Taiwania, 59(3): 281–286, 2014
DOI: 10.6165/tai.2014.59.281

NOTE

A Newly Recorded Species of *Elatostema* (Urticaceae) from Vietnam

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(Manuscript received 07 November 2013; accepted 28 April 2014)

ABSTRACT: *Elatostema retrohirtum* Gagnep. is described and illustrated as a newly recorded species from Vietnam and compared with the similar *Elatostema balansae* Gagnep.. Photographs, distribution map and supplementary description of its staminate inflorescence are also presented.

KEY WORDS: *Elatostema retrohirtum*, new record, taxonomy, supplementary description of inflorescence.

INTRODUCTION

Elatostema J.R. Forster & G. Forster (1775: 53; Urticaceae) consists several hundred species of herbs, small shrubs and subshrubs (Wang, 2012). This genus distributed throughout tropical and subtropical Africa, Asia, Australia and Oceania that grows in the deep shady place of forests, stream sides, gorges and caves.

31 species of *Elatostema* have been recorded in Vietnam (Wang and Chen, 1995; Pham, 2003; Lin *et al*., 2003, 2011; Fu *et al*., 2013). However, few studies of *Elatostema* from Vietnam have been undertaken in recent years (Lin *et al*., 2011; Fu *et al*., 2013).

Given climate change and the fragility of dwelling of *Elatostema* make taxonomist have to describe them by single specimen or only one kind of inflorescence found to establish their documentation and subsequent conservation. However, the consequent problem emerged that some similar species cannot be distinguished due to the fact that their inflorescences are different in gender. Therefore, comprehensive studies include extensive fieldwork and subsequent tracking necessarily. During extensive fieldwork on karst landscape from Southwest China and North Vietnam in recent years, a newly recorded species of *Elatostema* in North Vietnam have been found and reported with supplementary description of inflorescence below.

TAXONOMIC TREATMENTS

Elatostema retrohirtum Gagnep. Bull.Soc.Bot. France 76: 80. 1929.

曲毛楼梯草　Figs. 1–3

Perennial herb, terrestrial, monoecious or dioecious. Tuber forming, turber ca. 5 × 5 mm. Stems 150–350 × 1.8–2.5 mm, ascending or erect, branched, not succulent, green when fresh, densely hispid, the hairs ca. 0.5–1 mm, weakly curved to crooked, appressed, brown, internodes 9–39 mm; stipules 2, interpetiolar at each node, linear-lanceolate, caducous when inflorescences borne on this node, 4–8 × 1.0–2.0 mm, with cystoliths, sparsely scattered, bacilliform, 0.2–0.3 mm, glabrous, with one green nerve. Leaves distichous, alternate, terminal pair of leaves subopposite, sessile or short petiolate, petioles 0–1(–4.5) mm, densely hispid, the hairs ca. 0.5–1 mm, weakly curved to crooked, appressed, brown; laminae 40–60(–100) × 15–20(–50) mm, length: width ratio 2–3:1, obliquely elliptic, herbaceous or chartaceous, 3-nerved, the secondary nerves 3–4 pairs, borne 45–60° to the midrib; upper surface drying yellow-green, sparsely hispid, the hairs ca. 0.5 mm, weakly curved, appressed; cystoliths densely scattered, bacilliform, 0.2–0.3 mm; lower surface drying green, nerves puberulent, the hairs ca. 0.1 mm, weakly curved, appressed; base asymmetrical, broader-half rounded or subauriculate, narrower-half cuneate; margin denticulate, the teeth spaced 2–5 mm apart; apex short acuminate or acute, rarely acuminate. Staminate and pistillate inflorescences borne on the same or separate stems. Staminate inflorescences solitary, axillary, capitate, bearing ca. 60 flowers in a pedunculate receptacle; peduncle 4.0–6.0 × 0.3–0.8 mm, sparsely hispid, the hairs ca. 0.1 mm, weakly curved, appressed; ebracteate?; receptacle 2–4 × 3–5 mm, rectangle or oblong, yellow, glabrous, subtended by marginal bracts; the bracts ca. 6, unequal, outer 2 bracts major, broadly ovate, 2–2.5 × 4–5 mm, abaxial surface

