

---

# *Amorphophallus zengianus* (Araceae), a New Chinese Species from Yunnan

Long Chunlin and Li Heng

Kunming Institute of Botany, Chinese Academy of Sciences, Heilongtan, Kunming, Yunnan 650204, People's Republic of China

---

**ABSTRACT.** *Amorphophallus zengianus* C. L. Long & H. Li from Yunnan, China, is described as new. It is similar to *A. krausei* Engler in having an erect, boat-shaped spathe with a sterile portion between male and female parts, but differs in having a spathe without spots, an appendix shorter than the spathe, and a pleasant odor.

**Amorphophallus zengianus** C. L. Long & H. Li, sp. nov. TYPE: China. Yunnan: Jinping Xian, Ma'andi (22°40'N, 103°10'E), 900 m, 25 June 1998, C. L. Long 98003 (holotype, KUN).

Species *Amorphophallo krausei* Engler affinis, sed spathe intus basi atro-purpurea, appendice spadiceis subcylindrica 6 cm longa, 2–2.4 cm crassa papillosa et basi rugosa, inflorescentia neutra inter inflorescentias femininas et masculas 2 cm longa, 2.5 cm crassa staminodiis fusiformibus usque 6 mm longis 5 mm crassis suffulta, differt.

Tuberous herbs; tuber obovoid or depressed-obconical, ca. 14 × 12 cm, producing short globose offsets. Leaf unknown. Inflorescence long-pedunculate; peduncle ca. 56 × 1.5–2.3 cm, pale green with sparse (denser at base), blackish green, oblong, small spots, smooth; spathe erect, boat-shaped to ovate, ca. 20 × 15 cm; basal part dark purple, convolute, ca. 9.5 × 3(at base)–6 cm, slightly papillose; limb light green abaxially, green adaxially, deltoid, ca. 10 × 10 cm, the apex erect, acute. Spadix sessile, shorter than spathe, ca. 14 cm, emitting a faint, orange-like fragrance; female portion ca. 2.5 × 2 cm, the ovaries green, ovoid, ca. 2.5 mm diam., 2-ovulate; style pale green, ca. 1.5 mm, the stigma brown, slightly 3- or 4-lobed; sterile portion of spadix yellow, ca. 2 × 2.5 cm, the staminodes fusiform, ca. 6 × 5 mm; male portion of spadix yellow, ca. 3.5 cm × 2.2 mm, the synandria obconical, ca. 1 mm; anthers subglobose, short, pores apical; appendix of spadix deep yellow, cylindrical, ca. 5.5 × 2.2 cm, the base rugulose, the apex acute, entirely papillose. Chromosome number:  $2n = 26$ .

**Distribution.** Known only from Jinping Xian, southern Yunnan, China, in secondary forest and shrubs in valleys, from 760 to 1820 m above sea level.

*Amorphophallus zengianus* resembles *A. krausei* (from western Yunnan, China, and northern Myanmar). However, the latter species differs in its inflorescence, the odor of which is most unpleasant and reminiscent of a natural gas leak; its spathe, which is pale yellowish green adaxially, the base pale green with many small, slightly elongate or irregularly ridge-shaped warts; its spadix, which is nearly as long as the spathe; and its peduncle, which is marked with partly or almost entirely confluent spots and white dots.

Morphologically, *Amorphophallus zengianus*, *A. krausei*, and other species such as *A. konjac* C. Koch, *A. yunnanensis* Engler, and *A. kachinensis* Engler & Gehrman belong to the same section, i.e., section *Conophallus* Engler. They also have the same chromosome numbers, i.e.,  $2n = 26$ , differing from *A. paeoniifolius* Nicolson in section *Cundarum* Engler, which has  $2n = 28$  (Long et al., 1989; Li et al., 1990). Chromosome number is not significant to identify species from the same section, but it may be useful to differ sections in *Amorphophallus*.

The new species is named in honor of Zeng Xiaolian, a botanical illustrator and artist at Kunming Institute of Botany, Chinese Academy of Sciences, for his great contributions to the research of Araceae and other taxa in China.

**Acknowledgments.** The study is supported by the Chinese Academy of Sciences (the Knowledge Innovation Project and a grant numbered KZ951-A1-104). We are grateful to Zhou Yi-lan, who is cultivating the type collection in her private garden. Special thanks are extended to Zhou Qi-xing for making the chromosome count, and to Wang Ling for preparing the illustration. We also thank Nick Turland (MO) for his comments and help in

