

Thladiantha tomentosa (Cucurbitaceae) comb. nov. from southwestern China

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In this paper, we propose that *Thladiantha cordifolia* (Blume) Cogn. var. *tomentosa* A. M. Lu & Z. Y. Zhang should be recognized at species rank as *Thladiantha tomentosa* (A. M. Lu & Z. Y. Zhang) W. Jiang & H. Wang. This species is similar to *T. cordifolia* and *T. angustisepala* W. J. de Wilde & Duyfjes, from which it differs mainly by having ovate bracts, linear sepals, and ellipsoidal, rostrate, ribbed verrucose fruits.

The genus *Thladiantha* Bunge, with about 25 species, is primarily distributed in China, with some species occurring in Japan, Korea, northeast India, Indo-China and Malesia (de Wilde and Duyfjes 2006, Lu et al. in press). Depending on presence or absence of flabelliform male bracts, the genus is divided into two sections, i.e. sect. *Fidobracea* and sect. *Thladiantha* (A. M. Lu and Z. Y. Zhang 1981). *Thladiantha cordifolia* (Blume) Cogn. is the type species of the sect. *Fidobracea*, and is distributed from southern China, east India, Laos, Myanmar to Thailand, extending to Sumatra and Java (de Wilde and Duyfjes 2006).

Thladiantha cordifolia var. *tomentosa* was originally described by Lu and Zhang (1981). It was considered to differ from *T. cordifolia* var. *cordifolia* by having densely ferruginous tomentum in the whole plant. However, no fruiting specimen were known when the variety was first described (Prof. A. M. Lu pers. comm.). In his revision of the genus *Thladiantha*, Li (1997) suggested that the density of tomentum was not a stable character to recognize the variety.

Recently, fruiting specimens of *T. cordifolia* var. *tomentosa* were collected from Xishuangbanna in the southern part of Yunnan Province. After careful examination and comparison with the type specimen of var. *tomentosa* and other herbarium specimens, we found that *T. cordifolia* var. *tomentosa* is evidently morphologically different from *T. cordifolia* and *T. angustisepala*, especially in fruit morphology. Therefore, *T. cordifolia* var. *tomentosa* is here raised to the species rank, as *T. tomentosa* (A. M. Lu & Z. Y. Zhang) W. Jiang & H. Wang. Voucher specimens have been deposited at the herbarium of

Kunming Inst. of Botany (KUN), the Chinese Academy of Sciences.

Thladiantha tomentosa (A. M. Lu & Z. Y. Zhang) W. Jiang & H. Wang, comb. nov. (Fig. 1, 2)

Basionym: *Thladiantha cordifolia* (Blume) Cogn. var. *tomentosa* A. M. Lu & Z. Y. Zhang, Bull. Bot. Res. (1981, p. 70).

Type: China. Guangxi: Fusui, S. Q. Chen 12174 (holotype: PE 00032010!).

Climbing herbs. Plants pubescent. Stems angular-sulcate. Tendrils simple, spiraling over almost all their length, pubescent. Petiole robust, 4–8 cm long, pubescent. Leaf blade papery, ovate-cordate, apex acuminate, margin dentate, base cordate, sinus at base often open, basal nerve along margin of base of leaf blade, upper surface rather densely scabrid-hairy, later on leaving cystoliths, lower surface densely softer brown hairy. Flowers dioecious. Male flowers 3 to several in a dense short raceme, or solitary; peduncle robust, 3–6 cm long, pubescent; bracts foliaceous, ovate, shallowly incised, pubescent on both surfaces; pedicels slender, ca 2 mm long; calyx tube campanulate, 3–5 mm long; sepals linear, 10–15 mm long, ca 1 mm wide, 3-veined, pubescent; corolla yellow, petals ovate, 8–10 × 4–6 mm, apex short-acuminate or acute; stamens 5, anthers ca 3 × 2 mm. Female flowers solitary, calyx and corolla as in male flowers; ovary oblong, base obtuse, densely pubescent; styles 3-fid; stigmas enlarged, reniform, 2-lobed. Fruits ellipsoidal, ca 5.5 × 3.0 cm, apex rostrate, rind scabrous, slightly pubescent,

