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Valid Publication of *Croton dinghuensis* (Euphorbiaceae) and *Helicia yangchunensis* (Proteaceae), Two Species Endemic to Guangdong, China

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ABSTRACT. Two names proposed by H. S. Kiu, *Croton dinghuensis* (Euphorbiaceae) and *Helicia yangchunensis* (Proteaceae), were originally described from Guangdong, China, but were invalidly published because the author failed to specify the repository herbarium of the types. These names are validated by designating *G. L. Shi 2763* (IBSC) as the holotype of *C. dinghuensis* H. S. Kiu and *Zhanjiang Expedition 03261* (IBSC) as the holotype of *H. yangchunensis* H. S. Kiu.

Key words: China, *Croton*, Euphorbiaceae, *Helicia*, Proteaceae.

Two invalidly published names, *Croton dinghuensis* H. S. Kiu and *Helicia yangchunensis* H. S. Kiu in the Euphorbiaceae and Proteaceae families, respectively, have come to our attention while working on the checklist of endemic taxa from China. When these names were proposed by Kiu (1995, 1998), he indicated that the types were deposited at the South China Botanical Garden (IBSC) and Dinghushan Biosphere Reserve (IBSD) for *C. dinghuensis*, and at IBSC and Zhongshan University (SYS) for *H. yangchunensis*, but failed to indicate or distinguish the repository herbaria for the two holotypes. Thus, the contravention of Article 37.7 of the International Code of Botanical Nomenclature (McNeill et al., 2006) invalidates the names. Unfortunately, these oversights were not discovered in the taxonomic treatment for the updated English edition of *Flora of China*, Vols. 5 and 8 (Kiu & Weston, 2003; Li et al., 2008). To enable the formal use of these names, here we explicitly designate the holotypes and herbaria of deposit to validate these names. Note that Kiu (1995, 1998) did include Latin diagnoses and descriptions, and this fulfills the requirement for validation under Article 36.1. Ascription, according to Article 46.2, is to H. S. Kiu as the author of *C. dinghuensis* and *H. yangchunensis*.

1. *Croton dinghuensis* H. S. Kiu, sp. nov. TYPE: China. Guangdong: Zhaoqing, Dinghu, Shuiken,

in valley forest, 250 m, 20 May 1966, *G. L. Shi 2763* (holotype, IBSC; isotype, IBSD).

The validating description and diagnosis were previously published by Kiu (1998: 101–103).

Croton dinghuensis is morphologically most similar to *C. laniflorus* Geiseler, sharing features such as glabrous inflorescences, filamentous or absent female petals, and lanceolate sepals in female flowers. *Croton dinghuensis* differs by having papery leaves, glabrous on both surfaces, and with flat, disciform glands at the base of the leaf blade midvein. This contrasts with *C. laniflorus*, which has thinly leathery leaves abaxially with scurfy stellate hairs, petioles with a pair of cupular glands at the apex, but no glands on the leaf blade or midvein. *Croton dinghuensis* also resembles *C. laevigatus* Vahl, sharing subulate stipules, papery leaves, and an ovary with densely stellate hairs. However, *C. dinghuensis* has glabrous inflorescences and calyces in both male and female flowers. These contrast with the dense and appressed stellate indument of the calyx in both male and female flowers and the persistently pubescent inflorescences observed in *C. laevigatus*. Capsules are similar in size (1 cm in diam.), but are subglobose and sparsely stellate in *C. dinghuensis* and obovoid or trigonous and densely pubescent in *C. laevigatus* (Kiu, 1998; Li et al., 2008).

Habitat and distribution. *Croton dinghuensis* is known only from Guangdong Province in southeastern China. The species has a limited distribution, growing in forests in limestone regions at altitudes from 100 to 250 m.

2. *Helicia yangchunensis* H. S. Kiu, sp. nov. TYPE: China. Guangdong: Yangchun Co., Sanjiangtong, 700 m, 28 May 1957, *Zhanjiang Exped. 03261* (holotype, IBSC [barcode] 0009706; isotypes, IBK, IBSC, SYS).

The validating description and diagnosis were previously published by Kiu (1995: 110–111). In the process of confirming the type specimens, an

additional specimen with the same collector, number, and date was found in the Guangxi Institute of Botany (IBK). It is confirmed as part of the original gathering for the type and is included here as an additional isotype.

Helicia yangchunensis is similar to *H. formosana* Hemsl.; both taxa are trees that share a dense, rust-colored pubescence on young branchlets and inflorescences, and a woody pericarp. *Helicia yangchunensis* differs by having a smaller perianth, ca. 1.4–1.5 cm, with shorter, appressed indument (pilosulose) versus the perianth 1.5–2 cm and pilose in *H. formosana*. Mature leaf blades are abaxially pilose along the midvein but otherwise glabrescent in *H. yangchunensis*, and the blade margins are entire. In *H. formosana*, mature leaf blades are abaxially pilose along all veins, not just the midvein, and the blade margins are toothed. Inflorescences are smaller in *H. yangchunensis*, only 7–8 cm, but are much longer, 10–24 cm, in *H. formosana*.

Habitat and distribution. *Helicia yangchunensis* is known only from Yangchun Co., in Guangdong, China, growing in forests, hilly slopes, and often along streams at altitudes from 600 to 700 m.

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