**Michelia concinna** (Magnoliaceae), a new species from SE Yunnan, China

Hong Jiang¹ & En-De Liu²,*

¹) Yunnan Academy of Forestry, Kunming 650204, China
²) Key Laboratory of Biodiversity and Biogeography, Chinese Academy of Sciences, Kunming 650204, China (*corresponding author’s e-mail: liuende@mail.kib.ac.cn)

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*Michelia concinna* H. Jiang & E.D. Liu, a new species of Magnoliaceae from SE Yunnan, China is described and illustrated. The morphological characteristics of the new species and two morphologically similar species are compared.

Key words: Magnoliaceae, *Michelia*, new species, taxonomy

There are approximately 11 genera and 160 species of Magnoliaceae in China (Law 2004). The genus *Michelia*, including 80 species or so, mainly occurs in China, India, Sri Lanka, Indochina, Malaysia and south Japan. There are about 70 species of *Michelia* in China, which is considered the modern distribution and diversity centre of the genus (Law 1984, 1996, 2000, Law et al. 1995).

In the past five years, we did much research work on the conservation biology of Magnoliaceae. In March of 2003, when observing the plants of Magnoliaceae in Kunming Arboretum, Yunnan Province, China, we found several plants of *Michelia* that differed clearly from the congeneric species in China and in the neighbouring countries. In March of 2005, we observed the plants again and dissected several flowers; in October of that year, we collected and studied many fruits. After further morphological study, literature search (Law 1984, 1996, 2000, 2004, Chen & Nooteboom 1993, Law et al. 1995, Yan et al. 2004) and examination of numerous specimens in PE, KUN, IBSC and YAF, it became clear that these plants represented an undescribed species.

*Michelia concinna* H. Jiang & E.D. Liu, *sp. nova* (Fig. 1)

Species *M. crassipiti* Law similis, quae differt tepalis 6, purpureis, carpellis 25–32, ovulis in quoque carpello singulo 2; etiam affinis *M. skinneriana* Dunn, quae differt tepalis 6, stipulae petiolo adnatae.

**TYPE:** China. Yunnan Province: Kunming Arboretum (Transplanted from Southeast Yunnan, original habitat and altitude unknown), alt. 1990 m, 22.III.2006 H. Jiang 03942 (holotype KUN; isotypes H, PE, YAF).

* Arbor parva circa 4 m alta; ramuli hornotini spisse brunneo-pubescentibus, in vetustate sparse lenticellati; gemmae 2.0–3.5 cm longae, dense russo-tomentosae. Lamina coriacea, oblonga vel obovato-oblonga, 8–13 cm longa,
3–5 cm lata, superne atroviridia nitida in juventus sericea, in vetustate glabra, subts dense brunneo-pubescentia, apice cuspidate, basi late cuneata; costa vel nervi lateralis supra impressi, nervis lateralis utrinsecus 10–13, nervi reticulati conferti, in sicco utrique prominuli; petioli 6–8 mm longi, basi leviter dilatati, pubescentes; stipulae a petiolo adnatae, cicatricibus stipulum 2–4 mm longis. Pedunculi 1.0–1.5 cm longi, 4–5 mm diam., confertim brunneo-tomentosi; bracteae 2–3, papyraceae, extus spisse brunneo-tomentosa; pedicellae absentes; tepala 9, flavida, in 3-verticillum disposita, basi internus sanguinea, leviter succulenta, glabra; tepalis exterioribus obovatis vel obovato-ellipticis, 3.0–4.5 cm longis, 1.4–2.0 cm latis, interioribus anguste ellipticis vel oblongis, 2.8–3.4 cm longis, 1.0–1.3 cm latis; stamina 40–50, 1.5–1.8 cm longa, antheris circ. 1 cm longis; antherarum connexiva ultra loculos antherarum in cuspidem (0.5–1.0 mm longam) projectum; filamenta sanguinea, 4–6 mm longa; gynoecium...
Table 1. Morphological differences among Michelia concinna, M. crassipes and M. skinneriana.

<table>
<thead>
<tr>
<th>Characters</th>
<th>M. concinna</th>
<th>M. crassipes</th>
<th>M. skinneriana</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life form</td>
<td>small tree, 4–6 m tall</td>
<td>shrub, 2–5 m tall</td>
<td>large tree, 15 m tall</td>
</tr>
<tr>
<td>Stipule scar</td>
<td>1/3–1/2 of petiole length</td>
<td>3/4–1/1 of petiole length</td>
<td>as long as petiole</td>
</tr>
<tr>
<td>Leaf veins veins</td>
<td>reticulate veins dense and conspicuous on abaxial leaf surface</td>
<td>reticulate veins inconspicuous on abaxial leaf surfaces</td>
<td>inconspicuous on abaxial leaf surfaces</td>
</tr>
<tr>
<td>Peduncle</td>
<td>thick and strong</td>
<td>thick and strong</td>
<td>slender</td>
</tr>
<tr>
<td>Tepals</td>
<td>9, in 3 whorls</td>
<td>6, in 2 whorls</td>
<td>6, in 2 whorls</td>
</tr>
<tr>
<td>Tepal color</td>
<td>pale yellow</td>
<td>dark purple</td>
<td>pale yellow</td>
</tr>
<tr>
<td>Tepal indumentum</td>
<td>abaxially glabrous at base</td>
<td>abaxially glabrous at base</td>
<td>abaxially brown hairy at base</td>
</tr>
<tr>
<td>Ovules</td>
<td>4–5</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

cylindricum, 16–20 mm longum, spisse brunnepubescens, conspicue extra androecium projec-
tum, gynophorum 8–12 mm longum, dense brunnepubescens; carpella 47–62, ovata, circ. 2.5
mm longa, conferitim laete brunnepuberula, stylo circ. 2.5 mm longo, ovulis 4–5. Fructus
spiciformis-cylindricus 4–7 mm longus, dense pubescens, carpellis pro parte majore aborti-
vis, fertiliter liberde dehiscentibus, late ovatis vel suborbidatulis, 7–8 mm longis. Semen in quopue

Michelia concinna belongs to Michelia subgen. Michelia sect. Micheliopsis (Dandy 1974). It is morphologically close to M. crassipes and M. skinneriana, but there are some clear differ-
ences between them, indicated in Table 1.

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References

Yan, Y. H., Zeng, Q. W. & Xing, F. W. 2004: Michelia guang-