

A NEW VARIETY AND TWO NEW RECORDS OF *ELATOSTEMA* J. R. FORSTER & G. FORSTER (URTICACEAE) FROM VIETNAM

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Abstract

Based on examination of specimens of *Elatostema* J. R. Forster & G. Forster (Urticaceae) from Vietnam, *Elatostema albopilosum* W.T. Wang var. *vicinum* L. D. Duan & Y. Lin, a new variety collected from Bac Can Province and Tuyen Quang Province, Vietnam, is described and photographed. This new variety has glabrous stems, glabrous leaves and glabrous peduncles which differs from var. *albopilosum* that having sparsely puberulent leaf blade on abaxial surface along veins and sparsely strigillose leaf blade on adaxial surface, and short pilose peduncles. *E. integrifolium* (D. Don) Wedd. and *E. pseudodissectum* W. T. Wang, two species previously known from Vietnamese adjacent countries, are newly recorded from Ninh Binh Province and Tam Dao National Park, Vietnam, respectively. The vouchers are kept in the Herbarium (PE) of Institute of Botany, Chinese Academy of Sciences, Beijing, China, and their descriptions and photographs are also provided.

Introduction

The genus *Elatostema* J. R. Forster & G. Forster is the largest genus in the family Urticaceae, consists of c. 500 species and is distributed in tropical and subtropical regions of Africa, Asia and Oceania, 30 species of which are found in Vietnam (Fu *et al.*, 2013; Gagnepain, 1929; Ho, 2003; Lin, 2008; Lin *et al.*, 2003, 2011; Wang, 1995, 2012). Based on examination of *Elatostema* specimens housed at the Herbarium (PE) of Institute of Botany, Chinese Academy of Sciences, Beijing, China, and after thoroughly consulting the literature (Gagnepain, 1929; Lin, 2008; Bi *et al.*, 2011; Lin *et al.*, 2003, 2011; Wang, 1980, 1995, 2012; Duan and Lin, 2013; Wei *et al.*, 2013), a new variety was found from Vietnam, and two species previously known from Vietnamese adjacent countries, were discovered to be new to Vietnam, and were reported here.

1. *Elatostema albopilosum* W. T. Wang var. *vicinum* L. D. Duan & Y. Lin, var. nov. (Figs 1, 2).

Diagnosis: The new variety *Elatostema albopilosum* W. T. Wang var. *vicinum* L. D. Duan & Y. Lin is morphologically similar to *E. albopilosum* W. T. Wang var. *albopilosum*, but differs in glabrous stems, glabrous leaves and glabrous peduncles; the latter pilose stems, sparsely puberulent leaf blade on abaxial surface along veins, sparsely strigillose leaf blade on adaxial surface, and short pilose peduncles.

Type: Vietnam. Tuyen Quang Province, Na hang, 400 m a.s.l., 28 October 1998, H. N. Qin, H. Zhu, M. L. Zhang & T. G. Gao 319 (*Holotype:* PE). Bac Can Province, Cho Don District, Xuan Lac Commune, 105°32'95"E, 22°21'91"N, 200 m a.s.l., 27 October 2004, L. Q. Li, N. T. Hiep, Z. Y. Zhang, X. C. Zhang, T. G. Gao, Z. T. Wang, N. S. Khang & N. X. Tam 0432 (*Paratype:* PE).

