

Validation of an Invalidly Described Species of *Gnetum* (Gnetaceae) from Hainan Island, China

Fu Li-kuo and Yu Yong-fu

Institute of Botany, Chinese Academy of Sciences, 20 Nanxincum, Xiangshan, Beijing 100093, People's Republic of China

Michael G. Gilbert

Flora of China Project, Missouri Botanical Garden, c/o Department of Botany, Natural History Museum, Cromwell Road, London SW7 5BD, United Kingdom

ABSTRACT. *Gnetum hainanense*, previously invalidly described, is validated.

A nomenclatural problem was noticed during work on the Gnetaceae for volume 4 of the *Flora of China*. The original description of *Gnetum hainanense* C. Y. Cheng (Cheng et al., 1975) is invalid because two types (a male collection, *McClure 20084*, and a fertile collection, *Tsang & Fung 554*) were designated. It should be noted that the diagnosis given in the original publication is of questionable validity, as it gave no direct information on the new species but only indicated how another, known, species, *Gnetum parvifolium* (Warburg) Chun, differed from it. The species is well defined and moderately common and needs to be validated. The fertile collection is here selected as the type collection.

Gnetum cleistostachyum C. Y. Cheng was described in the same paper as *G. hainanense*, again with male and female types, and thus this name is also invalid. It was based on two collections at early anthesis. We have seen very little material at a comparable stage of development. What we have seen suggests that the urceolate involucre used to characterize *G. cleistostachyum* might be a developmental stage that occurs more widely in the genus, and thus are of questionable taxonomic value. When this is coupled with the absence of seeds, which provide the most reliable diagnostic characters for the group, we prefer not to take up this name. Similarly, we do not intend to recognize any infraspecific taxa within *Gnetum pendulum*. Thus, we are not validating *Gnetum pendulum* f. *intermedium*, also described with male and female types. The question of the validity of an essentially negative diagnosis also applies to *Gnetum pendulum*: again, the diagnosis gave no information on the new species, stating only how *G. oblongum* Markgraf differed from it. However, because all oth-

er parts of the protologue are valid and a reasonable illustration is provided, we regard that name as valid.

Gnetum hainanense C. Y. Cheng ex Fu Li-kuo, Yu Yong-fu & M. G. Gilbert, sp. nov. TYPE: China. Hainan Island: Hung Mo Shan, Lai [Loi] area, 22 July 1929 (fr), *Tsang & Fung 554* (holotype, PE 100207; isotypes A, K, PE 1188347). Figures 1, 2.

Species *Gneto lofuense* C. Y. Cheng affinis, sed foliis nervatis lateralibus utroque latere 6–8 (non 9–11), spicibus maribus longioribus, involucri 12–20 (non 9–11), seminibus in sicco laevibus vel obscure reticulatis (non grosse reticulatis), minoribus ((1.5–)1.9–2.1(–2.5) × 1.1–1.4(–1.6) cm, non 2.4–2.8 × 1.5–1.6 cm); a *Gneto parvifolio* (Warburg) Chun foliis maioribus (10–15(–30) × 3–7.5 cm, non 2.5–10(–13) × 1.5–5 cm), spicibus maribus brevioribus, involucri 12–20 (non 5–10(–12)), pilis intrainvolucrealibus dense conspicuis (non paucis brevissimis), seminibus in sicco late ellipsoideis non striatis (non fusiformibus longitudine striatis) manifeste differt.

Vines, slender and fragile, glabrous except within the fertile spikes. Petiole 8–12 mm; leaf blade oblong-elliptic or oblong-ovate, 10–15(–30) × 3–7.5 cm, leathery, glossy; lateral veins 6–8 each side. Male inflorescences simple or cymosely once-branched. Male spike 15–30 × 3–4 mm; involucre 12–20; each subtending (40–)60–80(–90) male “flowers” in several ranks plus an uppermost whorl of 15–20(–30) sterile female “flowers”; basal hairs between the “flowers” very numerous and forming a dense brown cushion. Female inflorescence axillary on old branches, cymosely once-branched, 10–15 cm long when fertile. Female spike with 10–20 involucre, rachis thick; each node with 8 or 9 female “flowers.” Seed cylindric to broadly ellipsoid, red, outer integument smooth to ± reticulately wrinkled when dry, (1.5–)1.9–2.1(–2.5) × 1.1–1.4(–1.6) cm, sessile or nearly so; apex acute or



Figure 1. Isotype (Tsang & Fung 554) of *Gnetum hainanense* C. Y. Cheng ex Fu Li-kuo, Yu Yong-fu & M. G. Gilbert (erroneously written as Yu et al. in photograph).



