

# New species and new combinations in *Brassaiopsis* (Araliaceae) from Vietnam and southwestern China

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## ABSTRACT

*Brassaiopsis ficifolioides* J. Wen & Lowry (Araliaceae) is described based on material in the Paris herbarium from Lao Cai Province, northern Vietnam, previously associated with another well delimited species, *B. ficifolia* Dunn. *Brassaiopsis gigantea* J. Wen & Lowry is described from Ninh Binh Province, north-central Vietnam, based on collections from Cuc Phuong National Park. Recent field work has shown that *Acanthopanax bodinieri* H. Lév. from southwestern China and northern Vietnam, long regarded as a synonym of *B. ciliata* Dunn, also represents a distinct species, necessitating its transfer to *Brassaiopsis*. Another taxon, previously described as *B. ficifolia* var. *nhatrangensis* Bui from southern Vietnam, is likewise distinct, and is thus also elevated to the rank of species.

## KEY WORDS

*Acanthopanax*,  
Araliaceae,  
*Brassaiopsis*,  
China,  
Vietnam,  
new species.

## RÉSUMÉ

*Nouvelles espèces et nouvelles combinaisons dans le genre Brassaiopsis (Araliaceae) au Vietnam et en Chine du Sud-Ouest.*

*Brassaiopsis ficifolioides* J. Wen & Lowry (Araliaceae) est décrit à partir de spécimens de l'herbier de Paris provenant de la Province Lao Cai au Nord du Vietnam et rapportés auparavant à une autre espèce bien distincte, *B. ficifolia* Dunn. *Brassaiopsis gigantea* J. Wen & Lowry est décrit de la Province Ninh Binh, au Centre-Nord du Vietnam, à partir de collections effectuées dans le Parc National Cuc Phuong. Des travaux de terrain récents ont montré qu'*Acanthopanax bodinieri* H. Lév. du Sud-Ouest de la Chine et du Nord du Vietnam, longtemps considéré comme synonyme de *B. ciliata* Dunn, constitue également une espèce distincte, ce qui nécessite son transfert dans *Brassaiopsis*. Un autre taxon du Sud du Vietnam, décrit initialement comme *B. ficifolia* var. *nhatrangensis* Bui et bien distinct de la variété type, est élevé au rang d'espèce.

## MOTS CLÉS

*Acanthopanax*,  
Araliaceae,  
*Brassaiopsis*,  
Chine,  
Vietnam,  
espèces nouvelles.

## INTRODUCTION

Recent examination of material at several herbaria (in particular F, P and PE) conducted as part of our studies of Asian Araliaceae has revealed two previously undescribed species of *Brassaiopsis* Decne. & Planch. from Vietnam, which we describe here as new: *B. ficifolioides* J. Wen & Lowry and *B. gigantea* J. Wen & Lowry. Comparison of specimens in these herbaria with our recent collections from Yunnan and Sichuan Provinces, China and Lao Cai Province, Vietnam, has also shown that a species originally described in *Acanthopanax* (Decne. & Planch.) Miq. and long relegated to synonymy under *B. ciliata* Dunn clearly represents a well delimited taxon, necessitating a new combination. Similarly, a Vietnamese taxon originally described as a variety of *Brassaiopsis ficifolia* Dunn is also distinct, prompting its recognition at the species level. Updated descriptions are provided for both of these taxa. Although *Brassaiopsis* has been treated in regional floristic works (see for example Li 1942; Hoo & Tseng 1978; Feng & Li 1979; Shang 1985; Hô 2000), it has never been revised comprehensively and constitutes one of the more poorly understood genera in the family.

## SYSTEMATICS

*Brassaiopsis bodinieri*

(H. Lév.) J. Wen & Lowry, comb. nov.

(Fig. 1)

*Acanthopanax bodinieri* H. Lév., *Bulletin de l'Académie internationale de Géographie botanique* 24: 143 (1914). — Type: China, Guizhou Prov., environs de Gan-Pin, 24.X.1897, fl., *E. Bodinier* & *L. Martin* 1928 (holo-, E [scanned image seen]; iso-, P [2 sheets]!).

ADDITIONAL MATERIAL EXAMINED. — **China.** Guizhou Prov., San Chouen, 1914, fr., *M. Cavalier s.n.* (P, 2 sheets). — Na-kan, Cheng-feng, ravine, flowers white, 18.X.1930, fl., *Y. Tsiang* 4717 (PE). — Tuhshan, 500 m, dense forested ravine, 7.IX.1930, bud, *Y. Tsiang* 6916 (PE, 2 sheets).