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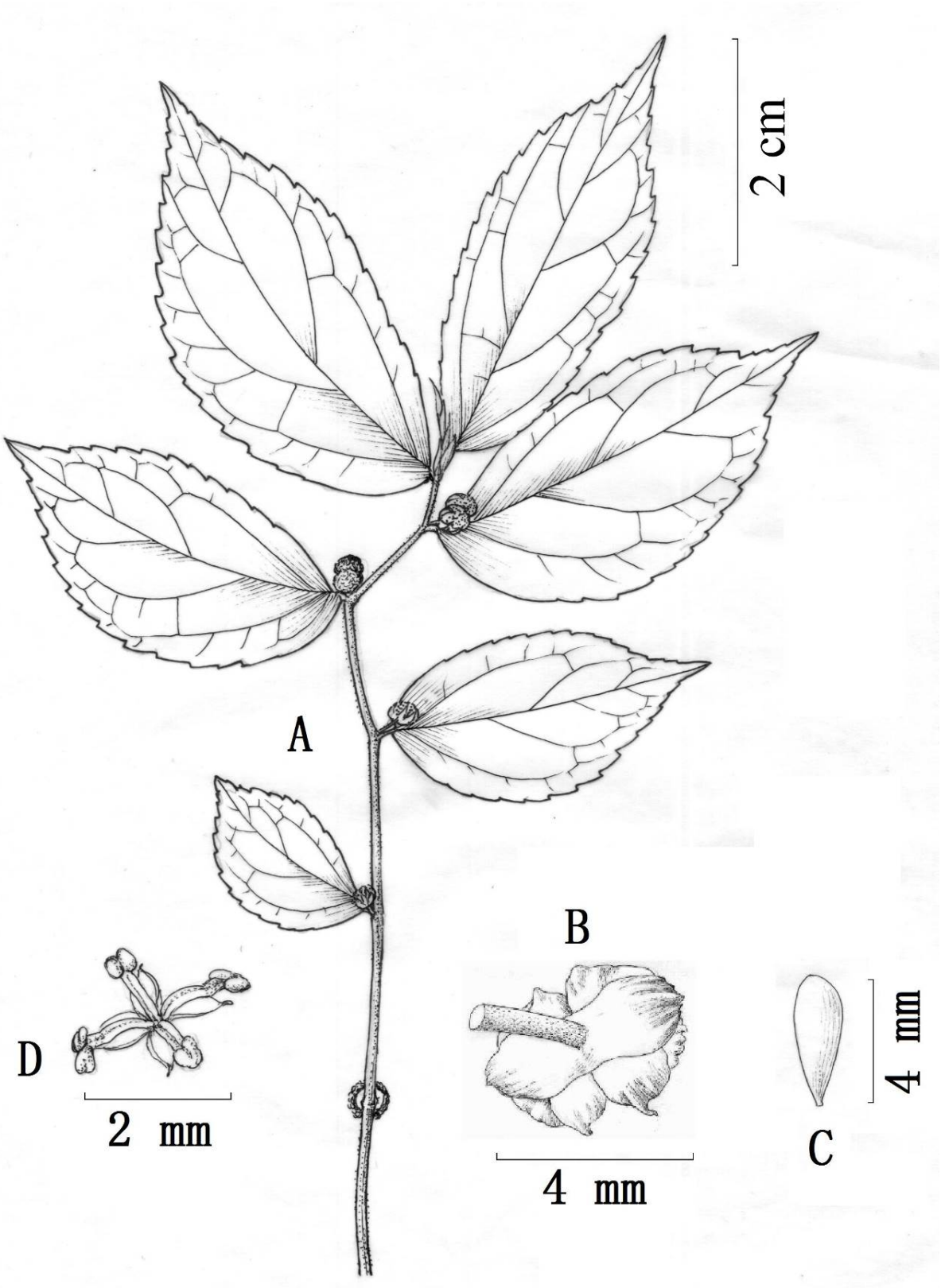


Fig. 1. ***Elatostema retrohirtum*** **Gagnep. A: Habit. B: Staminate inflorescence. C: Staminate bracteole. D: Staminate flower.** ***VMN_CN245*****, IBK (Illustration by Wen-Hong Lin)**

