

Aralia hiepiana J. Wen & Lowry, a new species of Araliaceae from Vietnam

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ABSTRACT

Aralia hiepiana J. Wen & Lowry, a new species from southern Vietnam, is described and illustrated. It belongs to *Aralia* sect. *Dimorphanthus* (Miq.) Miq. and most closely resembles *A. foliolosa* Wall. ex C.B. Clarke from China, India, Bangladesh, Thailand, and Vietnam, but can be distinguished by several characters of the leaves, inflorescences, flowers and fruits. The new species is also compared with several other members of *Aralia* from Vietnam, including *A. armata* (Wall.) Seem., *A. chapaensis* N.S. Bui, and *A. finlaysoniana* (Wall. ex G. Don) Seem., all of which have similar leaflet morphology.

KEY WORDS

Aralia,
Aralia hiepiana,
Aralia sect. *Dimorphanthus*,
Araliaceae,
Vietnam.

RÉSUMÉ

Aralia hiepiana J. Wen & Lowry, nouvelle espèce d'Araliaceae du Vietnam. Une nouvelle espèce du sud du Vietnam, *Aralia hiepiana* J. Wen & Lowry, est décrite et illustrée. Elle appartient à *Aralia* sect. *Dimorphanthus* (Miq.) Miq. et ressemble à *A. foliolosa* Wall. ex C.B. Clarke de Chine, Inde, Bangladesh, Thaïlande et Vietnam, dont elle se distingue par plusieurs caractères des feuilles, des inflorescences, des fleurs, et des fruits. La nouvelle espèce est comparée à plusieurs autres *Aralia* du Vietnam, dont *A. armata* (Wall.) Seem., *A. chapaensis* N.S. Bui, et *A. finlaysoniana* (Wall. ex G. Don) Seem., tous présentant des folioles de morphologie semblable.

MOTS CLÉS

Aralia,
Aralia hiepiana,
Aralia sect. *Dimorphanthus*,
Araliaceae,
Vietnam.

Examination of material of Araliaceae recently collected in Vietnam by the second author has revealed a new species of *Aralia* from the mountainous area to the NE of Da Lat, which is described below as *Aralia hiepiana*. The genus *Aralia* L. comprises nearly 70 species distributed in eastern to southeastern Asia and North America (WEN 1993). The new species is placed in *Aralia* sect. *Dimorphanthus* (Miq.) Miq. (WEN 2002) based on the following synapomorphies shared with other members of the group: prickly stems, 2-4-pinnately compound leaves, presence of an accessory leaflet or pinna at the base of each primary division of the leaf, and relatively large pollen tectoral perforations.

***Aralia hiepiana* J. Wen & Lowry, sp. nov.**

Arbuscula aculeata. Folia bipinnata; foliola chartacea, ovata vel anguste ovata, 4-8 × 1.5-3.5 cm, apice longe acuminata, basi rotundata, subcordata vel late cuneata, margine serrulata. Inflorescentia terminalis, grandis, glabra vel leviter pilosa; umbellae 15-25-florae, pedicellis 8-15 mm longis. Fructus (immaturus) globosus, 3-3.5 mm diam., stylis connatis usque ad medium.

TYPUS. — *Lowry & Phan Kê Lôc 4925*, Vietnam, Lam Dong Prov., along road from Da Lat c. 4 km before village of Da Cháy, moist area near stream crossing in *Pinus krempfii* forest, 12°05'24"N, 108°32'33"E, 1530 m, 29 Apr. 1997, fl., y.fr. (holo-, HN (2 sheets)!); iso-, F (5 sheets)!), MO (8 sheets, nos. 4973436, 4973442-444, 5080699-672)!), P (6 sheets).

Prickly treelets, 2-3 m tall. Leaves bipinnate, c. 1 m long, pinnules with 5-17 leaflets; petiole glabrous, with a few scattered prickles; rachises subtended by a pair of accessory leaflets or accessory pinnae at each division; leaflets ovate to narrowly ovate, chartaceous, 4-8 × 1.5-3.5 cm, apex long acuminate, base rounded or slightly subcordate to broadly acute, margins serrulate, lateral veins 8-10 pairs, sparsely pilose along veins above, glabrous below, dark green and shiny above, paler below, petiolules tinged deep purplish brown, 0.5-4 mm long. Inflorescence large with a short main axis, highly branched, axes glabrous to slightly pilose, purplish, with a few scattered prickles; primary branches > 50 cm

