

Colocasia menglaensis (Araceae), a new species from southern Yunnan, China

Jian-Tao Yin¹, Heng Li^{1,2} & Zai-Fu Xu¹

¹⁾ Xishungbanna Tropical Botanical Garden, Chinese Academy of Sciences, Menglun, Mengla 666303, Xishuangbanna, Yunnan, People's Republic of China

²⁾ Kunming Institute of Botany, Chinese Academy of Sciences, Heilongtan, Kunming 650204, Yunnan, People's Republic of China (corresponding author's e-mail: liheng@public.km.yn.cn)

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Colocasia menglaensis J.T. Yin, H. Li & Z.F. Xu is described and illustrated as a new species of Araceae from southern Yunnan, China. The morphological characters of *C. menglaensis* and the related *C. lihengiae* are compared. *Colocasia menglaensis* differs from *C. lihengiae* in its spadix with an appendix of 3.5 cm long, pubescent peduncle and petiole and the puberulous lower surface of the leaf blade.

Key words: Araceae, *Colocasia*, new species, taxonomy

Colocasia is a tropical genus of about 13 species, distributed in tropical and subtropical Asia. There are nine species in China (Li 1979, Li & Wei 1993, Mayo *et al.* 1997, Li & Long 1998, 1999, 2000, Long & Liu 2001, Cao & Long 2003). In China *C. esculenta* is widely cultivated and naturalized in the humid tropics and subtropics, while *C. heterochroma*, *C. lihengiae*, *C. gaoligongensis* and *C. gongii* are considered as native to western and southern Yunnan, China.

During our study on the tropical plant resources in South Yunnan, an apparently new species of *Colocasia* was discovered and introduced in Xishungbanna Tropical Botanical Garden, Chinese Academy of Sciences. After a careful study of, and comparison with other species in the genus, it is described here.

***Colocasia menglaensis* J.T. Yin, H. Li & Z.F. Xu, *sp. nova* (Fig. 1)**

Haec species Colocasiae lihengiae affinis, sed ab eo petioli et pedunculo pubescentibus, folia supra viridia glabra, infra pallido piloso, rhizomate 20–40 cm longo, 3–7 cm crasso, spadice appendice 3.5–7 cm longa, 0.5 cm crassa differt.

TYPE: China. Yunnan Province, Mengla County, Nangong Mountain, 101°26'29"E, 21°38'26"N, alt. 1086 m, forest margin, by stream, leaves green, inflorescence 3, yellowish, 27.III.2002 Yin Jian-Tao 30 (holotype HITBC).

Terrestrial perennial herbs with stolons (stoloniferous runners) and an erect rhizome. Rhizome 20–40 cm long, 3–7 cm in diam.; stolons 6–10 per plant, trailing horizontally, non-branch-