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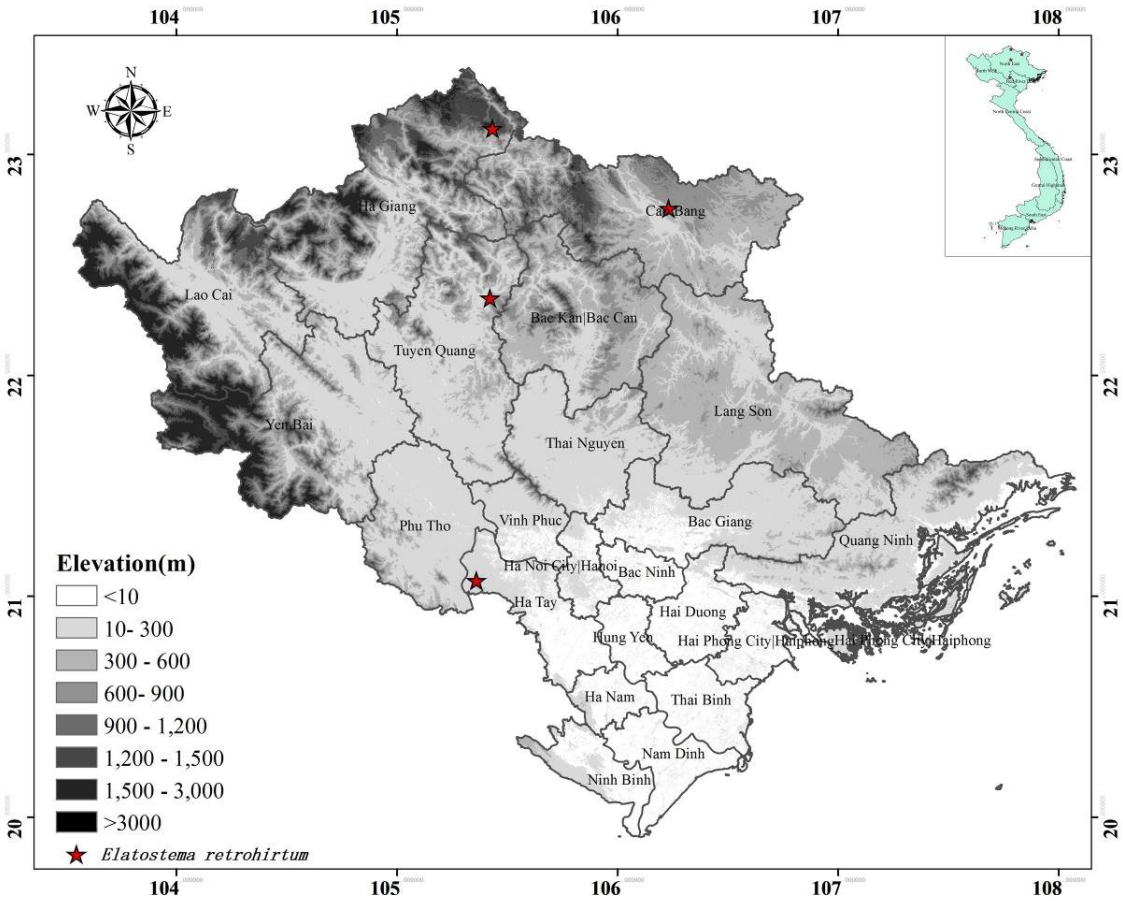


Fig. 2. Distribution of *Elatostema retrohirtum* Gagnep. in North Vietnam.

sparsely hispid, the hairs ca. 0.1 mm. weakly curved, appressed, with 5 or 6 longitudinal ribs, each ribbed extending apically as a corniculate protuberance, inner 4 bracts minor, obovate, ca. 2 × 3 mm, abaxial surface with 1–3 longitudinal ribs, at least one ribbed extending apically as a corniculate protuberance, glabrous; bracteolate; Staminate flowers 1.8–2.2 × 1.8–2.1 mm immediately prior to anthesis, pedicellate, pedicel ca. 1 mm, glabrous; bracteoles 2 per flower, equal, membranous, semitransparent, 2.5–4.0 × 1.0–1.5 mm, oblanceolate, glabrous; tepals 4, ovate, 0.9–1.2 × 0.7–0.9 mm, subapical appendage ca. 0.5 mm, corniculate, glabrous. Pistillate inflorescence solitary, axillary, capitate, bearing ca. 30 flowers in a pedunculate receptacle; peduncle ca. 1 × 0.5 mm, glabrous, ebracteate?; receptacle subrounded, 3–3.5 mm in diam., glabrous, yellow-green, subtended by marginal bracts, the bracts numerous, subequal, triangular, 0.6–1.2 × 0.4–0.6 mm; Pistillate flowers ca. 0.2 × 0.1 mm, pedicellate, bracteolate; pedicel ca. 0.2 mm; bracteoles 2 per flower, subequal, ca. 0.6–1.2 × 0.3 mm, spatulate-linear; Achenes 0.5–0.6 mm, ovoid or ellipsoid, ca. 6-ribbed.

