

MICHELIA RUBRIFLORA, A NEW SPECIES OF MAGNOLIACEAE FROM HAINAN ISLAND, CHINA

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Abstract

Michelia rubriflora sp. nov., from Hainan Island, China, is described and illustrated. It resembles *M. mediocris* Dandy, but can be easily recognised by its ovate-elliptic leaves, 1~2 mm long, stipular scars red and bigger tepals, and red and longer androecia.

Introduction

Michelia L., is a large genus in the family Magnoliaceae with about 80 species. It occurs in southeast Asia from India and Sri Lanka eastwards to South Japan and Taiwan and southeastwards to Indonesia (Chen *et al.*, 1993; Fordin & Covaerts, 1996; Law, 1984, 2004; Law & Wu, 1996). China with about 70 species of *Michelia* (Law, 1996) is regarded as the center of distribution and diversity of this genus (Bao *et al.*, 2002; Law *et al.*, 1995, 2004; Ma *et al.*, 2005). Species of *Michelia* are considered as important and excellent garden plants for their special fragrant flowers and handsome tree-shape.

During the expedition in Mount Jiangfengling, Hainan Province, as part of the project obtained from the National Natural Science Foundation of China, we collected a specimen of *Michelia*. It could not be placed in any of the previously described taxa, thus it is described here as a new species.

***Michelia rubriflora* Law et R. Z. Zhou, sp. nov. (Fig. 1)**

Types: China, Hainan province, Mount Jianfengling, altitude 500-600 m, 31 October 2001, Renzhang Zhou 0265 (holotype, IBSC); Guangzhou, the magnolia garden of Guangdong Forest Research Institute, 8 October 2001, Renzhang Zhou 0265b (paratype, IBSC).

Species *Michelia mediocri* Dandy affinis, sed foliis ovato-ellipticis, utrinque glabris, cicatricibus 1-2 mm longis, tepalis rubris, $2.5\sim3.5 \times 1\sim1.2$ cm, androeciis rubris $1.5\sim1.7$ cm longis differt.

Evergreen tree up to 15 m tall and 25 cm in diam.; bark greyish-brown, young twigs greyish-green, nearly glabrous; buds long and tipped, short stipitate; buds, young twigs, petioles and lower surfaces of leaves greyish-white or pale brown appressed pilose. Leaves leathery, ovate-elliptic, $5\sim9 \times 2.5\sim3.5$ cm, apex short-acuminate, base broadly cuneate, dark green above, pale green beneath, glabrous on both surfaces, midribs impressed above, prominent beneath, lateral veins 9-11 on each side, tenuous and inconspicuous, reticulate veins compact, elevated on both surfaces when dry; petioles 1~2.5 cm long, slightly inflated and inflected, stipular scars 1-2 mm long. Flowers fragrant, tepals 9, red, narrowly lanceolate, outer ones $3\sim3.5 \times 1\sim1.2$ cm, inner ones $2.5\sim2.7 \times c. 1$ cm; stamens red, 1.5-1.7 cm long, anthers c. 1 cm long, laterally dehiscent, filaments red, c. 2 mm long, connectives produced into 4~6 mm long appendages; gynoecia pale yellowish-green, gynophores c. 5 mm long, not exerted above androecia. Fruit aggregates spicate, with 5~12 follicles; follicles with obviously elevated lenticels; seeds ovoid or cordate, c. $10 \times 6\sim7$ mm.

