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Castanopsis chinensis Hance (Fagaceae), a Newly Recorded Plant in Taiwan

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ABSTRACT: *Castanopsis chinensis* Hance is a newly recorded species to be added to the flora of Taiwan. In this paper, a detailed description, a line drawing and color photos of the species are provided.

KEY WORDS: ***Castanopsis chinensis*, New record, Flora, Taiwan.**

INTRODUCTION

The genus *Castanopsis* (Don) Spach., a member of Fagaceae, is represented by about 120 species in subtropical and warm temperate areas of the world (Wendy, 1994). The species number of *Castanopsis* in Taiwan has been reported by different authors as 8 (Li, 1963; Liu and Liao, 1976; Liao, 1991, 1996), 9 (Chen, 1997; Yang et al., 1997), 10 (Liu, 1960; Liu et al., 1994) and 11 (Shen, 1984).

In September of 2005, we found an unknown species of *Castanopsis* at Machia, Pingtung, which is distinctly different from any other known species of the genus in Taiwan by its leaves being serrate at least along upper half margins. After a detailed study of its cupular morphology and a review of all relevant literature concerning the genus, the authors came to realize that the species may be identical to the species *C. chinensis* Hance which has a distributional range from S. China to Vietnam (Huang et al., 1999). In October, one of us (C.-K. Yang) went to the herbarium of the South China Botanical Garden, Chinese Academy of Sciences (IBSC) for examination of the specimens of the genus. In addition, he made an observation on the plants cultivated in the garden. As a result, all diagnostic characters of the unknown species from Taiwan closely matched those of *C. chinensis* and thus these two should be regarded as conspecific. The species is therefore a new record to the flora of Taiwan. The morphological description for the species is briefly outlined below.

TAXONOMIC TREATMENT

Castanopsis chinenesis Hance, Journ. Linn. Soc. Bot. 10: 201. 1868; Huang, Zhang & Bruce, Fl. China 4: 329. 1999; Huang et al., Fl. Reip. Pop. Sin. 22: 52. 1998. 桂林栲 Figs. 1-3

Evergreen trees 10-20 m tall with trunk straight; branches glabrous, puberulent when young. Leaves lanceolate to rarely ovate, 7-18 cm long, 2.5-4 cm wide, glabrous, thickly chartaceous, concolorous at both surfaces, base rounded to acute, margin serrate at least from middle to apex, apex caudate; midvein and secondary veins adaxially elevated, secondary veins 9-12 pairs; petioles 1-2.5 cm long. Female inflorescences borne on apical part of 1st-year branchlets; female flowers 1 or rarely 2 per cupule. Infructescences 8-15 cm long; cupules globose, 2.5-3.5 cm in diam., usually splitting into 3-5 segments, outside densely grayish brown, inside densely brown villous, wall 1-1.5 mm thick; bracts spinelike, almost entirely covering the outside of cupule, 6-12 mm long, connate at base or lower parts. Nuts compressed globose, 1.2-1.6 cm long, 1-1.3 cm wide, puberulent; scar basal, 8-10 mm in diam.

Specimens examined: TAIWAN. Pingtung: Machia Hsiang, Jhinlishan, alt. 800 m, Sep. 22, 2005, *C. K. Yang & F. S. Chou 1340* (SYSU = Herbarium, Department of Biological Sciences, National Sun Yat-sen University); Jhinlishan, December 2005, *J. F. Chen s.n.* (PPI = Herbarium, Department of Forestry, National Pingtung University of Science and Technology); Baibinshan, alt. 750 m, Nov. 14, 2005, *C. K. Yang & F. S. Chou s. n.* (SYSU). CHINA. Guangdong: Guangzhou city, Apr. 16, 1963, *L. Tang 10142* (IBSC = South China Botanical Garden, Chinese Academy of Sciences); Guangzhou city, Longyandung, Jan. 18, 1934, *W. Y. Chen 9346* (IBSC); same loc., Oct. 1, 1929, *W. Y. Chen 7620* (IBSC); same loc., *K. J. Hou 8417* (IBSC); Boluo hsiang, Oct. 4, 1989, *J. H. Li 6427* (IBSC); Boluo hsiang, Luofushan, alt. 245 m, Dec. 25, 1928, *Y. Jiang 1740* (IBSC); Jauchiung city, Dinghushan, Nov. 6, 1928, *Y. Jiang 1522* (IBSC); same loc., Oct. 17, 1929, *J. L. Tzuo 21256* (IBSC); Tzengchang hsaing, Nov. 6, 1958, *J. F Wei 122040* (IBSC); Shueishi hsaing, May. 1, 1996, *J. H. Li et al 2104* (TNM = Herbarium, Department of Botany, National Museum of Natural Science); Yangchuen