Figure 2. Detached seed of *Gnetum hainanense*, taken from the packet attached to the isotype sheet (scale in millimeters).

with a small pointed umbo in center. Flowering February–July, producing seeds July–December.

Gnetum hainanense is probably most closely related to *G. lofuensis*, which has rather similar reticulately wrinkled seeds; the seeds differ in *G. lofuensis* by being distinctly larger and much more prominently and coarsely wrinkled, perhaps indicating a thicker fleshy layer. *Gnetum parvifolium*, to which *G. hainanense* was originally likened, is clearly differentiated by the much smaller seeds that are finely longitudinally striate when dried and

the smaller male spikes with only 8–12 involucre whorls and with few, short hairs between the male “flowers.”

Paratypes. CHINA. **Guangxi:** Lar Pan, W of Hoo-chih, 22 July 1928, R. C. Ching 6503 (A); Seh-feng, Dar Shan, S of Nanning, 21 Oct. 1928, R. C. Ching 8093 (A, NAN); Shang-sze Distr. (near Guangdong border), Na Wai Village, Shap Man Taai Shan, June 1934, W. T. Tsang 23948 (A); Shang-sze Distr., Shap Man Taai Shan, 31 Aug. 1934, W. T. Tsang 24161 (A, MO). **Hainan:** Dung Ka to Wen Fa Shi, 520 m, 1932, N. K. Chun & C. L. Tso 43785 (A, B, K); Pak Shik Ling, Ku Tung village (Ching Mai Distr.), 22 July 1933, Fung H. 20175 (A, BM, E, K, MO, PE); Ch'ang-kiang Distr., Ka Chik Shan, 28 Mar. 1933, Yaichow, 700 m, 1933, F. C. How 70550 (MO, PE); no locality, 29 Apr. 1933, F. C. How 70614 (A, PE), S. K. Lau 1410 (A, BM); Ue Lung Shan (Ch'ang-kiang Distr.), 25 Jan. 1934, S. K. Lau 3214 (A); Kan-en Distr., Chim Fung Mt., near Fong Ngau Po Village, Jan. 1935, S. K. Lau 5256 (A, E); Fat Lo Shi, Yai-hsien, Mar. 1935, S. K. Lau 5775 (A); Yeung Lam shan, Yai-hsien, Mar. 1935, S. K. Lau 6282 (A, E); Ling-shui (Ling-tui) Distr., Chim Shan, Fan Maan Ts'uen, May 1932, S. K. Lau 26455 (A); Bak-sa, 29 Apr. 1936, S. K. Lau 26549 (A); Loktung, 24 May 1936, S. K. Lau 26888 (A, KUN); Pak Shik Ling, Ku Tung village (Ching Mai Distr.), 22 July 1933, C. I. 875 Lei (B, K, PE); no locality, 23 Feb. 1934, H. Y. Liang 65151 (E, PE), McClure 20084 (GH, K, MO, PE); Paak Po Shan, Taam-chau Distr., 1 Sep. 1927, W. T. Tsang 727 (A, K, PE).

Acknowledgments. We thank the curators and directors of the following herbaria for access to their material, directly or via loans: A, B, BM, E, K, KUN, MO, NAN, PE.

Literature Cited

Cheng W. C., Fu L. K. & Cheng C. Y. 1975. Gymnospermae Sinicae. Acta Phytotax. Sinica 13(4): 56–90, figs. 1–66.



Fu, Li-Kuo. and Gilbert, Michael George. 1999. "Validation of an invalidly described species of *Gnetum* (Gnetaceae) from Hainan Island, China." *Novon a journal of botanical nomenclature from the Missouri Botanical Garden* 9, 187–189.

View This Item Online: <https://www.biodiversitylibrary.org/item/14669>

Permalink: <https://www.biodiversitylibrary.org/partpdf/3029>

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>.