

A new species of *Litsea* (Lauraceae) from Thailand

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ABSTRACT. *Litsea phuwuaensis* C. Ngernsaengsaruy, a new species from north-eastern Thailand is described and illustrated.

Litsea Lam. includes approximately 400 species (Kostermans, 1957) and is widely distributed in tropical and subtropical Asia from India through Malesia and northwards to Japan, and in the Pacific Islands, Australia, New Zealand and the Americas (Kochummen, 1989). The Lauraceae are an important component of wet tropical forests and are well represented in the Flora Malesiana region (Van der Werff, 2001). In Peninsular Malaysia 54 species of *Litsea* have been recorded in a wide variety of habitats (Kochummen, 1989). In Thailand, Kostermans (1974) described six new species of this genus. The Forest Herbarium, Royal Forest Department (2001) reported botanical names and vernacular names of 22 species of Thai *Litsea* in “Thai Plant Names, Tem Smitinand, Revised Edition”. A taxonomic revision of the genus *Litsea* for the Flora of Thailand has been done by the author.

Fruiting specimens of a *Litsea* sp. were collected by Thawatchai Wongprasert et al. in 1998 and Rachun Pooma, W.J.J.O. de Wilde, B.E.E. Duyfjes, Voradol Chamchumroon & Kanlaya Phattarahirankanok in 2001. During a field trip in May 2003 with Naiyana Tetsana, Nantawan Suphuntee and Narong Koonkunthod, we first found this species in Phu Wua Wildlife Sanctuary, Nong Khai Province and in Phu Langka National Park, Nakhon Phanom Province. This species is only known from these two protected areas, but it is not rare there, and is especially abundant at Thum Fun in Phu Wua Wildlife Sanctuary. Eventually in June 2003, the author visited Phu Wua Wildlife Sanctuary again and collected good flowering material. Therefore, the following new species is described as part of a preparation of a taxonomic revision of the genus *Litsea* for the Flora of Thailand.

***Litsea phuwuaensis* C. Ngernsaengsaruy, sp. nov.**

Frutex 0.5–2.5 m altus, ramulis villosa. Folia spiralis, obovato-oblonga, oblongo-lanceolata, oblonga, elliptico-oblonga vel obovato-lanceolata, 7–18(–25) cm longa, 2–5.5(–7) cm lata, supra villosa, subtus villosa, nervis 7–14, supra impressis subtus elevatis. Inflorescentia axillaris vel caulina. Fructus ovoideus, 0.8–1 x 0.7–0.9 cm, glaber.

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Typus: Thailand, Nong Khai, Buengkhlá, Phu Wua Wildlife Sanctuary, way to Tham Fun near check point, mixed deciduous forest, 200 m altitude, 21 June 2003, male inflorescences, *C. Ngernsaengsaruy* 376 (holotypus BKF; isotypi BK, QBG, PSU, Department of Botany, Kasetsart University Herbarium). Figs. 1–2.

Shrub 0.5–2.5 m tall; young parts very densely pale brown villose; branchlets densely villose. *Leaves* spiral; blade obovate-oblong, oblong-lanceolate, oblong, elliptic-oblong or obovate-lanceolate, 7–18(–25) by 2–5.5(–7) cm, apex caudate or acuminate, base obtuse or cuneate, margin ciliate, chartaceous, green or dark green above, villose on both surfaces, glaucous beneath; petiole 0.3–1 cm long, densely villose; midrib sunken above, raised beneath, secondary veins 7–14 pairs, sunken above, raised beneath, curving and looping near margin, tertiary veins scalariform-reticulate, indistinct above, prominent beneath. *Inflorescences* umbellate, umbels in clusters, in axils of leaves or along branchlets, rarely cauliflorous (along main stem), 0.5–0.7 cm in diam.; peduncles 0.3–0.5 cm, villose; bracts 4, decussate, suborbicular or broadly ovate, concave, 3.5–5 by 3–4 mm, thinly coriaceous, with veins, villose outside. *Male flowers* 5 in each umbel; tepals 4–6, linear-oblong, subequal, 2–2.5 by 0.5–1 mm, membranaceous, sparsely hairs outside; pedicels 1–2 mm long, villose; stamens 6–8 (–9), usually arranged in 2 whorls, outer whorls usually longer than inner whorls; anthers oblong, sometimes ovoid, 0.5–1 mm long, 4-celled, all introrse; filaments slender, 1.5–2.5 mm long, villose, the outer whorl without glands, the inner whorl with 2 glands at base. *Female flowers* 5 in each umbel; tepals 5–6, linear-oblong, subequal, 2–2.5 by 0.5–1 mm, membranaceous, sparsely hairs outside; perianth tube funnelliform; pedicels 1–2 mm long, villose; ovary ovoid, 1–2 mm long, glabrous; style 1–2 mm long; stigma peltate; staminodes 6–7, linear, 1.5–2 mm long, villose. *Fruits* ovoid, 0.8–1 by 0.7–0.9 cm, apex apiculate, green with white dots, glabrous, glossy, seated on enlarged perianth tube; enlarged perianth tube shallowly cup, 0.5–0.6 cm in diam.; fruiting pedicels thickened, 0.8–1.2 cm long, sparsely villose; infructescence stalks 4–5 mm long, villose.