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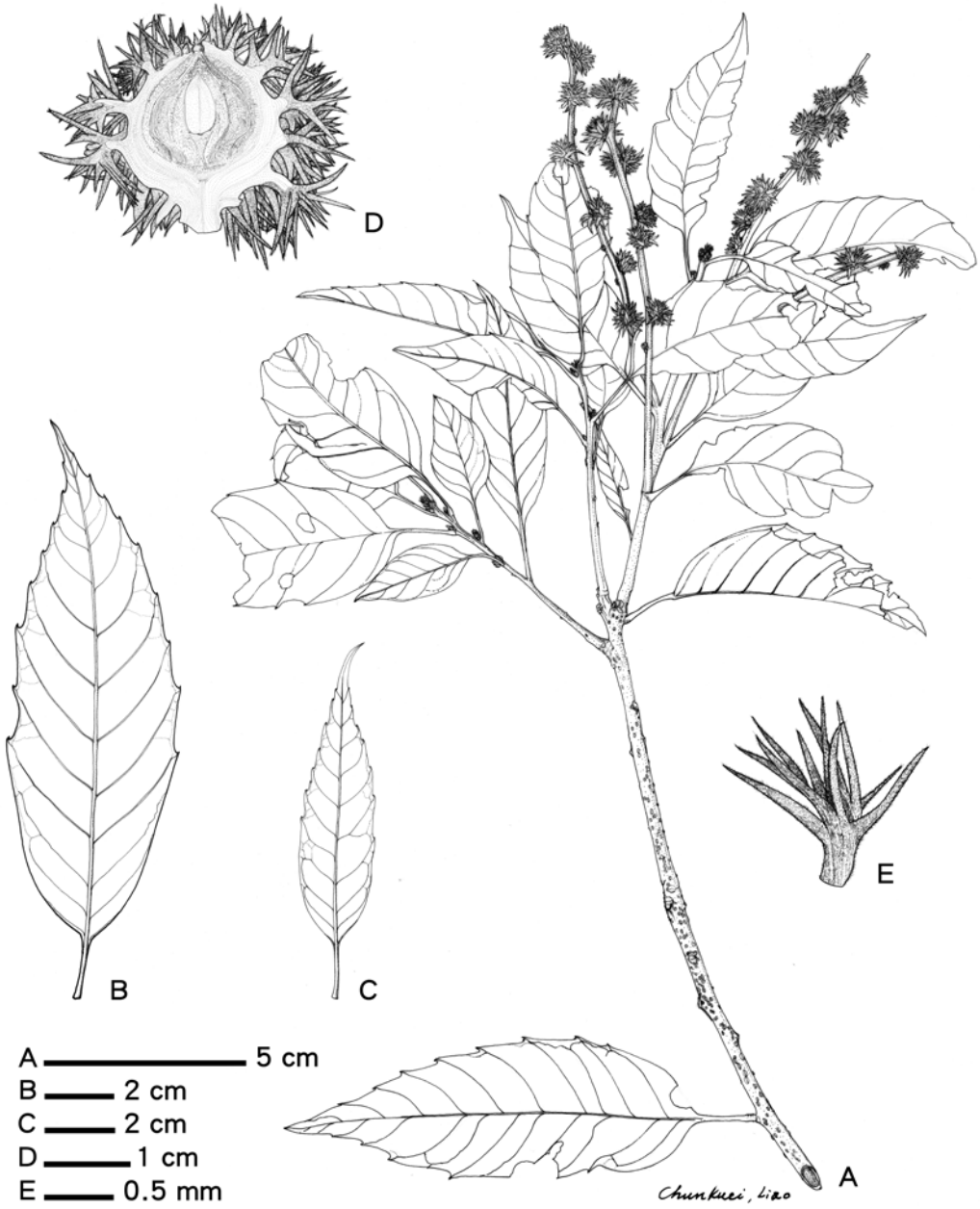


Fig. 1. *Castanopsis chinenesis* Hance. A: Branch with fruit. B-C: Leaves. B: At lower branch. C: At upper branch. D: Fruit (vertical section). E: Spines of cupule.

hsaing, alt. 200 m, Nov. 23, 1991, *N. Liu et al. 3081* (TNM); Guangzhou city, South China Botanical Garden, Oct. 21, 2005, *C. K. Yang & F. W. Xing 1360* (SYSU = Herbarium, Department of Biological Sciences, National Sun Yat-sen University). Guangxi: Teng hsiang, Dayanshan, alt. 1,200 m, Oct. 9, 1937, *L. C. Chen 91372 91375* (IBSC).

Note: The species grows on upper slope and ridge with an altitude ranging from 800 m to 1,100 m at Machia, Pingtung.

Phenology: Flowering from May to July; fruiting from September to November.

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Fig. 2. *Castanopsis chinenesis* Hance. A: Leaf. B: Upper branch with pistillate flowers. C: Pistillate catkin.

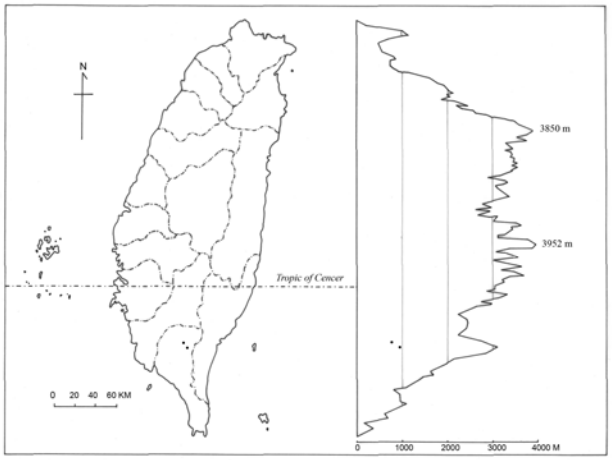


Fig. 3. Distributional map of *Castanopsis chinensis* Hance in Taiwan.

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臺灣新紀錄殼斗科植物－桂林栲

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摘　　要

桂林栲 (*Castanopsis chinensis* Hance) 為常綠喬木，產於臺灣南部的屏東縣，是臺灣新紀錄的殼斗科植物。本文描述此種植物的形態特徵，並提供線繪圖、地理分布圖與彩色照片以資辨識。

關鍵詞：桂林栲、新紀錄植物、臺灣植物誌。

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