Aralia lihengiana J. Wen, L. Deng & X. Shi, a new species of Araliaceae from China

Jun WEN

Department of Botany, Field Museum of Natural History, 1400 S. Lake Shore Dr., Chicago, IL 60605, U.S.A. wen@fieldmuseum.org

Lilan DENG

Department of Forestry, Southwest Forestry College, Kunming, Yunnan, China.

Xiaochun SHI

Gaoligongshan National Nature Reserve Bureau, Baoshan, Yunnan, China.

ABSTRACT

KEY WORDS

Aralia, Aralia lihengiana, Aralia sect. Pentapanax, Araliaceae, China. Aralia lihengiana J. Wen, L. Deng & X. Shi is described from southwestern China. It is a member of Aralia sect. Pentapanax (Seem.) J. Wen and an apparent close relative of the Himalayan A. gigantea J. Wen. Both species have sparsely serrate leaflet margins and racemose inflorescence units, but the new taxon is unique in the genus in bearing 3-4 or rarely 5-locular ovaries whereas other species of Aralia mostly have 5-locular ovaries.

RÉSUMÉ

Aralia lihengiana J. Wen, L. Deng & X. Shi, nouvelle espèce d'Araliaceae de

Description d'Aralia lihengiana J. Wen, L. Deng & X. Shi du sud-ouest de la Chine. Cette espèce appartient à Aralia sect. Pentapanax (Seem.) J. Wen et semble être proche d'Aralia gigantea J. Wen d'Himalaya. Ces deux espèces ont des folioles à marge à peine serretée et des unités inflorescentielles racémeuses. Le nouveau taxon est unique dans le genre par l'ovaire à 3-4 ou rarement 5 loges, alors que les ovaires des autres espèces d'Aralia ont en général 5 loges.

MOTS CLÉS

Aralia, Aralia lihengiana, Aralia sect. Pentapanax, Araliaceae, Chine.

A recent expedition to Gaoligongshan and nearby regions, and further examination of specimens collected in Yunnan province of southwestern China, have led to the discovery of a new species belonging to Aralia L. sect. Pentapanax (Seem.) J. Wen, bringing the total number in the section to 19. The new taxon described here appears to be closely related to A. gigantea J. Wen from the eastern Himalayan region (Bhutan, Nepal, eastern India, and Tibet). Earlier collections were previously misidentified as *Pentapanax* racemosus Seem. (= Aralia gigantea; HOO & TSENG 1978; FENG & LI 1979; SHANG 1985), which shares several characters with our new species, including sparsely serrate leaflet margin and racemose inflorescence units. Our new taxon differs, however, by its 3-4 rarely 5-(vs. 5) locular ovaries, styles that are connate to the middle point (vs. distinct), bracteoles that are lanceolate (vs. triangular) and smaller (0.7-1.2 vs. 1-1.8 mm long at anthesis), and ovoid-globose (vs. globose) fruits. Most species of Aralia have ovaries with 5 (rarely ranging to 12) locules (WEN 1993). Our new species is thus unique in having the lowest number of locules in the genus.

Aralia lihengiana J. Wen, L. Deng & X. Shi, sp. nov.

Frutex epiphytica. Folia (3-)5-(7) foliolata, glabra; foliola chartacea, ovata, 9-21 × 5-13 cm, apice acuta vel acuminata, basi rotundata vel subcordata, raro cuneata, margine remote serrata. Inflorescentia terminalis, leviter pilosa; flores racemosi, pedicellis 1-1.5 longis; bracteola lanceolata, 0.7-1.2 mm longis; ovarium 3-4 raro 5 loculare. Fructus elliploidea, 3-4 × 2.2-3 mm, stylis connatis usque ad medium.

TYPUS. — Wen et al. 6515, China, Yunnan Prov., Tengcong Xian, Jaitou Xiang, Datang Village, near the source of Lunshuihe, at the border between the Gaoligongshan National Nature Preserve and private forests, riverside moist area in evergreen forest, epiphytic on a *Litsea* tree, 2300 m, 24 June 2002, fr. (holo-, F!; iso-, KUN!, PE!, SWFC!).

Epiphytic shrubs. Branches with conspicuous elliptic lenticels. Leaves exstipulate, $25-55 \times 16-32$ cm, with (3-)5(-7) leaflets, petioles glabrous, 9-17 cm long; leaflets chartaceous, ovate, $9-21 \times 10^{-10}$

