

## *Mastixia mirocarpa* (Mastixiaceae), a new species from Yunnan, China

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*Mastixia mirocarpa* Y.C. Liu & H. Peng, a new species in the Mastixiaceae from Mt. Yulong Yunnan, SW China, is described and illustrated. It resembles *M. pentandra*, and is known only from Mt. Yulong.

Key words: *Mastixia*, Mastixiaceae, new species, taxonomy

Since the establishment of genus *Mastixia* in 1826 by Blume, its systematic position has changed often and it has been placed in Caprifoliaceae, Nyssaceae, Olacaceae, Aquifoliaceae, Araliaceae and Icacinaceae (Matthew 1976). The family Mastixiaceae was first established by Bullock (1958) but it did not get wider recognition until in the 1990s (Tang *et al.* 1998, Zhu *et al.* 1999). A recent study analyzed the rbcL sequences of two *Mastixia* species and their affinities (Li *et al.* 2002) and the result supports an independent status for the Mastixiaceae.

*Mastixia* has about 25 species distributed in Bhutan, Cambodia, China, India, Indonesia, Laos, Malaysia, Myanmar, Papua New Guinea, Philippines, Sri Lanka, Thailand, Vietnam, Pacific Islands (Solomon Islands) and South China (Xiang *et al.* 2005). In China there are three species, two of which are endemic there.

In September 2007 we spent a week doing field-work in the Yulong Mountain by the Jinsha River (one of the westernmost headwater streams of the Yangtze River) in NW Yunnan and

collected 327 specimens. Identifying the specimens later, we found a species new to science. We visited the locality twice again in July and September 2008 to collect more specimens of it, but we did not find any.

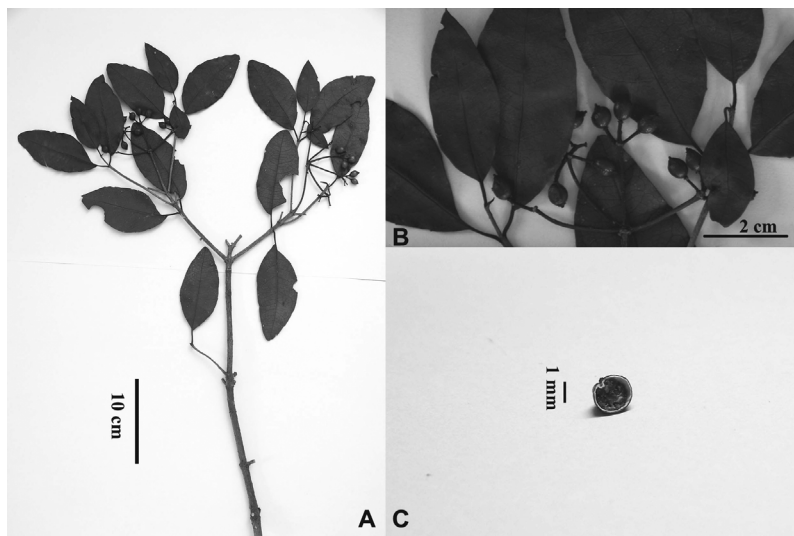
***Mastixia mirocarpa*** Y.C. Liu & H. Peng,  
*sp. nova* (Fig. 1)

*Affinis M. pentandrae* Blume, *sed frutice 3 m alto, foliis oppositis, fructibus parvioribus, 5–6 × 3–4 mm differt.*

TYPE: China, Yunnan Province, Yulong County, Shang Moguxi village, 27°10'25''N, 100°07'34''E, 2600 m, among shrubs on slopes, 22.IX.2007 H. Peng, Y. C. Liu *et al.* 6542 (holotype KUN; isotype PE).

Shrubs, 3 m tall. Branches cylindrical, slender, subglabrous. Leaves opposite; petiole 6–8 mm; leaf blade elliptic, 4–7 × 1.3–3 cm, leathery or subleathery, abaxially subglabrous, veins 7–12 per side, shortly ascending along margin,

**Fig. 1.** *Mastixia microcarpa* (from the holotype). — **A:** Habit. — **B:** Inflorescence. — **C:** Cross-section of a drupe.



**Table 1.** Summary of the key morphological differences between *Mastixia microcarpa* and *M. pentandra*.

	<i>M. microcarpa</i>	<i>M. pentandra</i>
Habit	shrub	tree
Leaves	opposite; 4–7 × 1.3–3 cm	alternate; 6–15 × 2.5–8 cm
Inflorescences	glabrous, 3 cm	puberulous, 4–9 cm
Drupes (length × width)	0.5–0.6 × 0.3–0.4 cm	1.5–2.5 × 1–1.7 cm

base cuneate to broadly cuneate, apex acute or acuminate. Inflorescences terminal, 3 cm, glabrous; branches subtended by small, triangular or lanceolate bracteoles. Flowers unknown. Drupes ovoid to oblong, style and 5 sepals persistent on apex. Fruiting between September and October; flowering time unknown.

The persistent sepals on the drupe are 5-merous, as in *M. pentandra*. Morphologically, *M. microcarpa* is distinguished by being a shrub, while the congeners are sizeable trees, and by its much smaller leaves, inflorescences and drupes (Table 1). We were first uncertain where this species belongs, but its terminal paniculate cymes, hypogynous ovary with one ovule, and the persistent style and sepals on drupes convinced us of the generic placement.

*Mastixia microcarpa* is known only from the western slopes of Yulong Mountain (NW Yunnan, SW China) at an altitude of 2400–2600 m. The type locality is in the eastern Himalayan and Hengduan Mountains, one of the biodiversity hotspots, and new species are consistently being

found there (Myers *et al.* 2000). This species shares a similar distribution pattern with other tropical taxa known only from this mountain, such as *Acalypha schneideriana*, *Clausena vestita*, *Croton yunnanensis*, and *Munronia delavayi*.

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## References

- Bullock, A. A. 1958: *Indicis Nominum Familiarum Angiospermarum Prodromus*. — *Taxon* 7: 161.
- Li, Y. L., Zhu, H. & Yang, J. B. 2002: Systematic position of the genus *Mastixia*: evidence from rbcL gene sequences. — *Acta Botanica Yunnanica* 24: 352–358.
- Matthew, K. 1976: A revision of the genus *Mastixia* (Cornaceae). — *Blumea* 23: 51–93.
- Myers, N., Mittermeier, R. A., Mittermeier, C. G., Da Fonseca, G. A. B. & Kent, J. 2000: Biodiversity hotspots for

- conservation priorities. — *Nature* 403: 853–858.
- Tang, Y. C. & Lu, A. M. 1988: Notes from A. Takhtajan's "Diversity and classification of flowering plants". — *Acta Phytotaxonomica Sinica* 36: 178–192.
- Xiang, Q. Y., Xiang, Q. B., Boufford, D. E. & Lowry, P. P. 2005: *Mastixia*. — In: Wu, C. Y. & Raven, P. (eds.), *Flora of China* 14: 230–231. Missouri Botanical Garden Press, St. Louis.
- Zhu, W. H. & Xiang, Q. B. 1999: Morphological characters of the genus *Diplopanax* Hand.-Mazz. and its systematic implication. — *Bulletin of Botanical Research* 19: 286–291.