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New records of *Elatostema* and *Pellionia* (Urticaceae) from Vietnam

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Abstract: Seven newly recorded species of *Elatostema* and *Pellionia* (Urticaceae) are reported. They are *E. cyrtandriifolium*, *E. xanthophyllum*, *E. sinense*, *E. platyphyllum*, *E. nasutum*, *P. brevifolia* and *P. grijsii*. The citation of specimens and their distribution are provided.

Key words: new records; Urticaceae; *Elatostema*; *Pellionia*; Vietnam

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越南荨麻科楼梯草属和赤车属植物新记录

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摘要: 报道了7个楼梯草属和赤车属植物(荨麻科)新纪录, 它们分别为锐齿楼梯草(*E. cyrtandriifolium*), 变黄楼梯草(*E. xanthophyllum*), 对叶楼梯草(*E. sinense*), 宽叶楼梯草(*E. platyphyllum*), 托叶楼梯草(*E. nasutum*), 短叶赤车(*P. brevifolia*)和华南赤车(*P. grijsii*)。列出了各个物种的标本引证和地理分布情况。

关键词: 新记录; 荨麻科; 楼梯草属; 赤车属; 越南

Two genera *Elatostema* and *Pellionia* belong to Urticaceae, one of them *Elatostema* consists of at least 340 species and the other one *Pellionia* has ca.60 species or more in the world (Wang, 1995a; Lin et al., 2003a; Wei et al., 2012). The two genera have similar habitat and even similar morphology, but can be distinguished by their different male and female inflores-

cences (Wang, 1995a, b, 2010; Lin et al., 2003a, b).

25 of *Elatostema* and 26 of *Pellionia* have been recorded in Vietnam (Ho, 2003; Lin et al., 2003a, b). There have been few studies of *Elatostema* and *Pellionia* in Vietnam in recent years (Lin et al., 2011).

Vietnam, bordered with S China, is located south of the tropic of cancer and has a tropical monsoon cli-

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mate. The mean annual temperatures are 24 °C and the annual rainfall is 1 800—2 000 mm. During our extensive fieldwork in Vietnam in recent years, we have collected seven specimens of *Elatostema* and *Pellionia* as new records from Vietnam. This report could be a very useful data for the “Flora of Vietnam” in progress.

1. *Elatostema cyrtandrifolium* (Zoll. & Mor.) Miq., Pl. Jungh. 1: 21. 1851; Q. Lin *et al.*, Fl. China 5: 149. 2003. — *Procris cyrtandraefolia* Zoll. & Mor. in Mor. Syst. Verz. 74. 1846.

Specimens examined: Vietnam, Ha Giang prov., between Meo Vac Distr. and Dong Van Distr., approximately 23°13'45" N, 105°24'48" E, ca. 976.5 m. 15. Jun. 2012, Fu Long-Fei, Do Van Truong & Wen Fang, VMN_CN244 (VMN, IBK).

Ecology: Grows in the crevices on a limestone hill. 976.5 m a.s.l.

Distribution: China (Fujian, Gansu, Guangdong, Guangxi, Guizhou, Hubei, Hunan, Jiangxi, Sichuan, Taiwan, Yunnan, Hainan), Bhutan, India, Indonesia, Malaysia, Myanmar, New to Vietnam.

Discussion: This species is similar to *E. balansae* Gagnep., but distinctly different by its leaf apex with entire acumen and stipule shorter (3—5 mm long).

2. *Elatostema xanthophyllum* W. T. Wang, Bull. Bot. Res., Harbin 2(1): 19. 1982; Q. Lin *et al.*, Fl. China 5: 158. 2003.

Specimens examined: Vietnam, Bac Kan Prov., Na Ry Distr., Kim Hy Nature Reserve, approximately 22°11'56" N, 106°4'5" E, ca. 364.9 m. 12. Jun. 2012, Fu Long-Fei, Do Van Truong & Wen Fang, VMN_CN134 (VMN, IBK); Bac Kan Prov., Na Ry Distr., Kim Hy Nature Reserve, 2. Dec. 2010, Wei Yi-Gang & Do Van Truong, VMN_CN24 (VMN, IBK).

Ecology: Grows on limestone rocks under evergreen broad-leaved trees and bushes. 364.9 m a.s.l.

Distribution: China (type from Longzhou County, Guangxi), new to Vietnam.

Discussion: *Elatostema xanthophyllum* was an endemic species to China (Lin *et al.*, 2003b), but type is bordered with N Vietnam, thus it is found in N Vietnam. This species resembles *E. pseudobrachyodontum* W. T. Wang and *E. acutitepalum* W. T. Wang, but distinctly different by its leaf blade papery and with larger cystolith (0.3—0.7 mm long).

3. *Elatostema sinense* H. Schroter, Repert. Spec. Nov. Regni Veg. Beih. 83(2): 152. 1936; Q. Lin *et al.*, Fl. China 5: 138—139. 2003.