Yunnan Prov., Jin-ping, 2220 m, 7.II.1958, fr., *J.-Z. He* 5 (PE). — Maguan Xian, Miechang Xiang, on the trail from Xingzhai to Qinqiwan, 1700 m, 17.VII.2001, old infructescence, *J. Wen* 5584 (F). — Pingbian Xian, Shibai, Lao-jian Shan, 1900 m, 12.X.1954, fl., *G.M. Hong* 4930 (KUN, PE). — Pingbian Xian, Yuping Zhen, on the way from Pin Bian to Shuiweicheng along Jianshan Road, near the km marker 9.5, disturbed area, 1925 m, 22°55'23.5"N, 103°41'44.5"E, 18.XI.2004, fr., *J. Wen et al.* 8433 (F, KUN, MO, VCU). — Pingbian Xian, Daweishan, Dajianshan, 22°54'41.3"N, 103°41'51.0"E, 2080 m, 18.XI.2004, y.fr., *J. Wen et al.* 8437 (F, KUN, MO, VCU). — Pingbian Xian, Daweishan, Shuiweicheng, 22°54'46.1"N, 103°41'53.8"E, 1943 m, 18.XI.2004, y.fr.,

*J. Wen et al. 8444* (F, KUN, MO, VCU). — Pingbian, Shibaxiang, Adakou, Laojianshan, 1900 m, 12.X.1954, fl., *K.M. Feng 4930* (PE). — Si-chour-hsien, Faa-douu, 1500 m, mixed forests, 19.IX.1947, bud, *K.M. Feng 11907* (KUN, PE). — Mar-li-po, Chung-dzia, 1800–2100 m, open thickets, 2.XI.1947, fl., *K.M. Feng 12683* (KUN, PE). — Si-chou, Far-doe, 1300 m, in woods, 3.XII.1939, fl., *C.-W. Wang 85239* (KUN, PE). — Wenshan Xian, 1700 m, 14.II.1933, y.fr., *H.T. Tsai 51809* (KUN, PE). — Wenshan Xian, Xiaojie Xiang, Yaodian, Laojunshan, near Erhegou, 2000 m, 26.VII.2001, old infructescence, *J. Wen 5645* (F).

**Vietnam.** Lao Cai Prov., Chapa, IX.1932, buds, fl., *Pételot 4567* (P, 2 sheets). — Between Trinh Thuong and Mouong, 9.I.1931, fr., *M.E. Poilane 18802* (P). — Sa Pa, Oquiho, 2000 m, 22°21'03.4"N, 103°46'35.7"E, 26.XII.2001, fr., *J. Wen 6018* (F, HN). — Sa Pa, Ban Khoang Village, on the way from Oquiho to Ban Khoang, 1650 m, 22°23'13.9"N, 103°47'16.2"E, 27.XII.2001, fr., *J. Wen 6023* (F, HN, MO).

#### DESCRIPTION

Shrub to small tree, andromonoecious or hermaphroditic, reaching to 5 m tall, stem with numerous stiff, partially flattened light orange-brown prickles to c. 10 mm long, and also with dense, straight brown trichomes. Leaves simple, (7-)9-11-lobed, the sinuses reaching 2/3 to 4/5 to the base, stipules adnate in lower portion to the petiole, free portions narrowly triangular to linear, (3-)5-11 mm long, c. 1 mm wide at base, leaf blade c. 18-26 cm long, (18-)25-40 cm wide, glabrous or with sparse short setae above, minutely light brown stellate beneath, nearly ferruginous on the veins, rarely glabrescent, papyraceous to membranaceous, lobes elliptic to narrowly obovate, (7-)9-22 cm long, 2.5-7.5 cm wide, primary veins equal in number to lobes, secondary and tertiary venation visible on both surfaces, slightly raised, base truncate to cordate, margin serrulate, the teeth narrowly triangular, c. 0.75-1.25(-2) mm long, the tip often curved, apex acuminate; petiole (8-)15-35 cm long, with small scattered prickles, especially just below the blade, occasionally unarmed. Inflorescence a terminal panicle, erect, primary axis stout, 10-25 cm long at anthesis, 0.5-1.5 cm in diam., densely covered with light brown to orange prickles to 6 mm long and with stiff, straight to wavy setose trichomes to 2.5 mm long, secondary axes 6-15, (5-)8-25 cm long at anthesis, ascending before anthesis, the

umbellules (particularly the lateral ones) appearing head-like, with a terminal umbel of bisexual flowers and 0-3(-4) lateral umbels of staminate (or sometimes apparently bisexual) flowers, prickles and indument similar to primary axes but shorter, terminal umbel 4-5.5 cm in diam., with c. (60-)75-90 flowers, peduncles of lateral umbels 0.5-3 cm long, lateral umbels c. 3.5-4 cm in diam., with nearly as many flowers, bracts caducous well before anthesis, triangular-ovate, adaxially concave and sheathing the young axes and umbels prior to elongation, densely short stellate but lacking prickles and setose indument, those subtending the secondary axes c. 2.5 cm long, 1.2-1.5 cm wide, those subtending the lateral umbels to c. 1.5 cm long, 0.8-1 cm wide, pedicels inarticulate, finely brown to ferruginous stellate, glabrescent, those of the bisexual flowers (8-)10-18 mm long at anthesis, not expanding in fruit, those of the staminate flowers c. 8-12 mm long, bracteoles subtending the pedicels linear-lanceolate, 5-14 mm long, caducous in mature fruit. Sepals 5, narrowly triangular, 0.25-0.5 mm long, 0.1-0.4 mm wide, caducous; petals 5, narrowly ovate-triangular, 3-4.5 mm long, 1.75-2.2 mm wide, glabrous, somewhat smaller in staminate flowers; stamens 5, filaments 3-4.5 mm long, anthers oblong, c. 1.5-2 mm long, 0.5-0.8 mm wide; ovary 2-locular, ellipsoid, green at anthesis, styles connate, c. 1.5-2.5 mm long at anthesis, stigma minutely capitate, stylopodium disc hemispherical, dark purple at anthesis. Fruits ellipsoid, 9-12 mm long, 5-8 mm in diam.

