

Validation of *Scrophularia macrocarpa* (Scrophulariaceae) endemic to southwestern China

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Scrophularia macrocarpa P. C. Tsoong, originally described from Sichuan, China, was not validly published in 1979 because two type specimens (one fruiting, one in flower) were designated. To enable formal use of the name, the species name is validated here, with the fruiting specimen designated as the holotype.

Scrophularia L. consists of about 200 species that are widely distributed throughout temperate Asia, Europe and North America (Tsoong 1979, Mabberley 1997, Fischer 2004). In China, 36 species and 2 varieties have been recognized (Hong et al. 1998). Among these, *S. macrocarpa* P. C. Tsoong was described as a new species in 'Flora Reipublicae Popularis Sinicae'. In the protologue, two specimens, representing flowering and fruiting stages were simultaneously designated as types (Tsoong 1979). Therefore, the name *Scrophularia macrocarpa* Tsoong was not validly published according to art. 37.1 of the ICBN (McNeill et al. 2006). Unfortunately, this problem was not discovered in the English and updated edition of the 'Flora of China'. To enable its formal use, the name is here validated, with the fruiting specimen, Z. F. Wang 22989, designated as the holotype. However, when checking the specimens in the herbarium, we found that a duplicate with flowers was deposited in KUN, and is here designated as an isotype (Fig. 1).

Tsoong did include a Latin description in 1979, which constitutes the validating reference, sensu ICBN art. 36.1 and, according to the article 46.2, P. C. Tsoong is the correct author of the name *Scrophularia macrocarpa*.

Scrophularia macrocarpa P. C. Tsoong sp. nov. (Fig. 1)

Validating Latin description: P. C. Tsoong, in Flora Reipubl. Pop. Sin. 67 (1979, p. 395).

Type: China. Sichuan: Mabian Hsien, 2400 m a.s.l., 27 May. 1931 (fr), F. Z. Wang 22 989 (holotype: PE, not seen, isotype: KUN).



Figure 1. Photograph of the isotype at KUN of *Scrophularia macrocarpa* (F. Z. Wang 22 989).

This species is known from southwest China (Sichuan, Yunnan) and has a limited distribution area. It occurs in dense forests at altitudes from 800 to 1000 m a.s.l., and is readily distinguished from other Chinese *Scrophularia* by having larger fruits (ca 11–14 mm), pinnate veins and its upper calyx lobe obviously larger than the other four lobes.

Additional specimens examined

China, Sichuan: Butuo, Sichuan Expedition 13 777(CDBI); Jinyang, Sichuan Expedition 3 058 (KUN, PE); Mabian, F. Z. Wang 22888 (KUN, PE); Shimian, C. J. Xie 40 239, 40 265, 40 343 (WUK). China, Yunnan: Luquan, P. Y. Mao 921 (KUN).

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