

MANGLIETIA PUBIPETALA (MAGNOLIACEAE), A NEW SPECIES FROM CHINA

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Abstract

Manglietia pubipetala Q.W. Zeng, a new species of *Manglietia* Bl. (Magnoliaceae), from Yunnan, China is described and illustrated, which occurs in the evergreen broad-leaved forest in Maguan (Bazhai), Xichou (Fadou), and Malipo (Jingchang) County, Yunnan Province, China. It is closely related to *M. rufibarbata* Dandy, *M. megaphylla* Hu & Cheng and *M. moto* Dandy, but differs primarily in its glaucous lower surfaces of leaves, pubescent tepals, and villose stamens and gynoecium.

Introduction

The genus *Manglietia* consists of 29 species mainly in tropical and subtropical Asia, of which 22 occur in China (Nooteboom, 1985; Chen and Nooteboom, 1993; Law, 1984, 1996a; Law, 2004; Zeng and Law 2004). In the course of recently checking specimens of Magnoliaceae in the Herbarium (IBSC) of South China Botanical Garden, the Chinese Academy of Sciences, a specimen of *Manglietia* collected from Yunnan, China clearly differed from the hitherto described species of the genus *Manglietia* (Gagnepain, 1939; Praglowksi, 1974; Chen and Nooteboom, 1993; Law, 1996). It can not be placed in any of the previously described taxa and is thus here described as a new species.

Manglietia pubipetala Q.W. Zeng, sp. Nov.

Fig. 1.

Type: China. Yunnan Province, Maguan County, Bazhai, evergreen broad-leaved forests, ca.1,500 m alt., 14.V.2002 *Ren-Zhang Zhou 0256* (holotype,IBSC).

Species *M. rufibarbatae*, *M. megaphyllae* et *M. moto*, affinis, sed foliis chartaceis, anguste obovate-ellipticis, subtus glaucis, dense brunneo-villosis; tepalis 9, brunneo-pubescentibus; staminibus c. 92–97, villosis; gynoeciis anguste obovato-ellipsoideis, dense brunneo-villosis, carpellis 25–30, ovulis in quoque carpello 5–8 differt.

Evergreen trees, up to 10 m high, bark grayish-brown; twigs sparsely lenticellate; buds, stipules, young twigs, petioles, lower surfaces of leaves, bracts and peduncles gynoecium brown villose. Stipules villose, adnate to the petioles. Leaves papery, narrowly obovate-elliptic, 13–17.5 × 4.5–6 cm, apex caudate-acuminate, base cuneate, green and glabrous above, glaucous and densely brown villose beneath; midribs and lateral veins prominent beneath, lateral veins 10–12 on each side; petioles 1.2–1.5 cm long, brown villose, stipule scars 0.8–1 cm long, as long as 2/3 of the petioles. Flowers bisexual, solitary and terminal; flower buds ovoid, 3–4 cm long; bract 1, brown villose; peduncles or brachyblast villose, 1.2–1.5 × 0.4–0.5cm long, brown villose, pedicle absent; tepals 9, outer 3 pale green, thinly