Specimens examined: Vietnam, Ha Giang Prov., Bac Me Distr., Bac Me Nature Reserve, approximately 22°45'66" N, 106°13'49" E, ca. 467.2 m. 16. Jun. 2012, Fu Long-Fei, Do Van Truong & Wen Fang, VMN_CN216A (VMN, IBK).

Ecology: Grows in limestone cave. 467.2 m a.s.l.

Distribution: China (Anhui, Fujian, Guangxi, Guizhou, Hubei, Hunan, Jiangxi, Sichuan, Yunnan, Shanxi), new to Vietnam.

Discussion: *Elatostema sinense* was an endemic species to China (Lin *et al.*, 2003b), but its distributions Guangxi and Yunnan are both bordered with N Vietnam, thus it is found in N Vietnam. This species is closely related to *E. parvum* (Bl.) Miq., but distinctly different by its male inflorescence with peduncle (1—2.5 mm long).

4. *Elatostema platyphyllum* Wedd., Arch. Mus. Hist. Nat. Paris 9: 301. 1856; Q. Lin *et al.*, Fl. China 5: 154. 2003.

Specimens examined: Vietnam, Ha Noi City, Ba Vi Distr., Bavi National Park, approximately 21°4'23" N, 105°21'36" E, ca. 832.2 m. 4. Jun. 2012, Fu Long-Fei, Do Van Truong & Wen Fang, VMN_CN33 (VMN, IBK).

Ecology: Grows along the road under forest on sandstone mountain. 830.9 m a.s.l.

Distribution: China (Hainan, Sichuan, Taiwan, Xizang, Yunnan), Bhutan, Japan, India, Nepal, Philippines, Sikkim, new to Vietnam.

Discussion: This species resembles *E. ebracteatum* W. T. Wang, but distinctly different by its leaf margin broader-half basal $\leq 1/2$ entire and staminate inflorescences with bracts.

5. *Elatostema nasutum* J. D. Hooker, Fl. Brit. India 5: 571. 1888; Q. Lin *et al.*, Fl. China 5: 143. 2003.

Specimens examined: Vietnam, Cao Bang Prov., Trung Khanh Distr., Pia Oac Nature Reserve, approximately 22°36'29" N, 105°52'18" E, ca. 1589.1 m. 14. Jun. 2012, Fu Long-Fei, Do Van Truong & Wen Fang, VMN_CN162 (VMN, IBK).

Ecology: Grows on limestone rocks under evergreen broad-leaved trees. 1589.1 m a.s.l.

Distribution: China (Guangdong, Guangxi, Guizhou, Hainan, Hubei, Hunan, Jiangxi, Sichuan, Xi-

zang, Yunnan), Bhutan, India, Sikkim, Nepal, Thailand, new to Vietnam.

Discussion: This species is closely related to *E. filipes* W.T. Wang, but distinctly different by its leaf larger $3.9(-18) \times 2.3, 5(-6.5)$ cm, male peduncle thicker (0.8–1.2 mm in diam).

6. *Pellionia brevifolia* Benth. Fl. Hongk. 330. 1861; Q. Lin *et al.*, Fl. China 5: 124–125. 2003.

Specimens examined: Vietnam: Cao Bang Prov., Trung Khanh Distr., Pia Oac Nature Reserve, approximately $22^{\circ}36'29''$ N, $105^{\circ}52'61''$ E, ca. 1596.1 m. 14. Jun. 2012, Fu Long-Fei, Do Van Truong & Wen Fang, VMN_CN161 (VMN, IBK).

Ecology: Grows on damp rocks on a limestone hill. 1596.1 m a.s.l.

Distribution: China (Guangxi, Yunnan), new to Vietnam.

Discussion: *Pellionia brevifolia* was an endemic species to China (Lin *et al.*, 2003a), but its distribution Guangxi and Yunnan are both bordered with N Vietnam, thus it is found in N Vietnam. This species resembles *P. retrohispada* W.T. Wang, but distinctly different by its leaf apex rounded or obtuse, achene bigger (ca. 1.2 mm).

7. *Pellionia grijsii* Hance, J. Bot. 6: 49. 1868; Q. Lin *et al.*, Fl. China 5: 125. 2003.

Specimens examined: Vietnam. Cao Bang Prov., Trung Khanh Distr., Pia Oac Nature Reserve, approximately $22^{\circ}36'24''$ N, $105^{\circ}52'46''$ E, ca. 1509.3 m. 14. Jun. 2012, Fu Long-Fei, Do Van Truong & Wen Fang, VMN_CN157 (VMN, IBK).

Ecology: Grows on damp rocks on a limestone hill. 1509.3 m a.s.l.

Distribution: China (Fujian, Guangdong, Guangxi,

Hainan, Hunan, Jiangxi, Yunnan) new to Vietnam.

Discussion: *Pellionia grijsii* was an endemic species to China (Lin *et al.*, 2003a), but one of its distribution Guangxi is bordered with N Vietnam, thus we found it in N Vietnam. This species is similar to *P. yunnanensis* (H. Schroet.) W. T. Wang, but distinctly different by its stem with densely strigose and leaf with cystolith.

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