#### REMARKS

Material of this species has long been attributed either to *Brassaiopsis hispida* Seem., a native of western China and northeastern India, or more often to *B. ciliata* from southwestern China and northern Vietnam. Most recent authors, starting with Li (1942), have placed Lévillé's name in synonymy under the latter (see also Hoo & Tseng 1978; Feng & Li 1979; Shang 1985; Hô 2000; Frodin & Govaerts 2004), in keeping with a general tendency to adopt most of Li's species concepts in regional floristic treatments. Li (1942) was not, however, able to examine numerous types from major European herbaria for his revision of

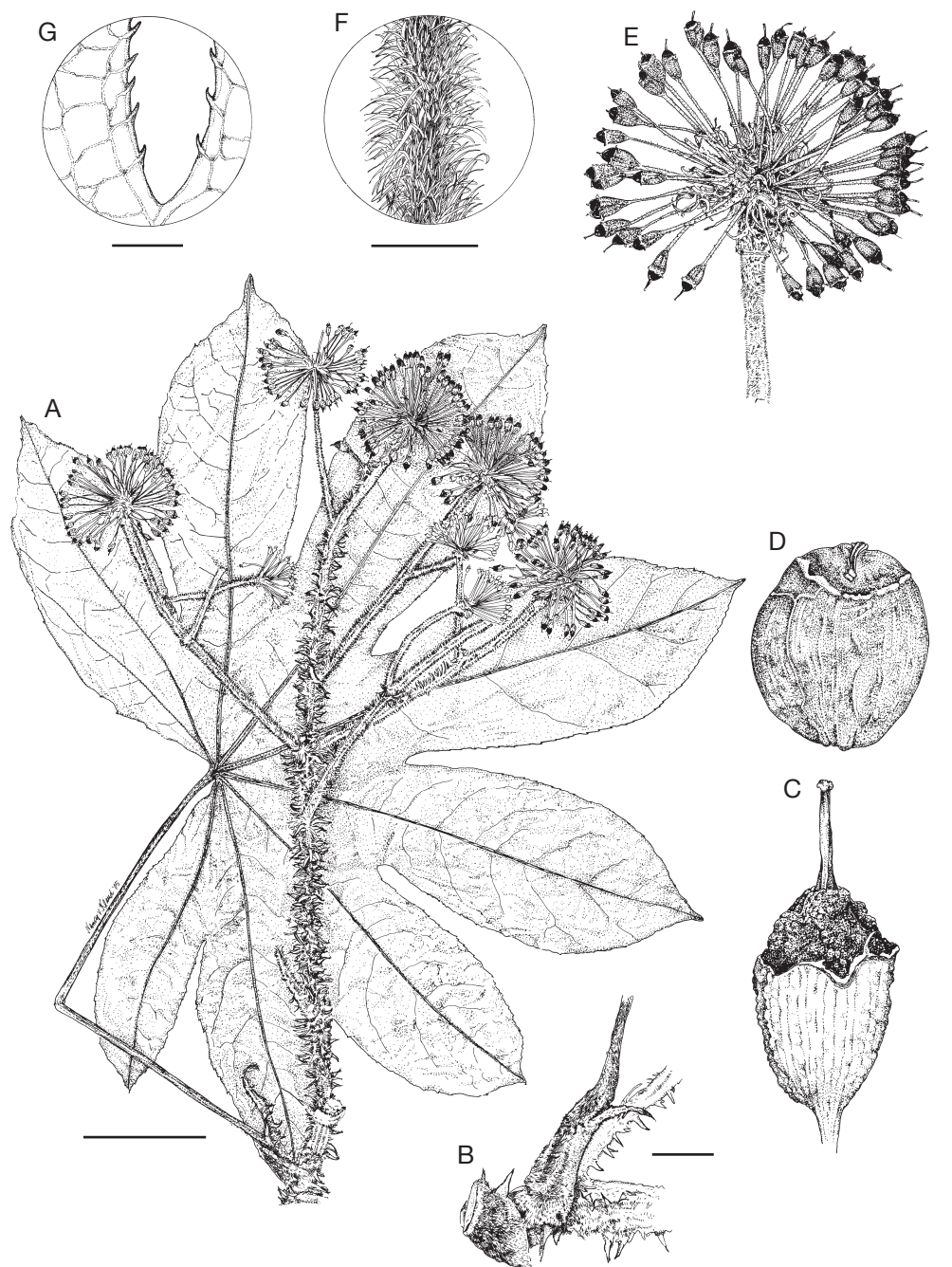


FIG. 1. — *Brassaiopsis bodinieri* (H.Lév.) J.Wen & Lowry: **A**, leaf and erect terminal inflorescence; **B**, stem showing the base of petiole with stipule; **C**, young fruit with purple stylopodium; **D**, mature fruit; **E**, umbel with linear-lanceolate bracteoles; **F**, close-up of the upper portion of peduncle showing the setose pubescence; **G**, close-up of the leaf portion between two sinuses showing ciliate margin. A-C, E, F, Wen *et al.* 8444; D, Wen 6023. Scale bars: A, E, 5 cm; B, 1 cm; C, G, 3 mm; D, F, 5 mm.



Chinese Araliaceae, completed during the second World War, which regrettably led to a number of misinterpretations.

Over the last several years the first author of the present paper became aware of the heterogeneity of *B. ciliata*, as broadly defined by Li (1942), Hoo & Tseng (1978) and subsequent authors. Recognition of this problem was based primarily on field observations made during 2001 in southeastern Yunnan Province, China (cf. *Wen* 5584 from Maguan Xian and *Wen* 5645 from Wenshan Xian) and on Mt. Omei in Sichuan Province (*Wen* 5012 and 5019). Mitchell & Wen (2005) pointed out problems with the delimitation of *B. ciliata* used by Hoo & Tseng (1978), as revealed by phylogenetic analyses using ITS and 5S sequence data, which placed material assigned to this species in two separate groups each comprising a pair of samples (*Wen* 5584 and 5645, and *Wen* 5012 and 5019, respectively).