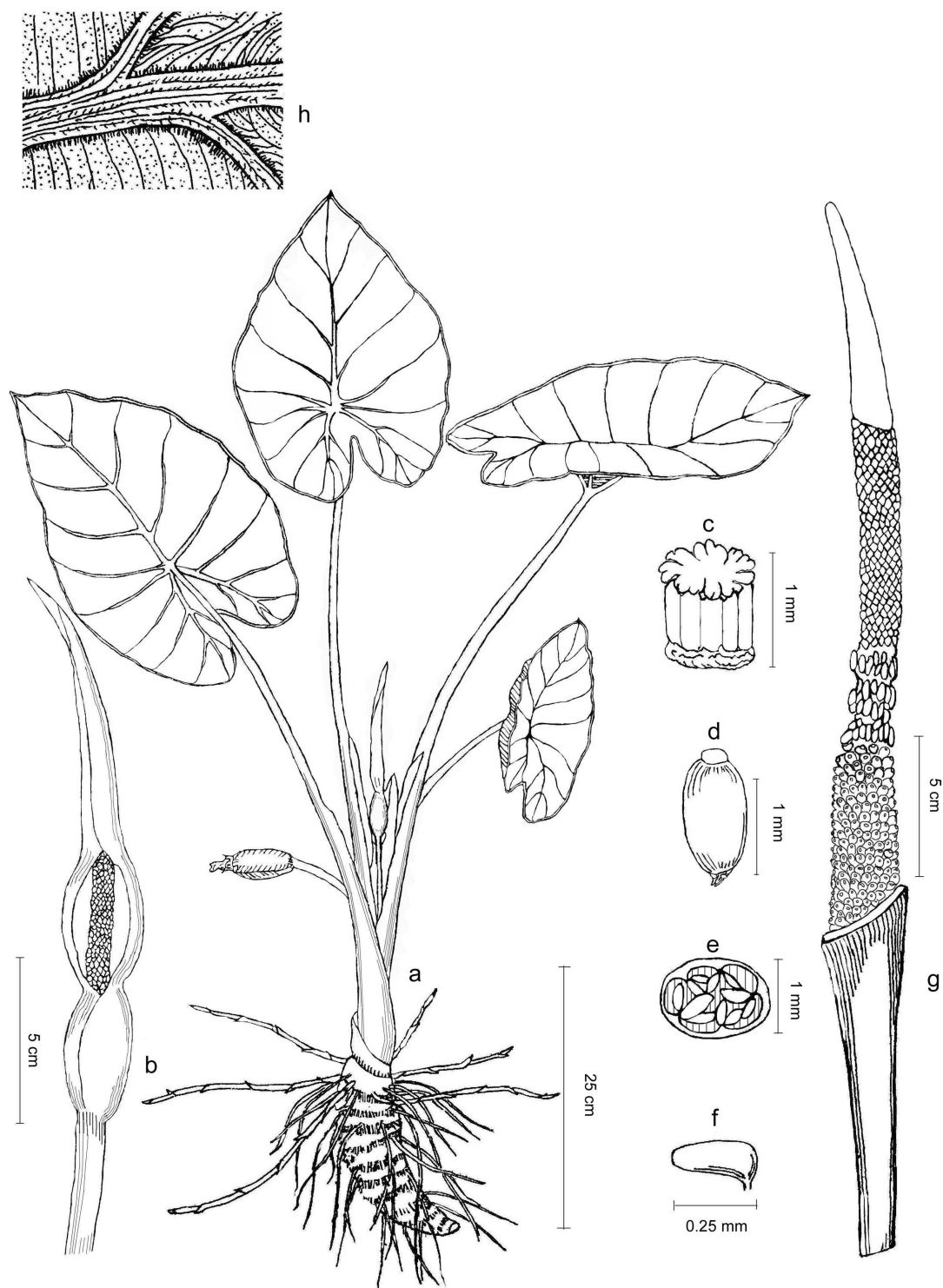


Fig. 1. *Colocasia menglaensis* (from holotype, drawn by Wen Huang). — **a**: Flowering plant with rhizome and stolons. — **b**: Inflorescence. — **c**: Synandrium. — **d**: Ovary. — **e**: Transverse section of ovary. — **f**: Ovule. — **g**: Spadix. — **h**: Lower surface of leaf.

ing, thin, pale green 15–20 cm long, 4 mm in diam., with light green cataphylls; internodes cylindric, 4 cm long, without tubercles; roots whitish, dense, 20–60 cm long, 1–2 mm diam. Leaves 5–6; petiole cylindric, pale greenish, pubescent, 50 cm long, 1 cm in diam.; leaf blade peltate, ovate-cordate, membranaceous, 40×25 cm, upper surface glossy green, lower surface pale green and pilose; primary lateral veins pinnate, 7–9 pairs, green on upper surface, pale green and sharply raised on the lower surface; marginal vein 1–3 mm from margin, inconspicuous. Inflorescences (2–)3(–4) appearing with leaves; peduncle cylindrical, pale green, pubescent, 20 cm long, shorter than petiole, surrounded by a prophyll, narrow lanceolate, ca. 20×3 cm. Spathe constricted between lower tubular part and blade, lower part nearly fusiform with convolute margins, greenish, 3–6 cm long, 1.2 cm in diam.; blade oblong-lanceolate, yellowish, 13–18 cm long, 4–6 cm wide, lower part open, upper part convolute, erect, not reflexed. Spadix sessile, shorter than spathe, female zone green, cylindrical, 2 cm long, 1 cm in diam., separated from male by a white narrower zone of sterile male flowers, male zone yellowish, cylindrical, 3.5 cm long, 7 mm in diam.; sterile zone between female and male zone, cylindrical, 1 cm long, 6 mm in diam.; appendix pale yellowish, elongate conic, 3.5 cm long, 0.5 cm in diam., rugose at base. Flowers unisexual, perigone absent. Male flower fragrant: 8–11-androus, stamens connate into a truncate synandrium, thecae lateral, oblong-linear, dehiscing by apical pore. Sterile male flower: synandrodies depressed-obpyramidal, apex nearly truncate, oblong to ovate. Female flower: ovary ovoid to oblong, 1.5 mm long, unilocular, ovules many (about 50), hemiorthotropous, funicles conspicuous, placentae 4–5, parietal, stylar region short, stigma discoid-capitate; berry not seen. Flowering March to June