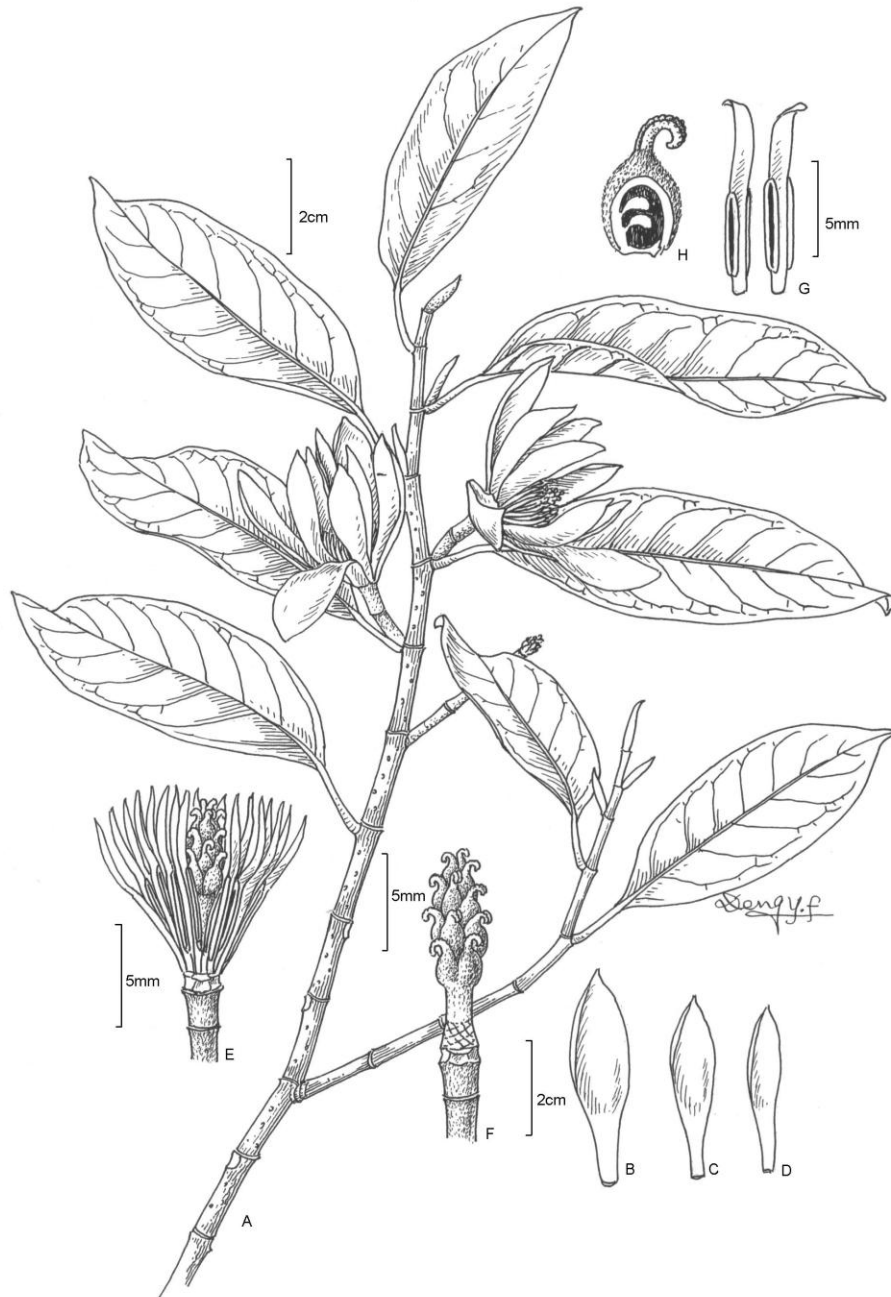


Fig. 1. *Michelia rubriflora* Law et R. Z. Zhou sp. nov. (from the holotype and paratype. —A: Flowering twig, showing perianth, leaves and branch. —B,C,D: tepals. —E: Androecium and gynoecium. —F: Gynoecium. —G: Stamens. —H: Longitudinal section of carpel.

Distribution and ecology: *Michelia rubriflora* is an endemic species, restricted to Mount Jianfengling in Hainan province, China in montane evergreen broad-leaved forests at alt. 500~600 m. It is an excellent garden plant for its handsome tree-shape and dense twigs and leaves.

Phenology: Flowering from October to November, fruiting from October to November of the following year.

Conservation status: As *Michelia rubriflora* is known only from one locality and the population there is small, it should be included in the IUCN critically endangered category (Anon., 2001). It has been introduced to the magnolia garden of South China Botanical Garden and Guangdong Forest Research Institute for better conservation.

Discussion: *Michelia rubriflora* Law et R.Z. Zhou is similar to *M. mediocris* Dandy (Law & Youngfen, 1996), which grows in the evergreen broad-leaved forests at alt. 400-1000 m in SE Guangdong, Guangxi and Hainan, China, also in Vietnam and Cambodia. *M. rubriflora* differs from *M. mediocris* in having ovate-elliptic, glabrous leaves, 1~2 mm long stipular scars, red tepals, (2.5~3.5 × 1~1.2 cm), and red androecium, (1.5~1.7 cm long). A morphological comparison between *M. rubriflora* and *M. mediocris* is given in Table 1.

Table 1. Diagnostic features of *M. rubriflora* and *M. mediocris*.

	<i>Michelia rubriflora</i>	<i>M. mediocris</i>
Leaves	leathery, ovate-elliptic, 5~9 × 2.5~3.5 cm, glabrous on both surfaces	thinly leathery, rhombic-elliptic, 6~13×3~5 cm, glabrous above, grayish-white appressed puberulent beneath
Petioles	stipular scars 1~2 mm long	without stipular scars
Tepals	red, narrowly lanceolate, 2.5~3.5 × 1~1.2 cm	white, spatulate, 1.8~2.2×0.5~0.8 cm
Androecium	red, 1.5~1.7 cm long	pale yellowish-green, 1.0~1.5 cm long
Connectives	produced into 4-6 mm appendages	produced into 3~4 mm appendages
Gynoecium	as long as androecium	c. 1 cm long
Seeds	c. 10 × 6~7 mm	6~8 × c. 5 mm

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