While conducting field work in Yunnan Province with several colleagues in 2004, we collected material of two clearly distinct entities on Daweishan, both of which had fully developed inflorescences. However, we were unable to key our specimens to different taxa using the available floristic treatments for China and Vietnam. It was not until several months later, while working in the Paris herbarium, that we realized one of the recently collected entities (*Wen et al.* 8433, 8437 and 8444) corresponded perfectly to the type material of *Acanthopanax bodinieri*, and matched two of the first author's earlier collections (*Wen* 5584 and 5645). Examination of photographs of type material of *B. ciliata* confirmed that the other collection from Yunnan (*Wen et al.* 8453, Pingbian Xian, Yuping Zhen, Dishui, Dafengzhi, 23°00'32.4"N, 103°37'50.5"E, 1115 m), as well as two earlier gatherings from Sichuan (*Wen* 5012 and 5019), clearly belong to that species.

*Brassaiopsis bodinieri* can easily be distinguished from *B. ciliata* by its dense, erect, terminal inflorescence, which is covered both by bristly and setose indument, and has a stout primary axis 10–25 cm long (vs. a prickly, pendant and lax inflorescence borne laterally on the stem in *B. ciliata*, with a primary axis (30–)75–150 cm long). *Brassaiopsis bodinieri* differs from *B. hispida* by its sparsely prickly or unarmed petioles (vs. densely prickly

in *B. hispida*), ciliate-serrulate leaf margin (vs. spinose-serrulate), and papery to membranaceous (vs. subcoriaceous) leaf texture. Also, the leaf margin has 4–6 teeth per centimeter in *B. bodinieri* (vs. 2–3 in *B. hispida*). With the exclusion of material now assigned to *B. bodinieri*, *B. ciliata* occurs in northern Vietnam, and Yunnan, Guangxi and Sichuan provinces in China.

#### DISTRIBUTION

Southwestern and south-central Guizhou and southern Yunnan provinces in China, and Lao Cai Province in northern Vietnam; 500–2220 m.

#### PHENOLOGY

Flowering from October to December, fruiting in December to February.

#### *Brassaiopsis ficifolioides*

J. Wen & Lowry, sp. nov.

(Fig. 2)

*Frutex. Folia chartacea, c. 40 cm longa, c. 23 cm lata, lobis 3, marginis remote serratis. Panicula terminalis c. 8 cm longa, sparse stellato-pubescentis; umbellate 9–14-florae, pedicellis 15–22 mm longis. Ovarium biloculare, stylis connatis.*

**TYPUS.** — **Vietnam.** Lao Cai Prov., entre Ping Ho et Ta Yang Ping, bord d'un torrent, c. 1200 m, 31.XII.1943, fl., Pételot 8422 (holo-, P!).