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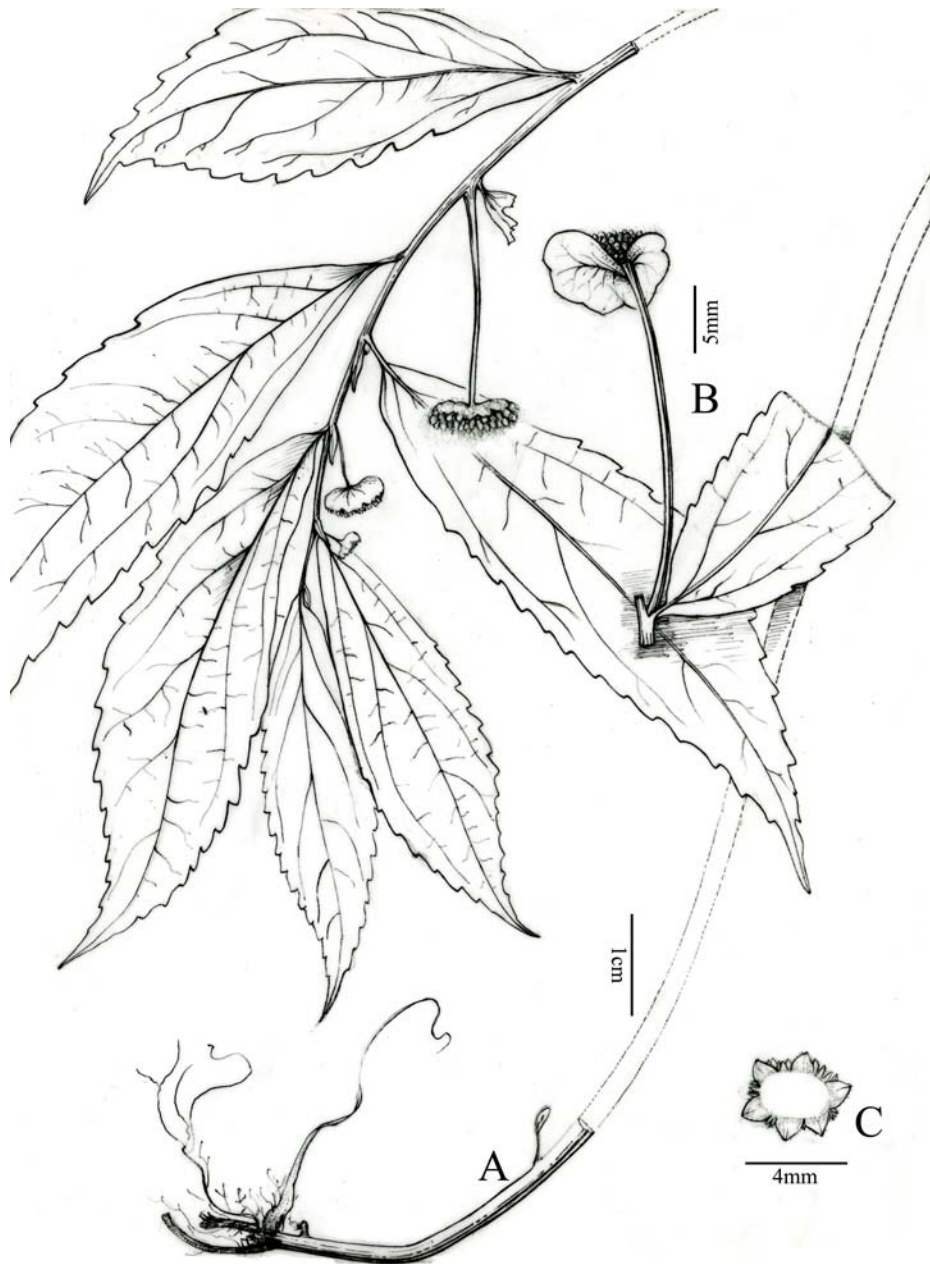


Fig. 1. *Elatostema albopilosum* W. T. Wang var. *vicinum* L. D. Duan & Y. Lin, var. nov. A) male habit (*H. N. Qin et al.* 319, PE), B) staminate inflorescence (*L. Q. Li et al.* 0432, PE), C) pistillate inflorescence, dorsal view (*L. Q. Li et al.* 0432, PE).