Thailand.— NORTH-EASTERN: Nong Khai [Phu Wua Wildlife Sanctuary, 27 Aug. 2001, *Pooma, De Wilde, Duyfjes, Chamchumroon & Phattarahirankanok* 2794 (BKF); Tham Fun, Phu Wua Wildlife Sanctuary, 21 May 2003, *Ngernsaengsaruy, Tetsana, Suphuntee & Koonkunthod* 319 (BKF, BK, Department of Botany, Kasetsart University Herbarium); Phu Wua Wildlife Sanctuary, 24 May 2003, *Ngernsaengsaruy, Tetsana, Suphuntee & Koonkunthod* 328 (BKF, BK); Tham Fun, Phu Wua Wildlife Sanctuary, 21 June 2003, *Ngernsaengsaruy* 377, 378, 379, 380, 381 (BKF, BK, Department of Botany, Kasetsart University Herbarium)]; Nakhon Phanom [Tat Kham Fall, Phu Langka National Park, 30 Oct. 1998, *Wongprasert et al.* s.n. (BKF); Ban Phaeng, Phu Langka National Park, 24 May 2003, *Ngernsaengsaruy, Tetsana, Suphuntee & Koonkunthod* 331 (BKF, BK, Department of Botany, Kasetsart University Herbarium), 335 (BKF, BK)].

Distribution.— Known only from NE Thailand.

Ecology.— In mixed deciduous forest, occasionally by streams, ca. 150–200 m.

Phenology.— Flowering May–June; fruiting June–August.

Vernacular.— Thang bai khon phu wua (ถังใบขนภูว) (The name is given by the author).