#### DESCRIPTION

Small shrub, apparently hermaphroditic, 0.5–1 m tall, stem grayish white, sparsely covered with conical prickles to c. 4 mm long, young shoots with dense stellate trichomes and prickly-like appendages. Leaves simple, 3-lobed, the sinuses reaching 3/4 to 4/5 to the base, stipules adnate in lower portion to the petiole, free portions narrowly triangular, 3–5 mm long, 1.5–2 mm wide at base, leaf blade c. 30 cm long, c. 23 cm wide, glabrous on both surfaces, thin papyraceous, lobes probably elliptic (material partially damaged), to c. 25 cm long, 7.5 cm wide, primary veins 5, secondary and tertiary veins conspicuous on both surfaces, base cordate, margin sparsely sharp toothed, the teeth 0.8–1.5 mm long, apex acuminate; petiole c. 22.5 cm long, glabrous, unarmed. Inflorescence a

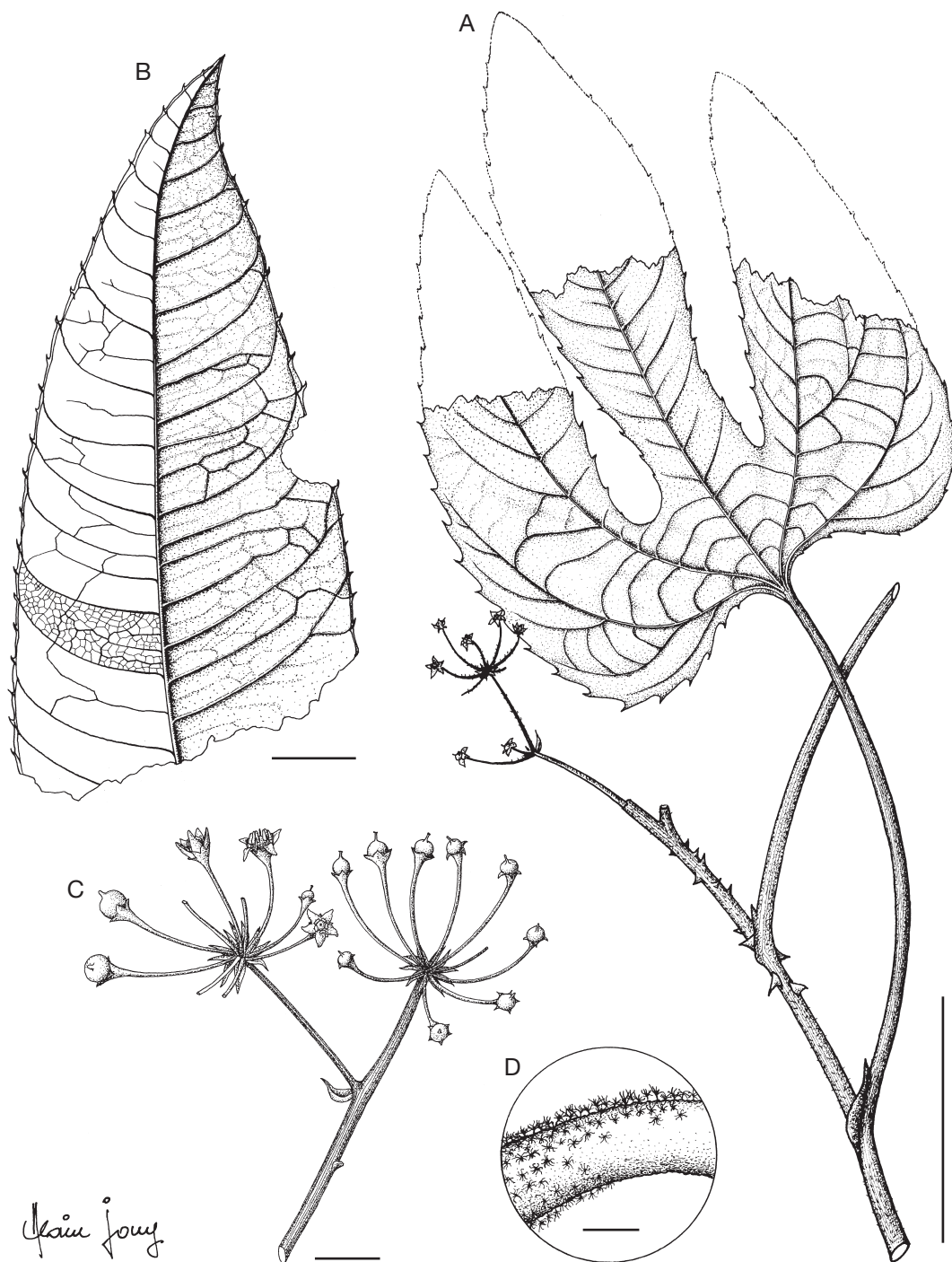


FIG. 2. — *Brassaiopsis ficifolioides* J.Wen & Lowry: **A**, leaf and erect terminal inflorescence; **B**, close-up of apical portion of leaf showing the sharp toothed margin; **C**, inflorescence; **D**, close-up of indument on petiole base. *Pételot 8422*. Scale bars: A, 10 cm; B, 2 cm; C, 1 cm; D, 1 mm.

terminal panicle, primary axis slender, *c.* 8 cm long, 2 mm in diam. at base, sparsely light brown stellate, bearing 2-4 umbels, peduncles 2-2.5 cm long, sparsely stellate to nearly glabrous, umbels with 9-14 flowers, bracts narrowly triangular, 3-3.5 mm long, 1.5-2 mm wide, stellate, pedicels inarticulate, sparsely stellate, 15-22 mm long, bracteoles narrowly triangular, persistent, 1.7-1.8 mm long, 1-1.2 mm wide. Sepals 5, narrowly triangular, 1.9-2 mm long, 1.4-1.6 mm wide, petals 5, ovate-triangular, 3-3.5 mm long, 2-2.2 mm wide, glabrous on both surfaces or very sparsely stellate on abaxial surface, stamens 5, filaments 2.3-2.5 mm long, anthers oblong, *c.* 1.5 mm long, 1 mm wide, ovary 2-locular, styles connate, *c.* 1 mm long, stigma obscure, disc hemispherical to subglobose. Fruits unknown.

