Six new species of *Elatostema* (Urticaceae) from YunnanWentsai Wang <sup>a,\*</sup>, Zengyuan Wu <sup>b</sup><sup>a</sup> State Key Laboratory of Systematic and Evolutionary Botany, Institute of Botany, Chinese Academy of Sciences, Beijing 100093, China<sup>b</sup> Key Laboratory for Plant Diversity and Biogeography of East Asia, Kunming Institute of Botany, Chinese Academy of Sciences, Kunming 650201, China

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## ABSTRACT

Six new species of the genus *Elatostema* (Urticaceae), *E. dentatocaudatum*, *E. baoshanense*, *E. cuipingfengense*, *E. viridicostatum*, *E. flexuosiculae* and *E. globosostigmatum*, from Yunnan Province, China are described and illustrated. The diagnostic differences between the six new species and their respective allies are given.

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***Elatostema dentatocaudatum* W. T. Wang & Zeng Y. Wu, sp. nov.** *Fig. 1: A–E.*[Sect. *Weddellia* (H. Schröter) W. T. Wang ser. *Crenata* W. T. Wang].

Species nova haec est fortasse affinis *E. bijiangensi* W. T. Wang, quod folio apice cuspidate integra et nevorum secundariorum paribus quinque praedito, capituli pistillati receptaculo majore discoideo elliptico ca. 5 mm longo, achenis longitudinaliter 6–8-costatis, costis achenis fere aequilongis distinguitur.

Perennial herb. Stem ca. 30 cm tall, ca. 1.2 mm diam. near base, puberulous (hairs 0.1–0.2 mm long), simple, ca. 10-leaved. Leaves alternate, sessile; blades thinly papery, obliquely oblanceolate or oblong, 7–15 × 1.4–4 cm, apex caudate (tail-like apex 2–4.5 cm long, 4–8-denticulate), base at leaf narrow side obtuse, at broad side cuneate, margin dentate; surfaces adaxially sparsely strigose, abaxially glabrous; nervation pinninerved, with 4 pairs of secondary nerves; cystoliths dense, inconspicuous, thinly bacilliform, 0.1–0.2 mm long; stipules membranous, greenish, narrowly lanceolate-linear, ca. 3 × 0.4 mm, glabrous. Staminate capitula and staminate flowers unknown. Pistillate capitula singularly axillary, shortly pedunculate; peduncle ca. 1 mm long, glabrous; receptacle small, inconspicuous, oblong, ca. 2 mm long, puberulous; involucral bracts ca. 16, membranous, green, narrowly triangular, 2 × 0.4–0.8 mm, puberulous; bracteoles numerous, dense, membranous, green, linear or spatulate, 1.2–2 × 0.1–0.4 mm, densely

long ciliate. Pistillate flower: pedicel 0.2–0.4 mm long, glabrous; tepals 2, ovate, ca. 0.15 mm long, glabrous; ovary ellipsoidal, ca. 0.4 mm long, glabrous; stigma penicillate, ca. 0.15 mm long. Achenes brownish, ellipsoidal, ca. 0.7 × 0.4 mm, longitudinally 4-ribbed above the middle. Yunnan Province: **Gongshan Xian**, Dulongjiang Xiang, on the way from Kongdang to Longyuan Cun. 98°19'28.994"E; 27°58'02.274"N. Alt. 1686 m. At shady places by stream. 2014-09-28. J. Liu, J. N. Lu & K. Chen GLGE 141160 (holotype, PE; isotype, KUN).

This species is probably related to *E. bijiangense* W. T. Wang, and from the latter differs in its leaves with 4–8-denticulate long tail-like apexes and four pairs of secondary nerves, in its smaller inconspicuous pistillate receptacles, and in its achenes which only on upper part are longitudinally 4-ribbed. In *E. bijiangense*, the leaves at apex have entire cusps and five pairs of secondary nerves, the pistillate receptacles are larger, conspicuous, discoid, ca. 5 mm long, and the achenes are longitudinally 6–8-ribbed, with the ribs nearly as long as the achene body (Wang, 2014).

***Elatostema baoshanense* W. T. Wang & Zeng Y. Wu, sp. nov.**

Fig. 1: F–H.

(Sect. *Elatostema* ser. *Cuspidata* W. T. Wang).