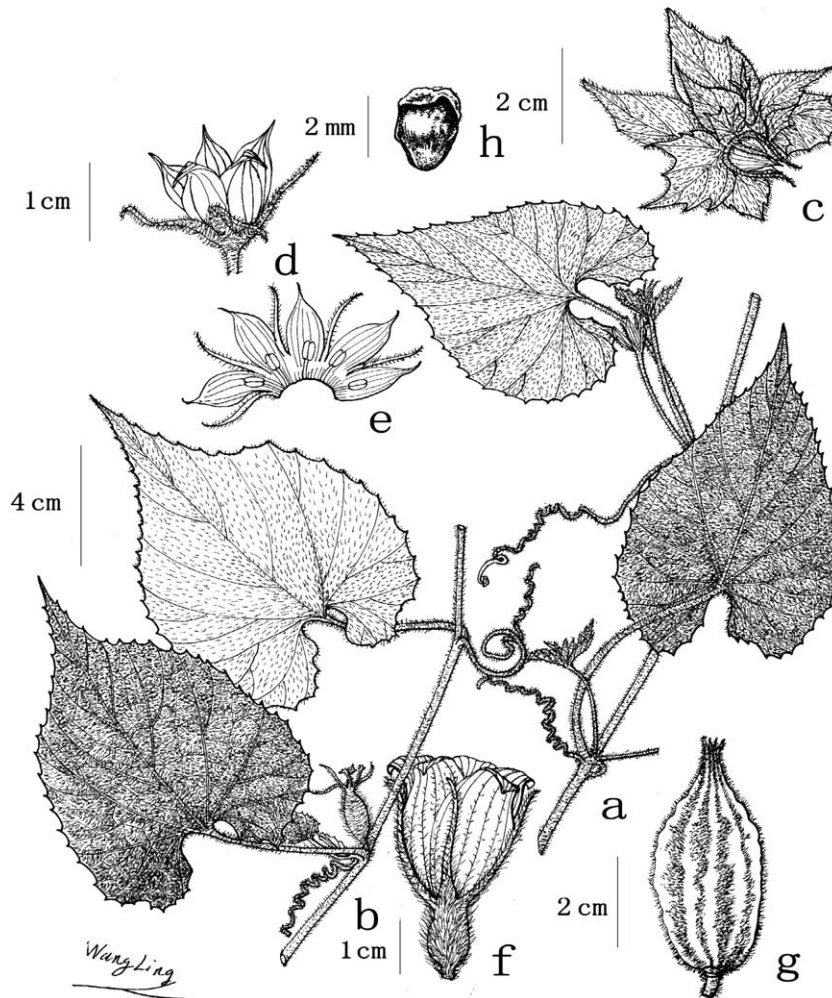


Figure 1. *Thladiantha tomentosa* (A. M. Lu & Z. Y. Zhang) W. Jiang & H. Wang comb. nov. (a) male branch, (b) female branch, (c) male inflorescence, (d)–(e) male flower, (f) female flower, (g) fruit, (h) seed. (a), (c)–(e) W. Jiang et al. 09402, (b), (f)–(h) W. Jiang et al. 09408.

with longitudinal verrucose ridges. Seeds broadly ovate, ca $3 \times 2 \times 1$ mm, pale brown, finely rugose.

Distribution

The species is distributed in Guanxi and Yunnan, southwestern China. It grows at the edges of forests and in ravines from 300–1300 m a.s.l.

Similar species

Thladiantha tomentosa is similar to *T. cordifolia* and *T. angustisepala*, all three with the bracts imbricate in male flowers, but it is distinct from both of them by having ovate bracts, and ellipsoidal, rostrate, and verrucosely ribbed fruits. *Thladiantha cordifolia* is characterized by having the surface of the fruit fenestrately pitted in rows. *Thladiantha angustisepala* is easily distinguished by its fruit which is

Table 1. Morphological comparison of *Thladiantha tomentosa* comb. nov. and related species.

Taxa	<i>T. tomentosa</i>	<i>T. cordifolia</i>	<i>T. angustisepala</i>
Characters			
Bracts	ovate	flabelliform or obovate or obtriangular	elliptic to narrowly elliptic or ± wedge-shaped
Sepals	linear, 10–15 mm long, ca 1 mm wide	long-triangular, or narrowly elliptic, 8–12 mm long, 3–5 mm wide	linear, 6–10 mm long, ca 1 mm wide or less
Fruit	ellipsoidal, apex rostrate, conspicuously verrucosely ribbed	ellipsoidal, obtuse at both ends, surface fenestrately pitted in rows	ellipsoidal, obtuse at both ends 10-ribbed, smooth