#### REMARKS

The only known collection of this species was previously identified as *B. ficifolia*, from which it differs by its much larger leaves (40 × 23 vs. 10-26 × 6-10 cm) that are thinner (thin papyraceous vs. subcoriaceous) and have conspicuous (vs. inconspicuous) secondary and tertiary veins on both surfaces. *Brassaiopsis ficifolioides* also resembles *B. triloba* K.M.Feng, but can be distinguished by its much larger leaves (40 × 23 vs. 12-18 × 14-18 cm) whose margin has sparse sharp teeth (vs. ciliate in *B. triloba*).

#### DISTRIBUTION

Lao Cai Province in northern Vietnam; 1200 m.

#### PHENOLOGY

Flowering in late December.

*Brassaiopsis gigantea* J.Wen & Lowry, sp. nov.  
(Fig. 3)

*Arbor. Folia chartacea, 15-35 cm longa, 15-30 cm lata, lobis 5-7, marginae serratis. Panicula terminalis 30-35 cm longa, stellato-pubescent; umbellate 17-25-florae, pedicellis 8-20 mm longis. Ovarium biloculare, stylis connatis.*

**TYPUS.** — **Vietnam.** Ninh Binh Prov., Cuc Phuong National Park, primary forest, 105°34'13.2"E, 20°22'54.0"N, 200 m, 28.VIII.2000, fl., *N.M. Cuong, D.T. Kien & M.V. Sinh 1068*, tree 6 m tall, dbh 49 cm, bark gray, flowers dull white (holo-, F!).

**PARATYPES.** — **Vietnam.** Ninh Binh Prov., Cuc Phuong National Park, near headquarter, 20°14'59.5"N, 105°42'55.9"E, 150 m, 1.I.2002, ster., *J. Wen, N.T. Hiep & N.M. Cuong 6118* (F!, HN!). — Nho Quan District, Cuc Phuong National Park, hotspot 33, 11 km from Bong, primary forest on steep limestone slope, 20°17'21.0"N, 105°40'16.8"E, 315 m, 25.V.2000, ster., *D.D. Soejarto & N.M. Cuong 11614* (F!). — In reservato Cuc Phuong, 400 m, V.1965, fr., *Ng. Anh Tiep s.n.* (P!).

#### DESCRIPTION

Tree 6-12 m tall, dbh 10-50 cm, andromonoecious, stem gray, with conical prickles 3-6 mm long. Leaves simple, 5-7-lobed, the sinuses reaching to *c.* 2/3 to the base, stipules adnate in lower 1/2 to the petiole, free portions lanceolate, 5-6.5 mm long, 1-1.2 mm wide, pubescent and subcoriaceous, leaf blade 15-35 cm long, 15-30 cm wide, papyraceous to thickly so, stellate above, densely stellate below, lobes elliptic to ovate, (7-)10-20 cm long, 6-11 cm wide, primary veins 5-7, secondary and tertiary veins prominent on both surfaces, base cordate, margin serrate to sparsely so in apical 3/4, the teeth 1-2 mm long, entire in basal 1/4, apex acuminate; petiole 15-30 cm long, stellate. Inflorescence an upright terminal panicle, unarmed, stellate, primary axis 30-35 cm long, secondary axes 9-10, 15-22 cm long at anthesis, each bearing a terminal umbel of bisexual flowers and 2-6 lateral umbels of apparently mostly bisexual and male flowers, terminal umbel 3.7-4.2 cm diam., with 20-25 flowers, peduncles of the lateral umbels 1-3 cm long, lateral umbels 1.7-2 cm in diam. in bud, with 17-20 flowers; bracts persistent, sometimes with 1-2 small lobes at the lower or middle part, coriaceous and pubescent, narrowly triangular, 6-10 mm long, 2.5-3 mm wide; pedicels inarticulate, densely stellate, 8-20 mm long; bracteoles subtending pedicels lanceolate, 3-4.5 mm long, 0.8-1.2 mm wide, persistent. Floral buds conspicuously angular in appearance. Sepals 5, triangular, 0.7-0.9 mm long, 0.8-1 mm wide, petals 5, ovate-triangular, 3.5-4 mm long, 2-2.5 mm wide, stamens 5, filaments 3-4 mm long, anthers oblong, 1.3-1.5 mm long, *c.* 1 mm wide, ovary 2-locular, styles united, stigmas inconspicuous, disc slightly projected. Fruits ellipsoid to slightly obovoid, 6-7 mm long, 4.4-6 mm in diam.