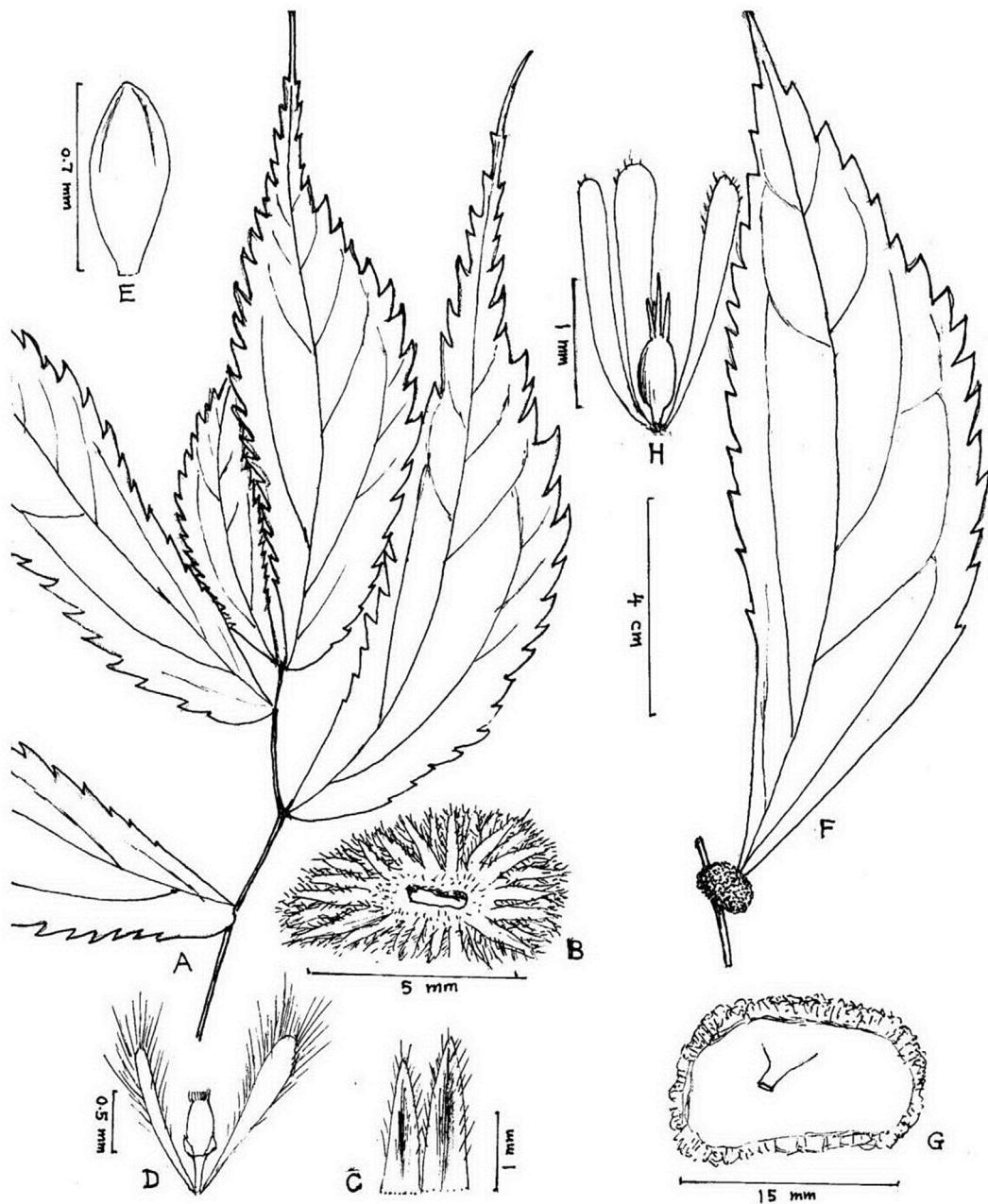
Species nova haec est affinis *E. cuspidato* Wight, quod foliis sessilibus vel subsessilibus subtus glabris, eorum cystolithis majoribus omnibus bacilliformibus 0.3–0.5 mm longis, capituli staminatis bracteis involucralibus late ovatis vel depresso triangularibus apice 1-corniculatis vel crasse apiculatis, bracteolis staminatis glabris differt.

Perennial herb. Stems ca. 35 cm tall, below ca. 2 mm across, glabrous, simple, ca. 14-leaved. Leaves alternate, shortly petiolate;

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**Fig. 1.** A–E. *Elatostema dentatocaudatum* A. apical part of pistillate stem; B. pistillate capitulum, seen from beneath; C. pistillate bracts; D. two pistillate bracteoles and pistillate flower; E. achene. (from holotype) F–H. *E. baoshanense* F. leaf and axillary staminate capitulum; G. staminate capitulum, seen from beneath; H. three staminate bracteoles and staminate flower bud. (from holotype).

blades thinly papery, obliquely long elliptic or oblanceolate,  $9\text{--}18 \times 3.2\text{--}5.2$  cm, apex cuspidate or acuminate, base obliquely cuneate, margin dentate; surfaces adaxially glabrous, abaxially on basal and secondary nerves puberulous (hairs 0.1–0.2 mm long); nervation semi-triplinerved, with secondary nerves 2–4 at leaf narrow side and 3–5 at broad side; cystoliths dense, inconspicuous, punctiform or shortly bacilliform, 0.1–0.15 mm long; petioles 3–10 mm long, glabrous; stipules membranous, whitish, lanceolate-linear, ca.  $12 \times 2$  mm, glabrous, 1-greenish-nerved. Staminate capitula singularly axillary, sessile or shortly pedunculate; peduncle ca. 1 mm long, glabrous; receptacle suboblong,  $10\text{--}16 \times 6\text{--}9$  mm, glabrous; involucral bracts few, small, inconspicuous, membranous, whitish, transversely rectangular or subquadrate,  $0.8 \times 1\text{--}2$  mm, glabrous, apex truncate; bracteoles

numerous, very dense, membranous, whitish, oblong or linear,  $1.5\text{--}2.5 \times 0.3\text{--}0.8$  mm, above sparsely ciliolate. Staminate flower buds ovoid, ca. 0.5 mm long, glabrous, apex with 4 tail-like projections 0.3–0.5 mm long. Pistillate capitula and pistillate flowers unknown.

Yunnan Province: **Baoshan Shi**, Longyang Qu, Mangkuan Zhen. Baihualing Cun, Hanlongzhai, Ertaipo.  $98^{\circ}46'50.28''\text{E}$ ;  $25^{\circ}18'0.13''\text{N}$ . Alt. 2233 m. In evergreen broad-leaved forest. 2012-07-01. J. Liu, Y. H. Luo & S. L. Tan GLGE 12148 (**holotype**, PE; isotype, KUN).

This species is related to *E. cuspidatum* Wight, and from the latter differs in its shortly petiolate and abaxially puberulous leaves with smaller punctiform or shortly bacilliform cystoliths 0.1–0.15 mm long, in its smaller transversely rectangular or subquadrate staminate involucral bracts without any projections, and

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