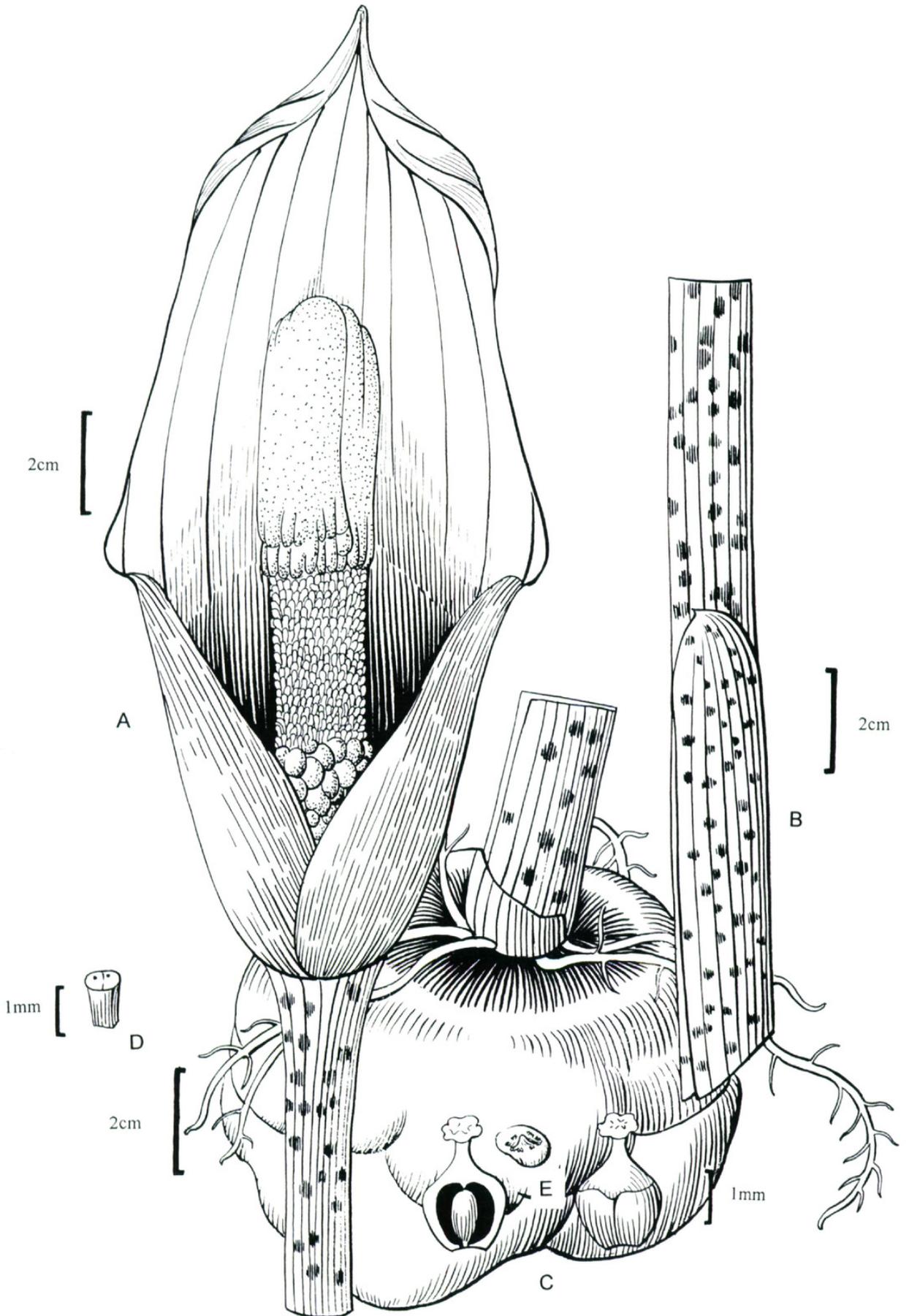


Figure 1. *Amorphophallus zengianus* C. L. Long & H. Li. —A. Inflorescence. —B. Part of peduncle showing cataphyll. —C. Tuber. —D. Synandrium. —E. Pistil and longitudinal section of pistil showing ovules. All drawn from the type collection, C. L. Long 98003 (drawn by Wang Ling).

---

the preparation of the manuscript, and Thomas Croat (MO) for his valuable comments.

Literature Cited

Li, H., Z. J. Gu, C. L. Long & Y. P. Yang. 1990. Report

on the karyotypes of *Amorphophallus* from China (II). *Guihaia* 10(1): 21–24.

Long, C. L., Z. J. Gu & H. Li. 1989. Report on the karyotypes of *Amorphophallus* from China (I). *Guihaia* 9(4): 317–321.



Long, Chunlin and Li, Heng. 2000. "Amorphophallus zengianus (Araceae), a New Chinese Species from Yunnan." *Novon a journal of botanical nomenclature from the Missouri Botanical Garden* 10, 125–127.

<https://doi.org/10.2307/3393011>.

**View This Item Online:** <https://www.biodiversitylibrary.org/item/14670>

**DOI:** <https://doi.org/10.2307/3393011>

**Permalink:** <https://www.biodiversitylibrary.org/partpdf/122091>

#### **Holding Institution**

Missouri Botanical Garden, Peter H. Raven Library

#### **Sponsored by**

Missouri Botanical Garden

#### **Copyright & Reuse**

Copyright Status: In copyright. Digitized with the permission of the rights holder.

License: <http://creativecommons.org/licenses/by-nc-sa/3.0/>

Rights: <https://biodiversitylibrary.org/permissions>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.