



Phlogacanthus yangtsekiangensis, a new combination in Chinese Acanthaceae

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The genus *Cystacanthus* was established by Anderson (1867: 457) and placed in tribe Ruellieae Dumortier (1829: 23) when published. In fact, it is closely related to *Phlogacanthus* Nees von Esenbeck (1832: 76, 99) and differs only in the corolla shape and indumentum. Thus, many authors merged *Cystacanthus* with *Phlogacanthus* (Benoist 1935, Imlay 1939, Brummit 1992, Mabberley 2008). But it was still recognized as a genus independent from *Phlogacanthus* by many recent authors (Scotland 1992, Scotland & Vollesen 2000, Hu 2002, Hu & Fu 2005, Wu *et al.* 2003, 2006, Hu *et al.* 2011). Our recently unpublished molecular analysis, however, showed that species of *Cystacanthus* are nested within *Phlogacanthus* and they might be treated as a single genus, *Phlogacanthus*. *Phlogacanthus* belongs to tribe Andrographideae Endlicher (1839: 707) and consists of about 35 species distributed in S and SE Asia (Scotland 1992, Scotland & Vollesen 2000, Mabberley 2008, McDade *et al.* 2008). In the recently published English version of the *Flora of China* (Hu *et al.* 2011), eight species were recognized in *Cystacanthus*. Among these, five species, i.e., *Cystacanthus paniculatus* Anderson (1867: 458), *C. pyramidalis* Benoist (1928: 907), *C. abbreviatus* Craib (1911: 438), *C. vitellinus* (Roxburgh 1820: 117) Y. F. Deng in Hu *et al.* (2011: 477) and *C. colaniae* (Benoist 1936: 109) Y. F. Deng in Hu *et al.* (2011: 477), already have names in *Phlogacanthus*; *Cystacanthus yangtsekiangensis* (Léveillé 1915: 6) Rehder (1935: 315), *C. affinis* Smith (1916: 103) and *C. yunnanensis* Smith (1916: 104), still need to be transferred to *Phlogacanthus*.

Cystacanthus yangtsekiangensis, *C. affinis* and *C. yunnanensis* were described based on types from Jinsha Jiang Valley, N. Yunnan, China. *Cystacanthus yunnanensis* was considered to be different from *C. yangtsekiangensis* in the different indumentum. The character of the indumentum, however, is not sufficient to distinguish them as different species, as can be concluded after study of the type material. *Cystacanthus affinis* has abbreviated inflorescences and seems to be different from *C. yangtsekiangensis*. After comparing a large number of specimens, and after investigations in the field, it was revealed that *C. yangtsekiangensis* has both abbreviated and elongated inflorescences and is therefore variable in this character. Therefore, we propose both *Cystacanthus affinis* and *C. yunnanensis* as synonyms of *C. yangtsekiangensis*.

Currently, eight species in *Phlogacanthus* are recognized from China: *P. abbreviatus* (Craib 1911: 438) Benoist (1935: 712), *P. colaniae* Benoist (1936: 109), *Phlogacanthus curviflorus* (Wallich 1831: 9) Nees (1832: 99), *P. paniculatus* (Anderson 1867: 458) Imlay (1939: 128), *P. pubinervius* Anderson (1867: 508), *P. pyramidalis* (Benoist 1928: 907) Benoist (1935: 711), *P. vitellinus* (Roxburgh 1820: 117) Anderson (1867: 507) and *P. yangtsekiangensis* (Léveillé 1915: 7) C. Xia & Y. F. Deng.

Phlogacanthus yangtsekiangensis (H. Lév.) C. Xia & Y. F. Deng, *comb. nov.*

Basionym: *Strobilanthes yangtsekiangensis* Léveillé (1915: 7).—*Cystacanthus yangtsekiangensis* (H. Lév.) Rehder (1935: 315). Type:—CHINA. Yunnan: Dêqên Xian, Rives du fleuve Bleu à Ta-Tchai, 400–450 m, May–June 1912, E. E. Maire *s.n.* (holotype E!)

Cystacanthus affinis Smith (1916: 103), *syn. nov.* Type: —CHINA. Yunnan: Lijiang Shi, Fengkow Valley, Lat. 27°40'N", 8000 ft., June 1914, G. Forrest 12493 (holotype E!; isotype A!, K!).