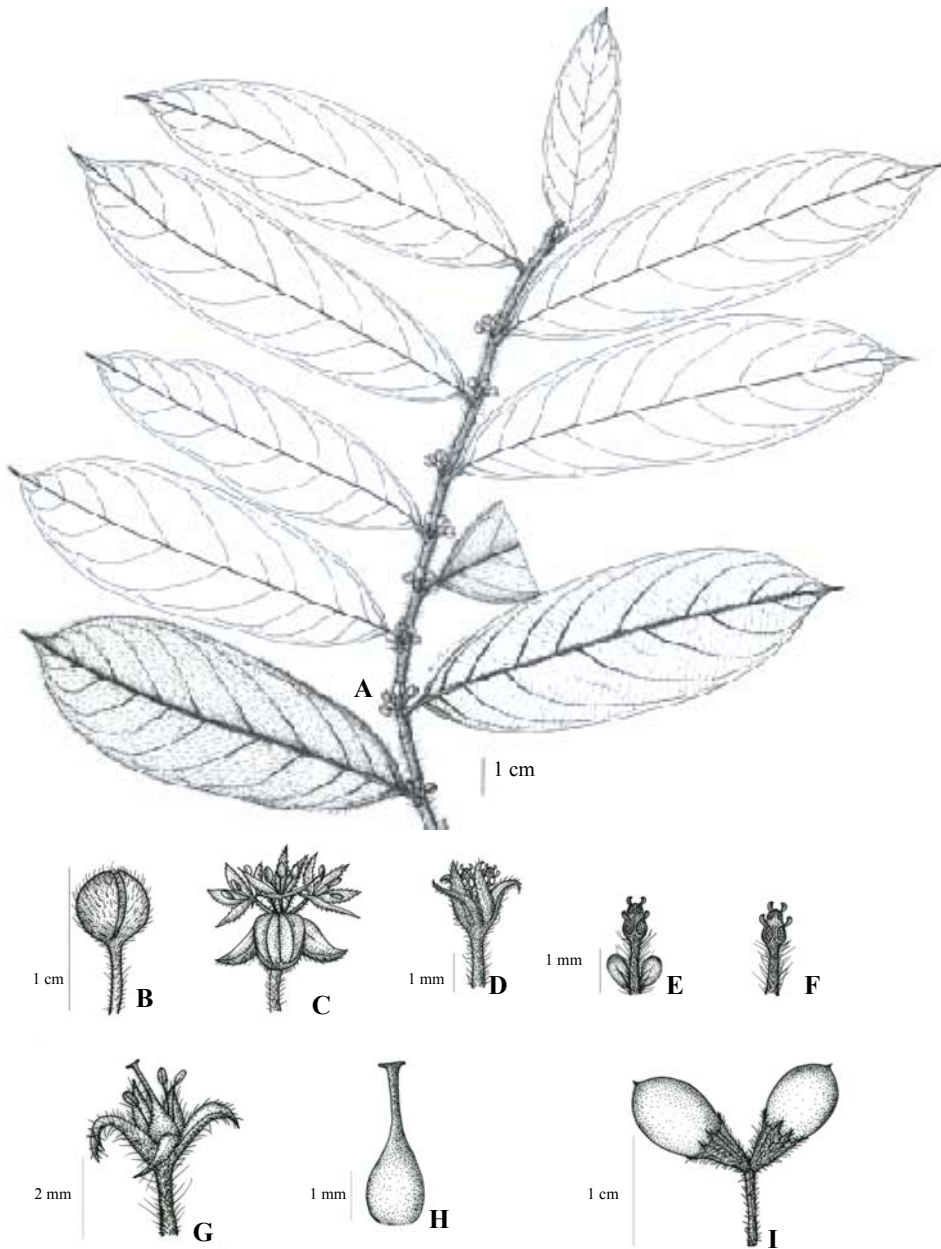


Figure 1. *Litsea phuwaensis* C. Ngernsaengsaruy: A. flowering branch; B. young umbel is enclosed in decussate bracts; C. male inflorescence; D. male flower; E. stamen with 2 glands; F. stamen without gland; G. female flower with staminodes; H. pistil; I. infructescence. Drawn by N. Tetsana.



Figure 2. *Litsea phuwuaensis* C. Ngernsaengsaruy: A. habit; B. young branch; C. young umbels are enclosed in decussate bracts; D. young umbels along main stem; E. male inflorescences; F. female inflorescence; G. young infructescences; H. fruiting branch; I. infructescence. Photographed by C. Ngernsaengsaruy.

Notes.— *Litsea phuwuaensis* is distinguished by the villose indumentum on most plant parts, the caudate or acuminate leaf apex and the ciliate leaf margin. Young parts are especially very densely pale brown villose.

Young umbels are enclosed in decussate bracts which can easily be mistaken for flower buds. *Litsea* is very similar to *Lindera* in their vegetative parts and even specimens with female flowers or in fruit are difficult to place to genus. *Litsea* differs from *Lindera* in its 4-celled anthers (*Lindera* has 2-celled anthers).

The specific epithet is named after Phu Wua Wildlife Sanctuary where we found and collected the type specimens.

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REFERENCES

- Kochummen, K. M. 1989. Lauraceae, pp. 98–178. In F.S.P. Ng (ed), Tree Flora of Malaya. vol. 4. Art Printing Works Sdn Bhd, Kuala Lumpur.
- Kostermans, A. J. G. H. 1957. Lauraceae. Reinwardtia 4: 193–256.
- _____. 1974. New species and combinations of Lauraceae from Thailand. Natural History Bulletin of Siam Society 25: 29–44.
- The Forest Herbarium, Royal Forest Department. 2001. Thai Plant Names, Tem Smitinand, Revised Edition. Prachachon Co. Ltd, Bangkok.
- Van der Werff, H. 2001. An annotated key to the genera of Lauraceae in the flora Malesiana region. Blumea 46 (1): 125–140.