Distribution: China (Guangxi, Yunnan, Guizhou, Sichuan & Guangdong) (Lin *et al* 2003). Vietnam. (The species is found at the damp cliff, stream sides and limestone cave. it is a widespread species in North Vietnam.)

Specimens examined: **VIETNAM**, Ha Noi City, Bavi District., Bavi National Park, 21°4′22″N, 105°21′36″E, 824.8 m, 4 June 2012, L.F. Fu, V.T. Do & F. Wen, VMN_CN34(VNMN, IBK, PE); Ha Giang Province, between Meo Vac district and Dong Van District, 23°7′8″N, 105°25′58″E, 1097.8 m, 15 June 2012, L.F. Fu, V.T. Do & F. Wen, VMN_CN186 (VNMN, IBK, PE); Cao Bang Province, Bac Me District, Bac Me Nature Reserve, 22°45′25″N, 106°13′49″E, 467.2 m, 16 Jun 2012, L.F. Fu, V.T. Do & F. Wen, VMN_CN217 (VNMN, IBK, PE); Tuyen Quang Province, Na Hang District, Na Hang Nature Reserve, 22°21′7″N, 105°25′20″E, 201.9 m, 17 June 2012, L.F. Fu, V.T. Do & F. Wen, VMN_CN245 (VNMN, IBK, PE). **CHINA**, Yunnan Province, between Malipo County and Babu Village, 23°14′52″N, 104°46′37″E, 931 m, 2 May 2013, L.F. Fu & S.L. Huang, FL0015 (IBK).

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Fig. 3. Photographs of *Elatostema retrohirtum* Gagnep. A–C: Habitat. D: Habit. E: Staminate inflorescence (viewed from below). F: Staminate inflorescence with opening flowers (viewed from above). (A, E & F photo L.F. Fu; B–D photo F. Wen).

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Notes: The original description of *Elatostema retrohirtum* lacks of its staminate inflorescences information. we gave a supplementary description here. Meanwhile, we found some differences from the original description that plants are not all dioecious, petioles are longer (to 4.5 mm long) and leaf blades are bigger (to 10 × 5 mm). *E. retrohirtum* is most similar to *E. balansae* Gagnep. from which it can be distinguished based on leaf apex, stipule size, staminate inflorescence bract, bracteole and pistillate inflorescence as summarized in Table 1.

Table 1. Morphological comparison of *Elatostema retrohirtum* and *E. balansae*

Characters	*E. retrohirtum*	*E. balansae*
leaf	apex short acuminate or acute, rarely acuminate	apex cuspidate or acuminate
stipule	4–8 × 1.0–2.0 mm	5–14 × 3–4 mm
Staminate inflorescence		
puduncle	4–6 mm,	1–2 mm
bract	major bracts with 5 or 6 longitudinal ribs, minor bracts with 1–3 longitudinal ribs	major bracts with inconspicuous 3 longitudinal ribs, minor bracts without longitudinal ribs
bracteole	oblanceolate	linear
pistillate inflorescence	3.5–6 mm	5–10 mm

ACKNOWLEDGEMENTS

We are grateful the staff at the herbarium of Vietnam National Museum of Nature, Vietnam (VNMN) and Mr. Wen-Hong Lin for the illustration. This work was supported by the Natural Science Foundation of China (No. 31160039) and the Fund of Guangxi Key Laboratory of Functional Phytochemicals Research and Utilization funds (ZRJJ2012-9).

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越南樓梯草屬（蕁麻科）一新記錄種

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(收稿日期：2013年11月07日；接受日期：2014年04月28日)

摘要：本文報道了越南樓梯草屬一新記錄種曲毛樓梯草，同時與其近緣種華南樓梯草做了比較。提供了該種的線描圖、彩色照片、分布圖以及雄花序補充描述。

關鍵詞：曲毛樓梯草、新記錄、分類學、花序補充描述。

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