulate, papery or subcoriaceous, glabrous, upper surface shiny, light green or yellowish green, lower surface paler, midrib impressed above and prominent underneath, 17–30 pairs of secondary veins at 70–80°, fairly straight, reaching margin, tertiary venation mostly obscure or, more rarely, visible beneath and then perpendicular to the secondary veins and meeting between them. *Inflorescence* axillary, cymose, axis shorter or as long as subtending petiole; 8–18 flowers per inflorescence; axes rufous-brown pubescent; bracts and bracteoles ovate or oblong, pubescent, apex rounded or acute, bracts at the base of flower pedicels, 2–2.5 mm long, bracteoles on flower pedicels, 1–2 mm long, pubescent; pedicels 0.8–4 mm long. *Flowers* fragrant, 5-merous (excluding gynoecium). *Calyx* lobes ovate or oblong, (1–)1.5–2 by 0.8–1.6 mm, 1–1.9 times as long as wide, apex rounded to acute, rufous-brown pubescent, ciliate. *Corolla* salverform, white; tube dilated at base, (7.5–)12–15 mm long, 1–1.2 mm wide, outside glabrous, inside pubescent in upper part of tube; lobes overlapping to the left in bud, oblong, slightly falcate, (8–)15–21 by 3–4 mm, apex rounded to acute, margin ciliate, otherwise glabrous. Stamens inserted at (1.3–)2–3 mm from corolla base which is 0.15–0.25 of tube length; filaments 0.5–1 mm long; anthers 1–1.5 by 0.3–0.6 mm. *Ovary* (0.5–)1–1.5(–2) mm long, unilocular, ovules numerous;



Figure 1. A–D. *Willughbeia tenuiflora* Dyer ex Hook.f., A. Habit, B. Habit with flowers and fruit, C. Inflorescence and flowers, D. Fruit. Photographed by J. Wai.

style 0.1 mm long, often impressed on ovary; style head 1.1–2 mm long, conical or ovoid, 0.5–0.8 mm wide, apex puberulent. *Fruit* a berry, pear-shaped, (6–)13–15 cm long, (4.5–)10–12cm wide. *Seeds* 2.2–2.5 by 0.9–1.5 by 0.9–1.4 cm.

Thailand.— PENINSULAR: Yala: Betong, [Ban Chantharat, 4 Dec. 2005, 5° 47' N 101° 12' E, *J. Wai 501* (**BKF**, **PSU**); Gunung Silipid, 17 April 2006, 5° 53' N 101° 09' E, *J. Wai 668* (PSU, spirit collection); Ban Chantharat, 18 April 2006, 5° 47' N 101° 12' E, *J. Wai 681* (**BCU**, **BKF**, **PSU**)].

Distribution.— Peninsular Malaysia, Singapore, Sumatra.

Ecology.— On exposed quartzite/phyllite ridges, alt. 600–700 m. Flowering and fruiting November–May.

Proposed IUCN conservation assessment.— Least Concern (LC). Although only collected once in Thailand this species is common in other parts of its range.

Note.— The dimensions given in the description include those for plants from outside of Thailand in parentheses when these are larger or smaller than found for the plants from Thailand. *Willughbeia tenuiflora* belongs to a group of similar species previously only known from Peninsular Malaysia, Sumatra, Java, Borneo and the Philippines (Middleton, 1993, 1996). They all share a characteristic rufous-brown pubescence on the inflorescence axes and sepals and can be distinguished using the keys and descriptions in Middleton (1993) and Middleton (1996). These include *Willughbeia anomala* Markgr., *W. oblonga* Dyer ex Hook.f., *W. lunduensis* D.J.Middleton, *W. javanica* Blume and *W. sarawacensis* (Pierre) K.Schum. Based on their currently known distributions it is unlikely that any of these other species will be found in Thailand.

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