## 越南木兰科植物新记录

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摘要:报道了越南木兰科1新记录种 Michelia mannii King,原记载分布于印度。该种产自越南北部的 Cuc Phuong 国家公园的原生石灰岩森林和越南南部的 Lam Dong 省的 Langbiang 地区。凭证标本保存在 CHI, CPNP, IBSC, L和 VFU。

关键词:木兰科;含笑属; Michelia mannii;新记录;越南

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## Michelia mannii (Magnoliaceae), A Newly Recorded Species from Vietnam

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**Abstract**: *Michelia mannii* King (Magnoliaceae), a previously known species only in Bristish India, is newly recorded from Vietnam. It was found in primary limestone forest in Cuc Phuong National Park, Northern Vietnam and in Langbiang Plateau, Lam Dong Province, Southern Vietnam. The specimens of this species are being preserved in CHI, CPNP, IBSC, L, and VFU.

Key words: Magnoliaceae; Michelia; Michelia mannii; New record; Vietnam

The genus *Michelia* was established in 1753 by Linnaeus<sup>[1]</sup> based on a single species *M. champaca* L. (Sp. Pl. 1753: 536). Today it is considered including ca. 70 species and being distributed from tropical and subtropical Asia<sup>[2]</sup> and there are about 39 species reported from China<sup>[2]</sup> and ca. 22 species from Vietnam<sup>[3]</sup>. The genus is mainly characterized by flowers axillary or pseudo-axillary on brachyblasts, solitary, bisexual, anthers latrorse or sublatrorse, gynoecium stipilate<sup>[4]</sup>.

During the revision of family Magnoliaceae from

Vietnam, some herbarium specimens 'TVT 240209.17' (IBSC, VFU), 'NMC 444, 547' (CHI, CPNP, L), 'PKL 10377, 10444' (CHI, CPNP) from Vietnam were identified as *Michelia mannii* King<sup>[5]</sup>, with Vietnamese name of Gioi An Do (Fig. 1), a species previous known only from Assam and Sylhet, India. This represents not only another new record for the flora of Vietnam, but it also reaffirms the rich plant diversity as well as their wide distribution in Himalayan geographical range extended considerably eastwards including China and Vietnam<sup>[6-7]</sup>. This

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*Michelia mannii* King. Ann. Roy. Bot. Gard. (Calcutta) 3(2): 218.  $1891^{[5]}$ . TYPE. India, Upper Assam, Makum forest, Dec. 1889, G. Mann *s.n.* (holotype CAL, n.v.; isotype: K, L, P!).

*Magnolia mannii* (King) Figlar. Proc. Int. Symp. Magnoliac. 22. 2000<sup>[8]</sup>.



Fig. 1 Michelia mannii King

A. Fruiting branch with leaves;  $B \sim D$ . Tepals; E. Gynoecium; F. Stamen; G. Carpel; H. Fruit; I. Seeds. [Drawn by VU Quang Nam. A based on NMC 547 (CPNP),  $B \sim I$  based on TVT 240109.17 (IBSC, VFU)].

Trees, 45 m tall, 1 m in diam.; bark light grey, peeling off leaving irregular scars, brownish-yellow when slashed; fruiting and flowering branches not stout, ca.  $3 \sim 5$  mm in diam., dull brown when dry, irregularly rough and gnarled, sparsely lenticellate. Terminal buds ellipsoid,  $1.3 \sim 2$  cm  $\times 0.6 \sim 1$  cm, abaxially reddish silky appressed pubescent. Leaves leathery, redish brown when dry, leaf margin slightly recurved; leaf blade obovate to sometimes elliptic, 9 ~ 12 cm  $\times$  4  $\sim$  7 cm, abaxially reddish silky setulose (hardly visible by hand lens), adaxially shiny, glabrous; base cunneat to broadly cunneat, apex shortly acute to acuminate; secondary veins 12 ~ 16 on each side of midrib, slender, conspicuous on both sides, prominent on lower surface, midrib adaxially furrowed, reticulate veins dense, more conspicuous on lower side; petiole glabrous,  $0.8 \sim 1.5$  cm long, adaxially narrowly furrowed, without stipular scar. Brachyblast ca. 7 mm × 3 mm, densely reddish silky appressed pubescent, with  $2 \sim 3$  bract scar. Flowers axillary, solitary, yellowish-white, gynoecium exserted from androecium; tepals 9, outer 3, adaxially pale green, tepals obovate, ca. 2.7 cm × 1 cm; innermost 3