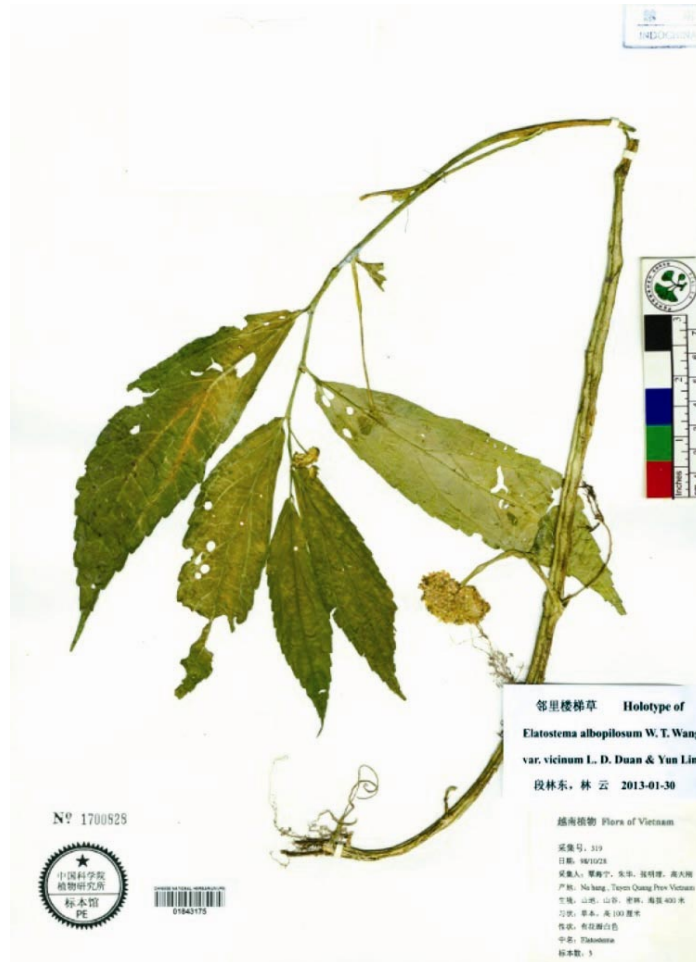


Fig. 2. Holotype of *Elatostema albopilosum* W. T. Wang var. *vicinum* L. D. Duan & Y. Lin (from *H. N. Qin et al.* 319, PE)

2. *Elatostema integrifolium* (D. Don) Wedd. in DC., Prodr. 16(1): 179 (1869). *Procris integrifolia* D. Don, Prodr. Fl. Nepal. : 61 (1825). (Fig. 3).

Type: Nepal. Precise locality not known, *Wallich s. n.* (? K).

Perennial herbs or subshrubs, monoecious or dioecious, 60-200 cm tall. Stems erect, branched, glabrous. Leaves alternate, glabrous; nanophylls absent; stipules narrowly lanceolate, 6-10 × 1.5-2.0 mm, with cystoliths; petiole 1.5-6.0 (-10) mm long; leaf blade obliquely elliptic or obliquely oblanceolate, 5-19 × 2-6 cm, papery or herbaceous, major basal lateral veins asymmetric, 1 basal, the other arising above base, cystoliths conspicuous, dense, 0.2-0.4 (-0.6) mm long; base obliquely cuneate, margin entire or c. 2-crenate, apex acuminate or caudate. Male inflorescence solitary or in pairs, simple, 10-18 × 6-12 mm, sessile; receptacle 4-6 mm in diam.; bracts 4, triangular, equal, connate, c. 1 mm long; bracteoles cymbiform, c. 1.2 mm long. Female inflorescence solitary or in pairs, 5-8 mm in diam.; peduncle 0-1 mm long; receptacle very small; bracts 20-30, triangular, nearly equal, 0.8 mm long; bracteoles narrowly linear, 0.8-1.2 mm long.

Male flowers 4-merous. Achenes ellipsoid, 0.7 mm long, 8-ribbed.

Phenology: Flowering from February to May.

Distribution: Bhutan, China, India, Indonesia, Myanmar, Nepal and Thailand. New record to Vietnam.

Habitat: The species grows in valley forests, streamside at altitudes of 460-760 m in Vietnam and 900-1600 m in other countries.

Specimens examined: Vietnam. Ninh Binh Province: Bong, Biology Station, 460-760 m a.s.l., 10.2.1965, *Sino-Vietnam Exped. 2332* (PE).



Fig. 3. *Elatostema integrifolium* (D. Don) Wedd. (from *Sino-Vietnam Exped. 2332*, PE).

Note: This newly recorded species is similar to *E. laevissimum* W.T. Wang (Wang, 1980) in Vietnam, but differing in stipules narrowly lanceolate, 6-10 × 1.5-2.0 mm, with cystoliths, leaves glabrous, male inflorescence 10-18 × 6-12 mm, female inflorescence 5-8 mm in diam., the latter with stipules narrowly triangular, 2-5 × 0.8-1.0 mm, without cystoliths, leaf blade sparsely

strigillose on adaxial surface, male inflorescence 3-4 mm in diam. and female inflorescence 1.5-2.5 mm in diam.

3. *Elatostema pseudodissectum* W. T. Wang, Bull. Bot. Lab. N.-E. For. Inst. 7(7): 55 (1980). (Fig. 4).

Type: China. Guangxi: Baise, 15 August 1928, R. C. Ching 7427 (*Holotype:* PE!).