long, secondary branches 25-40 cm long; bracts and bracteoles persistent, chartaceous, glabrous, lanceolate, margins ciliate, secondary bracts 20-25 mm long, tertiary ones 10-16 mm long, bracteoles 3-5 mm long; umbels 15-25-flowered; pedicels 8-15 mm long, varying with umbel position (longer on those terminating lower order inflorescence axes), glabrous. Floral buds green. Sepals triangular, 0.6-0.7 × 0.5-0.6 mm. Petals ovate, 2-2.2 × 1.2-1.3 mm. Stamens 5, filaments slender, 3-3.5 mm long; anthers oblong, 0.8-1 mm long. Ovary 5-locular; styles 5, connate to the middle point. Fruit (immature) globose, 3-3.5 mm in diam. — Fig. 1.

ETYMOLOGY. — The species epithet honors our friend and colleague NGUYEN Tien Hiep, Coordinator of the MBG-Vietnam Botanical Conservation Program, who has done so much to advance our knowledge of the flora of Vietnam, and who so expertly organizes field expeditions throughout the country.

PHENOLOGY. — Flowering in late April (also with young fruits).

DISTRIBUTION. — Known only from the foothills of Bi Dúp mountain, NE of Da Lat, Lam Dong Prov., Vietnam.

ECOLOGY. — Moist areas near streams; 1450-1530 m.

PARATYPES. — *Lowry & Phan Kê Lôc 4926*, Vietnam, Lam Dong Prov., moist area along stream near base camp at village of Klong Lanh, 12°08'12"N, 108°39'02"E, 1450 m, 29 Apr. 1997, fl., y.fr. (F!, HN!, MO (4 sheets, nos. 4973434, 4973441, 5080668, 5081752)!).

Aralia hiepiana resembles *A. foliolosa* Wall. ex C.B. Clarke from China, India, Bangladesh, northern Thailand, and Vietnam in leaflet shape (ovate to narrowly ovate, with a long acuminate apex and rounded to slightly subcordate base), its small leaflet size, more or less glabrous leaves and inflorescence axes, and small fruits (3-3.5 mm in diam.). The new species differs from *A. foliolosa* in having bipinnately (vs. tripinnately or quadripinnately) compound leaves, sparsely pilose (vs. glabrous) leaflets along the veins above, serrulate leaflet margins with fine, sharp (vs. rounded) teeth, more numerous (15-25 vs. 7-15)