tepals oblanceolate, ca.  $2.5 \text{ cm} \times 0.7 \text{ cm}$ . Stamens numerous,  $1.3 \sim 1.5 \text{ cm}$  long; filaments ca. 1.7 mm long, connective appendage ca. 1.5 mm long, anthers latrorse. Gynoecium cylindrical, ca. 2 cm long, gynophore and scar of stamens ca.  $0.7 \sim 0.8 \text{ mm}$  long, densely yellowish silky appressed trichomes; ovaries ellipsoid, 2 mm long, densely silky yellow appressed fine trichomes, shortly stipitate; styles as long as ovaries, recurved, glabrous. Fruits  $6 \sim 13 \text{ cm}$  long, irregularly gnarled, scar of perianth and stamens ca.  $6 \text{ mm} \times 6 \text{ mm}$ , fruiting gynophore ca. 2 cm long, mature carpels partly undeveloped, woody, rather distant, obovoid or ellipsoid,  $1.5 \sim 2 \text{ cm} \times 1 \sim 1.5 \text{ cm}$ , sparsely white lenticellate, apex shortly beaked. Seeds  $2 \sim 3 \text{ per carpel}$ , testa scarlet.

**Distribution and ecology:** India: Assam (Makum forest) and Sylhet (Bangai forest); new to Vietnam (N Vietnam: Ninh Binh Prov., Cuc Phuong National Park; S Vietnam: Lam Dong Prov., Langbiang Plateau) (Fig. 2). Growing in primary evergreen broad-leaved forest at altitudes between 500 ~1500 m. Flowering: Apr. ~ May, fruiting: Sep. ~ Nov.

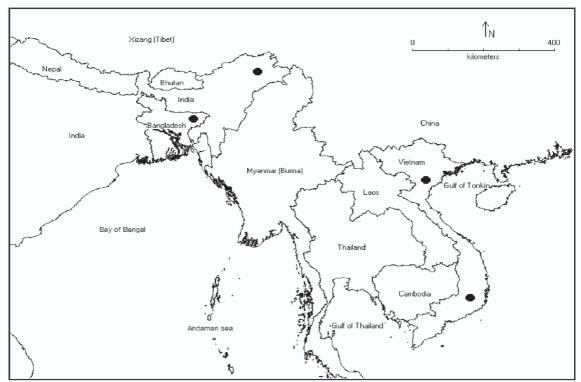


Fig. 2 Distribution map of Michelia mannii

**Taxonomic notes:** The protologuo of this species by King<sup>[5]</sup> (Ann. Roy. Bot. Gard. (Calcutta) **3**(2): 218. 1891) stated that 'spathoid bracts broadly ovate, smooth, coriaceous' and 'ovaries on an elongate rachis, sessile, smooth', but they are densely silky reddish or yellow appressed fine trichomes (easily visible by hand lens) (G. Mann s.n. (P), branch with gynoecium and separated ripe fruit, barcode No. P00205396; G. Mann s.n. (K), branch with gynoecium, barcode No. L0397532).

Specimens examined: INDIA. G. Mann s.n. (K, L, P) (Upper Assam, Makum forest, Dec. 1889), G. Mann s.n. (K, L, P) (Sylhet, Langai forest, Aug. 1890). VIETNAM. Ninh Binh Prov. Cuc Phuong National Park: MNC 444 (CPNP, L) (22 Aug. 1999, barcode No. L0397529), NMC 547 (CPNP, L) (18 Sep. 1999), PKL 10377, PKL 10444 (CPNP). Lam Dong Prov. Langbiang Plateau, TVT 240209. 17 (IBSC, VFU).

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## References

- Linnaeus C. Species Plantarum 1 [M]. Holmiae, Impensis Laurentii SALVII, 1753: 1–560.
- [2] Xia N H, Liu Y H, Nooteboom H P. Magnoliaceae [M]// Wu Z Y, Raven P H. Flora of China Vol. 7. Beijing: Science Press & St. Louis: Missouri Botanical Garden Press, 2008: 48-91.
- [3] Vu Q N, Xia N H. Michelia velutina Candolle (Magnoliaceae), A new record for flora of Vietnam [J]. Vietnam J For Sci, 2009, 3:1012– 1015.(in Vietnamese)
- [4] Dandy J E. Magnoliaceae [M]// Hutchinson J. The Genera of Flowering Plants, Vol. 1: Angiosperm. Oxford: Clarendon Press, 1964: 50-57.
- [5] King G. The Magnoliaceae of British India [J]. Ann Roy Bot Gard (Calcutta), 1891, 3(2): 197-223.
- [6] Vu Q N, Xia N H. Manglietia lucida (Magnoliaceae), A new record species for Vietnam [J]. J Trop Subtrop Bot, 2010, 18(1): 43-46.
- [7] Takhtajan A. Floristic Regions of the World [M]. California: University of California Press, 1986: 1–522.
- [8] Figlar R B. Proleptic branch initiation in Michelia and Magnolia subgenus Yulania provides basis for combinations in subfamily Magnolioideae [C]// Liu Y H, Fan H M, Chen Z Y, et al. Proceedings of International Symposium on the Family Magnoliaceae. Beijing: Science Press, 2000:14–25.