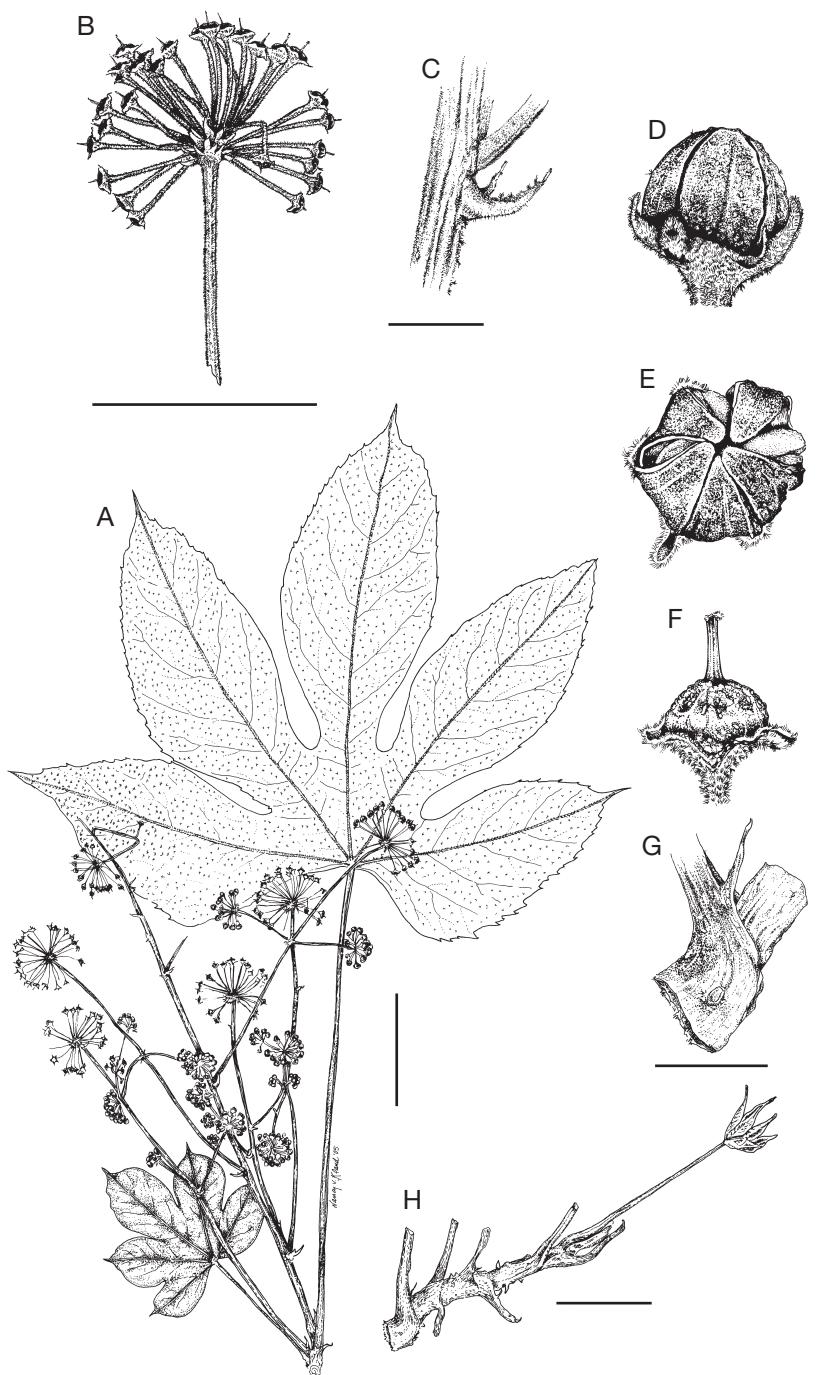


FIG. 3. — *Brassaiopsis gigantea* J.Wen & Lowry: **A**, leaf and erect terminal inflorescence; **B**, terminal umbel; **C**, portion of inflorescence axis showing a bract with a small lobe in the lower part; **D**, floral bud; **E**, flower just prior to anthesis; **F**, flower after anthesis showing projected ovary; **G**, stem with base of petiole showing stipule; **H**, young branch showing prickly stem. Cuong *et al.* 1068. Scale bars: A, 5 cm; B, 3.5 cm; C, G, 1 cm; D, 3 mm; E, F, 4 mm; H, 2 cm.