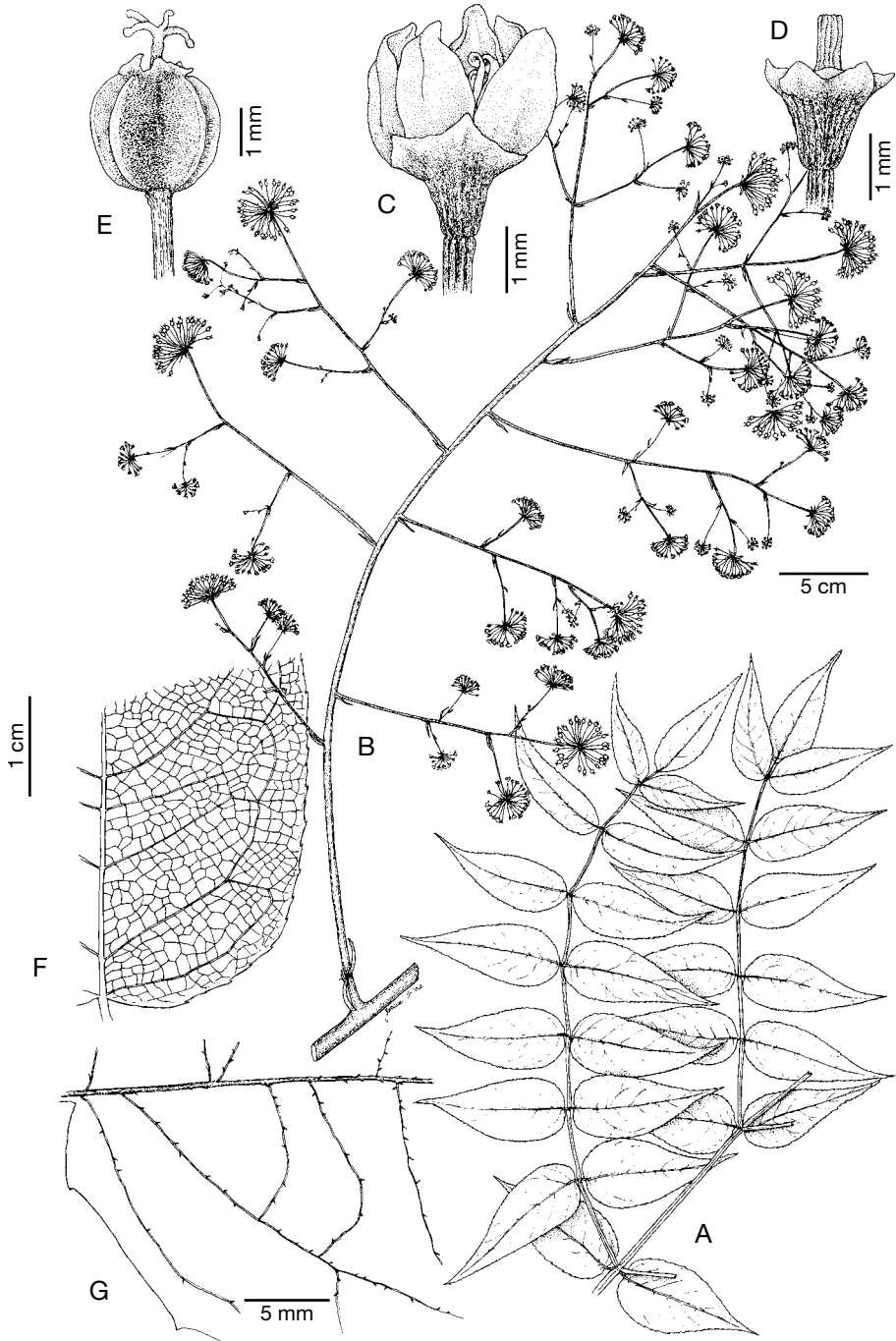


Fig. 1. — *Aralia hiepiana*: **A**, portion of a leaf; **B**, infructescence branch; **C**, flower; **D**, old flower after shedding of petals; **E**, young fruit; **F**, lower leaflet surface showing venation pattern; **G**, upper leaflet surface showing trichomes on veins (Lowry & Phan Kê Lôc 4925).

flowers per umbel, longer (8-15 vs. 5-13 mm) pedicels, longer (3-5 vs. 2-3.5 mm) bracteoles, and styles that are connate in the lower half (vs. completely free).

Aralia hiepiana also shares several features with three other Vietnamese species of *Aralia*: *A. armata* (Wall.) Seem., *A. chapaensis* N.S. Bui, and *A. finlaysoniana* (Wall. ex G. Don) Seem., all of which have similar leaflet morphology. The new species can be distinguished from *A. armata* by its glabrous leaves that are sparsely pilose along the veins above (vs. pilose throughout), inflorescence axes that are slightly pilose (vs. distinctly so), and persistent (vs. caducous) bracts and bracteoles. *Aralia hiepiana* differs from *A. chapaensis* in its non-glaucous lower leaflet surface, larger bracteoles (3-5 mm vs. 1.5-2.5 mm long), and partially fused (vs. distinct) styles. Our new species can be easily distinguished from *A. finlaysoniana* (previously referred to as *A. toranensis* Ha and *A. nguyen-taoi* Ha in Vietnam; cf. HA 1974, HO 2000, and WEN 2002) in having bipinnately (vs. tripinnately to quadripinnately) compound leaves, only a few scattered, more or less straight prickles on the petioles (vs. more numerous, strongly recurved prickles), leaflets that are only sparsely pilose on the veins above (vs. sparsely strigose throughout) and

glabrous below (vs. pubescent to pilose), persistent (vs. caducous) bracts, and umbels with 15-25 (vs. 20-50) flowers.

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REFERENCES

- HA T.D. 1974. — Florae Vietnamensis taxa nova e tribu Aralieae Benth. (Fam. Araliaceae). *Nov. Syst. Vyssh. Rast.* 11: 226-240 (In Russian).
 HO P.-H. 2000. — *Cây cỏ Việt Nam – an illustrated flora of Vietnam*, vol. 2. Nha Xuat Ban Tre, Ho Chi Minh City.
 WEN J. 1993. — Generic delimitation of *Aralia* (Araliaceae). *Brittonia* 45: 47-55.
 WEN J. 2002. — Systematics and biogeography of *Aralia* sect. *Dimorphanthus* (Miq.) Miq. (Araliaceae). *Fieldiana* (in press).

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