Perennial herbs, monoecious, 20-40 cm tall, glabrous. Stems ascending or erect, branched. Leaves alternate; nanophylls absent; stipules narrowly triangular, 0.7-1.5 × 0.2-0.4 mm, without cystoliths; petiole 1-3 mm long; leaf blade obliquely ovate or elliptic-ovate, 4-11 × 1.5-4.0 cm, membranous or herbaceous, major basal lateral veins both arising at base of leaf blade, cystoliths conspicuous, dense, 0.2-0.6 mm long; base obliquely cuneate, apex acuminate or cuspidate, margin denticulate. Male inflorescence solitary, simple, 4-7 mm in diam.; peduncle 12-40 mm long; receptacle small; bracts 3-4, connate, equal, broadly ovate. Female inflorescence solitary, 30-flowered or more, 3-6 mm in diam., sessile; receptacle 3-5 mm in diam.; bracts 11-20, narrowly ovate, nearly equal, c. 1.2 mm long; bracteoles spatulate-linear, 0.3-0.5 mm long. Male flowers 4-merous. Achenes ellipsoid, c. 0.6 mm long, smooth.

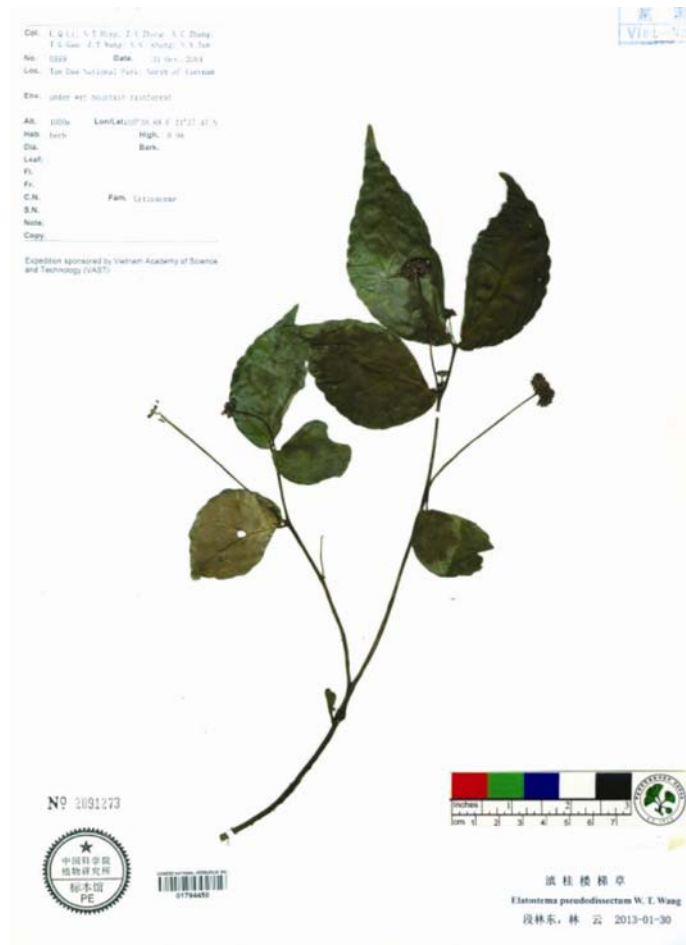


Fig. 4. *Elatostema pseudodissectum* W. T. Wang (from L. Q. Li *et al.* 559, PE).

Phenology: Flowering from September to October.

Distribution: South-west China. New record to Vietnam.

Habitat: This species grows in valley wet forests, streamsides at altitudes of 1000 m in Vietnam and 1100-2200 m in China.

Specimens examined: Vietnam. Tam Dao National Park, 105°38'68"E, 21°27'47"N, 1000 m a.s.l., 31.10.2004, L. Q. Li, N. T. Hiep, Z. Y. Zhang, X. C. Zhang, T. G. Gao, Z. T. Wang, N. S. Khang & N. X. Tam 559 (PE). Precise locality not known, Ke Can, 150 m a.s.l., 5.1.1965, Sino-Vietnam Exped. 1750 (PE).

Note: This newly recorded species is similar to *E. dissectum* Wedd. (Weddell, 1856) in Vietnam, differing in stipules narrowly triangular, 0.7-1.5 × 0.2-0.4 mm, without cystoliths, leaf blade obliquely ovate or elliptic-ovate, male inflorescence 4-7 mm in diam., the latter having stipules narrowly linear or subulate, 3-5 × 0.1-0.3 mm, with cystoliths, leaf blade obliquely oblong or obliquely oblong-lanceolate and male inflorescence 10-12 × 8-10 mm.

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