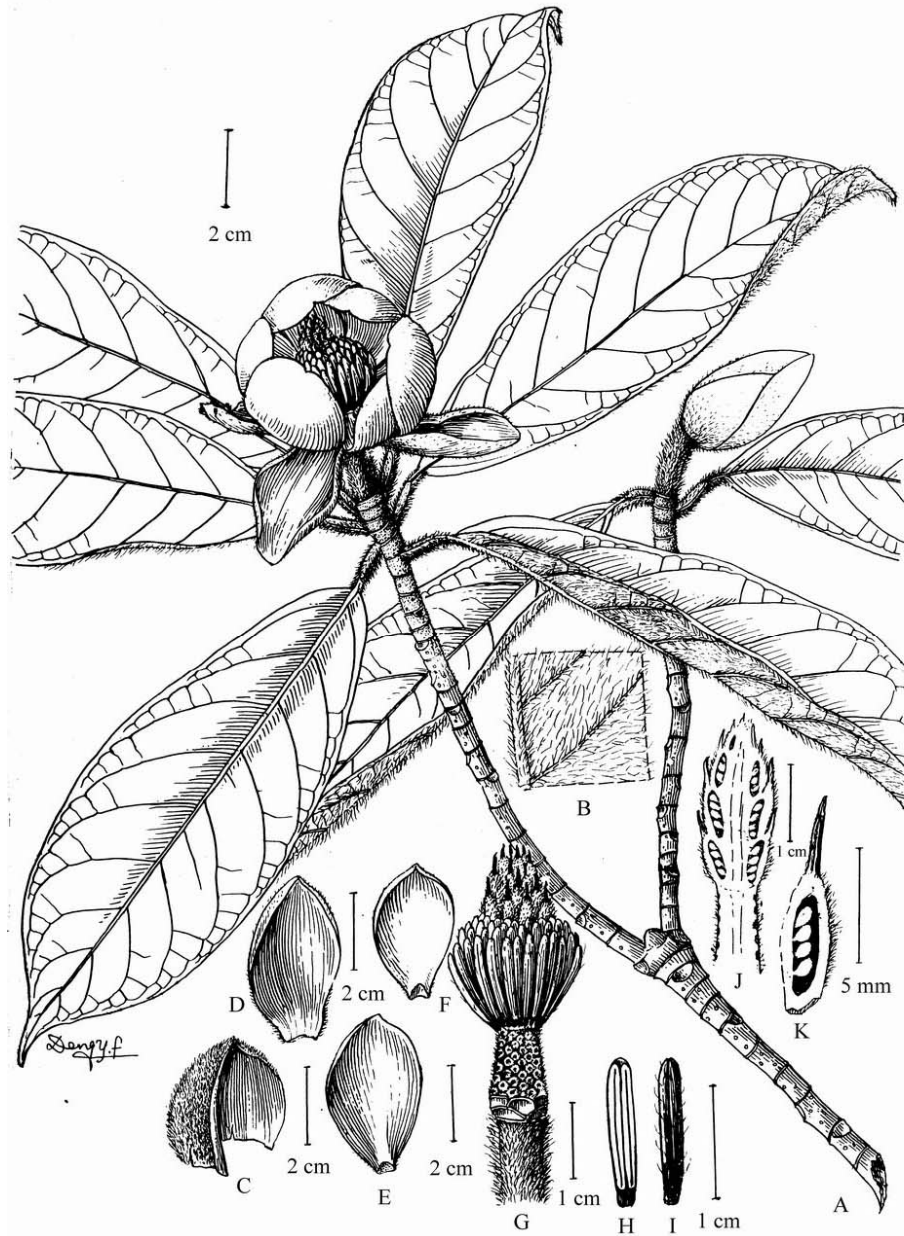


Fig. 1. *Manglietia pubipetala* Q.W. Zeng. A. Flowering twig, showing perianth, leaves and branch; B. Portion of lower surface of leaf; C. Bract; D. Outer tepal; E. Mid tepal; F. Inner tepal; G. Gynoecium; H. Stamen, ventral view; I. Stamen, dorsal view; J. Gynoecium, longitudinal section; K. Carpel, longitudinal section. Drawn by Ying-Feng Deng from R. Z. Zhou 0256 (IBSC).

Table 1. Differences between *Manglietia pubipetala* and three closely related species.