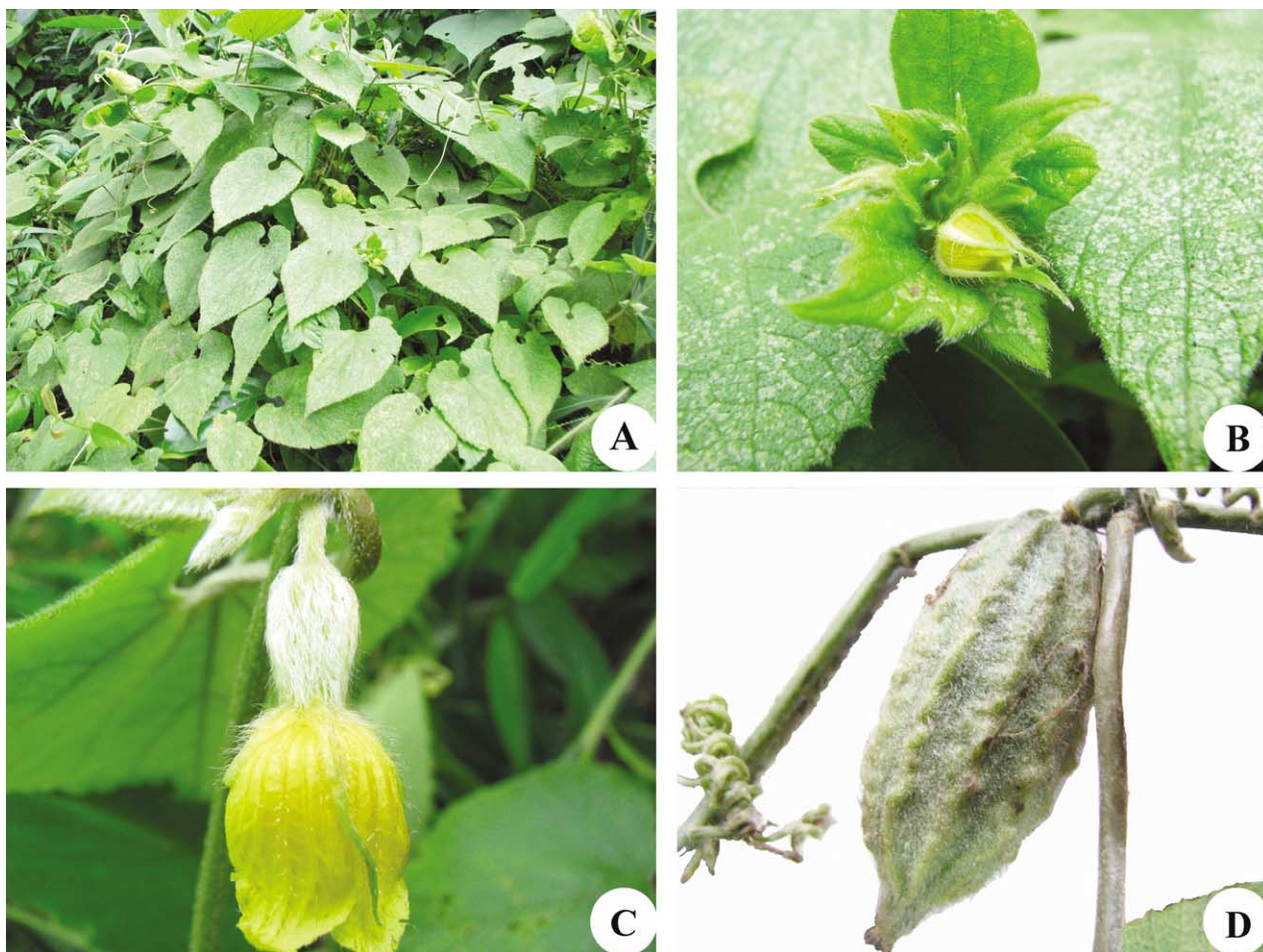


Figure 2. *Thladiantha tomentosa* (A. M. Lu & Z. Y. Zhang) W. Jiang & H. Wang comb. nov. (A) the whole plant, (B) male inflorescence, (C) female flower, (D) fruit.

ellipsoidal, obtuse at both ends, 10-ribbed and smooth (de Wilde and Duyfjes 2006). The characters are summarized in Table 1.

Additional specimens examined (in flower)

China. Yunnan: Mengxing, J. Z. Zhao 86-7 (KUN); Xishuangbanna, W. Jiang et al. 09402, 09408 (KUN); Xishuangbanna, G. D. Tao et al. 19662; Xishuangbanna, K. M. Feng 20768 (KUN); Xiaomengyang, B. Y. Qiu 56741 (KUN); Pingbian, P. Y. Mao 04000, 02141, 03901 (PE); C. W. Wang 75668 (IBSC).

Acknowledgements – This study was supported by grants from the Keynote Projects of National Natural Science Foundation of China (no. 40830209), the Knowledge Innovation Program, Chinese Academy of Sciences and a fund of Yunnan Scientific and Technologic Program (no. 2008GA029). We are grateful to Prof. An-Min Lu from the Institute of Botany, the Chinese

Academy of Sciences and Prof. Jian-Qiang Li from Wu Han Botanic Garden, the Chinese Academy of Sciences for their valuable suggestions; to Zeng-Yuan Wu for her help in the field work; to Ling Wang for the botanical line drawing.

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