Key to the Chinese species of *Colocasia*

1. Stem a hypogeal, subglobose or subcylindric tuber (sect. *Colocasia*) 2
1. Stem epigeal, erect or suberect, stoloniferous, tuber absent (sect. *Caulescentes*) 5
2. Plant wild; leaf blade heterochromous, dark-green or dark-purple above, with pale-green venation; tubers small, globose or obovoid, ca. 1.5 cm in diam.; stolons conspicuous, more than 10 cm long 3
2. Plant cultivated or naturalized; concolorous, green above, pale-green below, underground rhizome thick, tuber-like *C. esculenta* (4)
3. Spathe blade erect, lower part yellow, upper part violaceous; zone of sterile male flowers in spadix absent *C. heterochroma*
3. Spathe blade reflexed, yellowish or greenish; zone of sterile male flowers in spadix present *C. bicolor*
4. Stolons absent; appendix of spadix shorter, nearly 1/2 the length of the male zone (including lower part with staminodes) var. *esculenta*
4. Stolons present; appendix of spadix elongate, nearly equals male zone of spadix var. *antiquorum*
5. Spathe blade white; appendix small, 1–5 mm long, above-ground stem stout, erect *C. gigantea*
5. Spathe blade golden yellow, yellowish 6
6. Appendix of spadix absent or extremely short 7
6. Appendix of spadix conspicuous 8
7. Spathe blade deep golden yellow, obovate to triangular, erect, opening, acute or obtuse at apex; in spadix sterile zone narrower, 15×3 mm *C. gaoligongensis*
7. Spathe blade golden yellow, oblong-lanceolate, patent to reflexed, acuminate to acute at apex; in spadix sterile zone short and more robust, 10×5 mm *C. lihengiae*
8. Petiole pubescent, lower surface of leaf blade pilose; appendix of spadix 3.5 cm long, 0.5 cm in diam. *C. menglaensis*
8. Petiole and leaf blade glabrous 9
9. Stem erect or nearly erect, 120–135 cm high, 12–18 cm in diam., spathe blade golden yellow with purple margins, appendix of spadix about 5 cm long *C. gongii*
9. Stem a hypogeal rhizome, subglobose, 1–1.5 cm in diam.; spathe blade orange, appendix of spadix 2.5–2.7 cm long *C. fallax*

Colocasia menglaensis is fairly similar to *C. lihengiae*. It differs from the latter by its conspicuous appendix ca. 3.5 cm long, 0.5 cm in diam.; the pubescent peduncle and petiole, and the pilose lower surface of leaf blade. The spadix of *C. menglaensis* also resembles that of *C. gongii*, but differs in having a larger underground rhizome without an erect or nearly erect stem, an erect (not reflexed) spathe blade and a pubescent peduncle and petiole.

HABITAT. *Colocasia menglaensis* grows in humid forest margins at 1086 m by a stream. Other aroids in the same habitats include *C. heterochroma*, *C. gigantea*, *Alocasia odora*, and abundant aroids on the trees or on rocks, such as *Rhaphidophora hookeri*, *R. megaphylla*, *R. hongkongensis*, *R. decursiva*, and *Pothos chinensis*. Plants of *Colocasia menglaensis* were introduced to the Tropical Garden at alt.

500–600 m two years ago. They are growing very well and flowering each year.

DISTRIBUTION. China (Yunnan province, Mengla County of Xishungbanna Prefecture, Mt. Nangongshan), Myanmar (Bhamo).

ADDITIONAL SPECIMENS EXAMINED (paratypes). — **China.** Yunnan Province, Mengla County, 101°26'29"E, 21°38'26"N, alt. 1086 m, forest margin, by stream, 30.III.2002 *Yin Jian-Tao* 253 (HITBC); Yunnan Province, Mengla County, Nangong Mountain, 101°26'29"E, 21°38'26"N, alt. 1086 m, forest margin, by road, 30.VI.2002 *Yin Jian-Tao* 264 (HITBC). **Myanmar.** Bhamo, 97°15'E, 24°15'N, in humid secondary forest, 30.VI.2003 *Yin Jian-Tao* 265 (introduced in Xishuanbanna Tropical Botanical Garden, HITBC).

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