Characters	<i>M. pubipetala</i>	<i>M. rufibarbata</i>	<i>M. megaphylla</i>	<i>M. moto</i>
Buds	villose	villose	tomentose	tomentose
Twigs	villose	villose	tomentose	tomentose
Leaves	papery, 13–17.5 × 4.5–6 cm, glabrous above, glaucous and pubescent beneath	thinly leathery, 10–24 × 4–8 cm, glabrous above, pubescent beneath	leathery, 25–41 × 15–17 cm, glabrous above, tomentose beneath	leathery, 11–22 × 4–7.5 cm, glabrous above, tomentose beneath
Lateral veins	10–12	12–18	20–22	12–15
Petioles	villose, 2.5–3.5 cm long	villose, c. 3 cm long	tomentose, 2–3 cm long	tomentose, 2–4 cm long
Stipule scars	0.7–0.8 cm long	c. 1 cm long	0.7–1 cm long	0.6–1.2 cm long
Peduncels	villose, erect, 1.2–2.5 × 0.5 cm	tomentose, pendulous, 3.5–6 cm long	tomentose, erect, 3.5–4 × 1.5 cm	tomentose, pendulous, 4–9 × 0.6 cm long
Tepals	9, pubescent, 3.8–4.4 × 2–2.8 cm	11, glabrous, 3 × 2 cm	9–10, glabrous, 4.5–6 × 2.5–3 cm	9, glabrous, 6–7.5 × 2–4 cm
Stamens	villose, 1.3–1.4 cm long	glabrous, 1–1.2 cm long	villose, 1.2–1.5 cm long	glabrous, 1.1–1.3 cm long
Gynoecia	obovoid-ellipsoid, villose, 1.5–2 cm long	ovoid-oblong, villose,	ovoid, glabrous, 2–2.5 cm long	ovoid, glabrous, 1.3–1.5 cm long
Carpels	25–30	---	60–75	48–71
Ovules	5–8	---	8–14	6–8

leathery, pale brown pubescent, oblong-elliptic, apex emarginated, 3.8–4.0 × 2.5–2.7 cm, mid 3 white, fleshy, base pale brown pubescent, obovate, 4.2–4.4 × 2.6–2.8 cm, inner 3 white, fleshy, base pale brown pubescent, obovate, 3.8–4 × 2–2.4 cm; stamens c. 92–97, red, villose, 1.3–1.4 cm long, anthers 1.1–1.2 cm, introrsely dehiscent, connectives elongated into a short appendage, stamen scars 6–7 mm long, villose; gynoecium narrowly obovoid-ellipsoidal, densely brown villose, 1.5–2 × 0.5–0.6 cm, carpels 25–30, 0.7–0.8 cm long, ovules 5–8 in each carpel, biseriate, styles 3–4 mm long. Fruits unseen.

Additional specimens examined (paratype): China. Yunnan Province, Xichou County, Fadou, Hemawan, in the evergreen broad-leaved forests, ca. 1,600 m alt., 2 May 1979, *Ting-Xiang Gao & Dai-Qing Zhu* 05 (IBSC); Yunnan Province, Kunming, Kunming Botanical Garden, introduced in 1987 from Yunnan Province, Malipo County, Jingchang, in the evergreen broad-leaved forests, ca. 1400 m alt., 3 May 2003, *Zeng Qing-Wen* 67 (IBSC).

Distribution and ecology: This species grows in the evergreen broad-leaved forests at alt. 1,400–1,600 m in Malipo, Xichou & Maguan County, Yunnan Province, Southwestern China. Flowers in May. Grows with *Manglietia megaphylla* Hu & Cheng, *Parakmeria yunnanensis* Hu, *Phoebe macrocarpa* C. Y. Wu, *Castanopsis lamontii* Hance, *Cornus controversa* Hemsl., *Neolitsea levinei* Merr., *Lindera metcalifiana* Allen, *Bretschneidera sinensis* Hemsl., *Choerospondias axillaris* (Roxb.) Burt & Hill., *Acanthopanax evodiaefolius* var. *pseudoevodiaefolius* Feng, *Exbucklandia populnea* (R. Br.) Chang, *Sassafras tzumu* (Hemsl.) Hemsl., etc.

Discussion: This new species *Manglietia pubipetala* is closely related to *M. rufibarbata* Dandy (Dandy, 1928), *M. megaphylla* Hu & Cheng (Hu & Cheng, 1951; Law, 1996) and *M. moto* Dandy (Dandy, 1928; Chen and Nooteboom, 1993), but it differs primarily in its glaucous lower surfaces of leaves, pubescent tepals and villose stamens and gynoecium. The differences between *M. pubipetala* and the other three species are given in Table 1.

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