## REMARKS

*Brassaiopsis gigantea* has the largest girth of any member of the genus, forming trees to 12 m in height, with a trunk that can reach 50 cm dbh. It resembles *B. grushvitzkyi* J. Wen, Lowry & T.H. Nguyễn of southwestern China and northern Vietnam in its tree habit, stellate leaf pubescence, and coriaceous inflorescence bracts, but differs in its serrate or sparsely serrate (vs. entire) leaf margin and bilocular (vs. 5-locular) ovary (also see Wen *et al.* 2003). *Brassaiopsis gigantea* can be distinguished from *B. phanrangensis* Shang from north-central Vietnam in having leaves that are densely stellate on both surfaces (vs. glabrous above and sparsely short tomentose to stellate below, especially along the veins) and papyraceous to thickly papyraceous (vs. thin chartaceous), and inflorescences that are stellate throughout at anthesis (vs. glabrescent except at the nodes of the inflorescence axes and umbels, which are densely lanate at anthesis, then almost glabrescent in fruit) with stellate (vs. densely lanate) bracts. *Brassaiopsis gigantea* can be easily distinguished from *B. stellata* K.M. Feng of southwestern China and northern Vietnam by its robust and upright (vs. slender and drooping) inflorescence and 5-7-lobed (vs. mostly 3-5-lobed) leaves, as well as its arborescent (vs. shrubby) habit.

## DISTRIBUTION

Known only from Ninh Binh Province in north-central Vietnam; 150-400 m.

## PHENOLOGY

Flowering in late August, fruiting in May.

*Brassaiopsis nhatrangensis*

(N.S. Bui) J. Wen & Lowry, comb. et stat. nov.

*Brassaiopsis ficifolia* Dunn var. *nhatrangensis* Bui, *Adansonia*, sér. 2, 6: 445 (1966). — Type: Vietnam, Khanh Hoa Prov. [Annam], km 25 route de Nha Trang à Ninh Hoa, 750 m, 17.X.1923, fl., *Poilane* 8243 (holo-, P!; iso-, P!, TCD).

ADDITIONAL MATERIAL EXAMINED. — **Vietnam.** Nha Trang Prov. [Annam], Massif de la Mère et l'Enfant, 400 m, 4.XI.1922, fl., *Poilane* 5015 (P).

## DESCRIPTION

Shrub 0.8-3 m tall, andromonoecious, stem grayish brown, sparsely covered with scattered conical prickles 2.5-6 mm long. Leaves simple, 5-3-lobed, the sinuses reaching 1/2 to 2/3 to the base, stipules adnate in lower portion to the petiole, free portions narrowly triangular, 3-4 mm long, 1.5-2 mm wide, coriaceous to subcoriaceous, leaf blade 15-25 cm long, 13-24 cm wide, sparsely stellate above, densely ferrugineous stellate below when young, glabrescent, lobes elliptic to slightly ovate, 5-21 cm long, 3.5-7 cm wide, primary veins 3-7, secondary and tertiary veins prominent on both surfaces, base truncate to subcordate, margin serrate in apical 2/3, the teeth *c.* 0.3 mm long, entire in basal 1/3, apex acute to acuminate; petiole 8-24 cm long, glabrescent. Inflorescence a terminal panicle, slender, sparsely to moderately ferrugineous stellate, primary axis 8-12 cm long, *c.* 3 mm in diam. at base, secondary axes 5-7, 4-5.5 cm long at anthesis, each bearing a terminal umbel of bisexual flowers and 1-2(-3) lateral umbels of apparently mostly male flowers, terminal umbel 1.2-1.5 cm in diam., with 15-25 flowers, peduncles of the lateral umbels 0.3-0.7 cm long, lateral umbels 0.5-1 cm in diam. in bud, with nearly as many flowers, bracts persistent, narrowly keel-shaped, 12-15 mm long, 5-7 mm wide, ferrugineous, pedicels inarticulate, stellate, 5-6 mm long, bracteoles subtending pedicels narrowly triangular, 1.5-2 mm long, 1-1.5 mm wide, persistent. Sepals 5, triangular, 1-1.3 mm long, 0.8-1 mm wide, petals 5, ovate-triangular, 2.5-3 mm long, 2-2.2 mm wide, stamens 5, filaments 3-3.5 mm long, anthers oblong, 1.2-1.3 mm long, *c.* 1 mm wide, ovary 2-locular, oblate at anthesis, black in dry material, styles united, stigmas inconspicuous, disc slightly rounded. Fruits unknown.

## REMARKS

*Brassaiopsis nhatrangensis* superficially resembles *B. ficifolia* of southwestern China, northern Vietnam and northern Thailand, but can be distinguished by its truncate to subcordate (vs. deeply cordate) leaf base, persistent (vs. caducous) inflorescence bracts, narrowly triangular and ferrugineous bracteoles subtending the flowers (vs. lanceolate, glabrous and

ciliate), ferrugineous (vs. grayish) indument on the inflorescence, and undivided (vs. bifid) stigmas. Both species are small shrubs in evergreen forests with coriaceous leaves that are deeply 3-5-lobed and a slender terminal inflorescence. *Brassaiopsis nhatrangensis* likewise resembles *B. triloba* from southwestern China and northern Vietnam, but differs in having coriaceous to subcoriaceous (vs. papyraceous) leaves whose margin is serrate in the apical portion and entire in the basal 1/3 (vs. ciliate throughout in *B. triloba*).

#### DISTRIBUTION

Known only from Nha Trang Province in southern Vietnam; 400 m.

#### PHENOLOGY

Flowering in mid-October to early November.

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