

***MICHELIA XINNINGIA* (MAGNOLIACEAE) - A NEW SPECIES FROM CHINA**

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Abstract

Michelia xinningia Law & R. Z. Zhou, a new species from Xing'an County, Guangxi Province, China, is described and illustrated. This species is similar to *M. platypetala* Hand.-Mazz., but differs in its buds, young twigs, lower surfaces of leaves and petioles with golden villose; tepals obovate, outer ones 4-5×c.2cm, filaments red, anthers laterally dehiscent.

Introduction

The genus *Michelia* L., (Magnoliaceae) comprises about 80 species, of which 70 species are distributed from southwest to east China (Law, 2004). About 69% genera and 53% species of Magnoliaceae in the world are found in China, so China deserves the reputation of Magnolia Kingdom. South China Institute of Botany for the first time initiated the project 'Studies on the introduction and propagation of Chinese magnoliaceous plants and its rare and endangered species' in 1981 and established a conservation base for germplasm of magnoliaceous plants – the Magnolia Garden. The Magnolia garden in South China Botanical Garden, Chinese Academy of Sciences, which covers 12 hectares and contains 11 genera with about 130 species, possesses the world's richest and best magnoliaceous collection and now has become a research base of the living magnoliaceous plants (Law, 2004). The species *Michelia xinningia* described in this paper is one of many new species of Magnoliaceae discovered by the project research team through widely investigating on living material and checking herbarium specimens in China. In 1992, they discovered this species under the evergreen broad-leaved forests at alt. 1500m in Ziyunshan, Xinning County, Hunan Province, China, and they introduced it into the magnolia garden in South China Botanical Garden, Chinese Academy of Sciences.

Michelia xinningia Law & R. Z. Zhou sp. nov.

Fig. 1.

Type: China, Hunan, Xinning county, Ziyunshan, in the evergreen broad-leaved forests at alt. 1500m, 20 September 1992, R. Z. Zhou 197 (holotype, IBSC; isotype, IBSC).

Species *M. platypetale* affinis, sed gemmis, juvenibus ramunculis, foliorum subtus superficiebus petiolisque aureo-villosis; tepalis obovatis, extra eis 4-5 × c.2cm, intra eis 3.8-4 × c.1.5cm; antheris lateraliter dehiscentibus differt.

Evergreen trees 20m tall and 30cm in diam.; bark grayish-brown, young twigs green, old ones dark brown; buds, young twigs, lower surfaces of leaves and petioles golden villose. Leaves leathery, narrowly elliptic, 12-18 × 4.5-5.5cm, apex acuminate, base cuneate or broadly cuneate, upper surfaces deep green, lower surfaces pale green, midribs brown pilose, lateral veins 8-9 on each side; petioles 1-1.5cm long, without stipular scars. Flowers fragrant, white, tepals 9, obovate, outer ones 4-5 × c. 2cm, inner

ones $3.8-4 \times c. 1.5$ cm; stamens 30-35, filaments red, c. 0.5 cm long, anthers c. 0.8 cm long, laterally dehiscent, connectives produced into c. 2mm appendages; gynoecia c.1.6 cm long, gynophores 1.5-2 cm long, carpels 16-20. Fruit aggregates spicate; follicles completely 2-valved dehiscent, white impressed lenticellate; seeds ovoid.

Fig. 1. *Michelia xinningia* Law & R. Z. Zhou. 1. Flowering twig; 2. Flower bud; 3. Tepals; 4. Androecium; 5. Gynoecium; 6. Stamen. Drawn by Y.F. Deng from R.Z. Zhou 197 (IBSC).

Table 1. Differences between *Michelia xinningia* and *M. platypetala*.

Characters	<i>Michelia xinningia</i>	<i>M. platypetala</i> .
Indumentum	Buds & young twigs with golden villose.	Buds & young twigs with rufous sericeous.
Leaves	Leathery, narrowly elliptic.	Thinly leathery, oblong or elliptic-oblong.
Tepals	Outer obovate, 4-5 × c. 2 cm; inner shape like outer.	Outer elliptic or obovate-elliptic, 5-7 × 2-2.5 cm; inner narrowly ovate-lanceolate
Anthers	Laterally dehiscent	Introrsely dehiscent

Distribution and ecology: This species grows in sand-shale under the evergreen broad-leaved forests at alt. 1500m at original region-Ziyunshan, Xinning Couty, Hunan Province, China. In 1992, it was successfully introduced into the magnolia garden in South China Botanical Garden, Chinese Academy of Sciences. Its flowering and fruiting season are April–May and September–October respectively.

Discussion: This species belongs to *Michelia* Subg. *Metamichelia* Law et Y. F. Wu, Sect. *Anisochlamys* Dandy (Law, 1984, 1996) because its stipules and petioles, without stipular scars, are detached and 9 tepals at each flower have different size. The closest species to this species appears to be *M. platypetala* Hand.-Mazz. More detailed comparison of the new species with relevant species is given in Table 1.

Notes: This species is named after its original region-Xinning Couty. It is an excellent garden plant for its handsome tree-shape and attractive fragrant flowers, so it is necessary to make further research on it.

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Reference

- Law, Y.W. 1984. Preliminary study on the taxonomy of family Magnoliaceae. *Acta Phytotax. Sin.*, 22: 89-109.
- Law, Y.W. 1996. Magnoliaceae. In: Law, Y.W., Lo, H.S. and Wu, Y.F. *Flora Reipublicae Popularis Sinicae*, 30(1): 151-194. Science Press, Beijing.
- Law Y. W. 2004. *Michelia* L. In: Law Y.W. *Magnolias of China*, 210-335. Beijing Science & Technology Press, Beijing.

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