5-13 cm, apex acute to acuminate, base rounded to subcordate to rarely acute, margins sparsely serrate, lateral veins 8-10 pairs, conspicuous on both sides, blades glabrous on both surfaces; petiolules glabrous, those of the two lower leaflets of the pinna with an inconspicuous articulation below the leaflet blade, those of the lateral leaflets 0.1-1.5 cm long, those of the terminal leaflets 3.5-7 cm long. Inflorescences terminal at the branch apex, pilose, primary branches 10-16, with a main axis 6-15 cm long; scales of the reproductive buds shiny brown, narrowly triangular, $1.5-2.2 \times 0.8-1$ cm; primary branches 18-35 cm long, with 15-30 secondary branches; secondary branches 4-7 cm long, racemosely arranged on primary branches, secondary bracts lanceolate, 2-3.5 mm long. Flowers in a raceme, each secondary inflorescence branch bearing 15-30 white flowers, pedicels pilose, 1-1.5 mm long at anthesis, bracteoles lanceolate, 0.7-1.2 mm long at anthesis. Sepals triangular, 0.25-0.3 mm long. Petals ovate, 1-1.3 mm long. Stamens 5, 1.5-1.8 mm long. Ovary 3-(or sometimes 4- to rarely 5-) locular, base of the style enlarged, forming a conical stylopodium-like structure; styles divided to the midpoint. Fruits ovoid-globose, 3- 4×2.2 -3 mm, with recurved persistent styles. — Fig. 1.

ETYMOLOGY. — The species epithet honors Professor Li HENG at Kunming Institute of Botany, The Chinese Academy of Sciences, who is a leading authority of the Gaoligongshan flora and who has been an inspiration to many young botanists.

PHENOLOGY. — Flowering in late May and June; fruiting in June.

DISTRIBUTION. — Western, southwestern to southern Yunnan, China.

ECOLOGY. — In evergreen to warm temperate forests; 1700-2650 m.

PARATYPES. — CHINA. Yunnan Prov.: Peng & Bai 990, Jingdong, Man Wan, Xingchun, 2080 m, 4 July 1993, fl. (KUN); Wu 9135, Jingdong, Xiao-huangchao-ba, 2500 m, 13 May 1963, fl. (KUN, 2 sheets); China-Soviet Union Exped. Team 1565, Jingping Xian, Yünping Xiang, Yanshijiao, 17 May 1956, bud (KUN, PE); Luchun Exped. Team 804, Luchun, at the border of Luchun and Yuanyang, 1700-1800 m, 13 May

218 ADANSONIA, sér. 3 • 2002 • 24 (2)

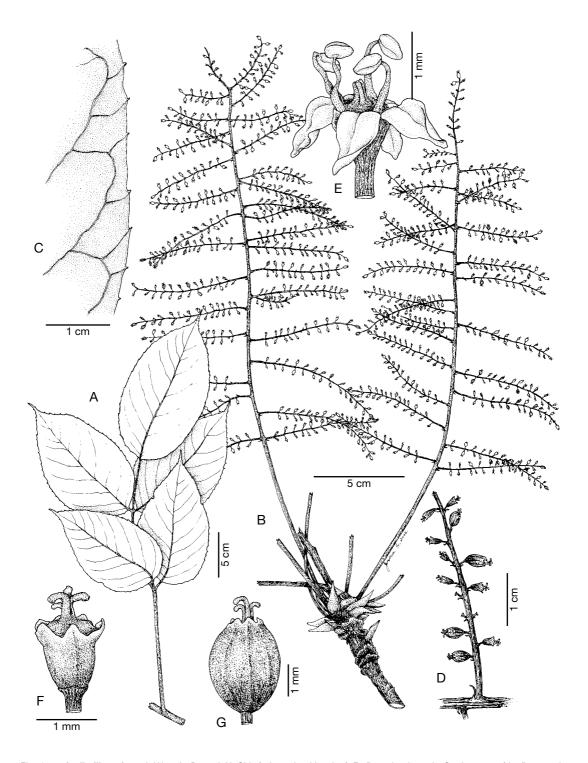


Fig. 1. — *Aralia lihengiana* J. Wen, L. Deng & X. Shi: **A**, branch with a leaf; **B**, flowering branch; **C**, close-up of leaflet margin; **D**, close-up of inflorescence branch; **E**, open flower; **F**, old flower after shedding of corolla; **G**, fruit with 3 persistent styles.

ADANSONIA, sér. 3 • 2002 • 24 (2)

1974, fl. (KUN, 2 sheets); Yü 16326, Shunning, Wenkuankai, 2100 m, in forest, 17 June 1938 (KUN, 2 sheets, PE, 2 sheets); Yü 16375, Shunning, Huaiyaopu, 2100 m, 19 June 1938, fl. (KUN, 3 sheets, PE, 2 sheets); Yü 16685, Shunning, Hila, 2650 m, in forest near ravine, 11 July 1938, fl. (KUN, 2 sheets, PE, 2 sheets); Wen et al. 6519, Tengcong Xian, Jaitou Xiang, Datang Village, Shijiapingzhi, 2000 m, in riverside evergreen forest, epiphytic on a Lithocarpus tree, 24 June 2002, fl. (F, KUN, SWFC); Northwest Yunnan Yangtze River Exped. Team 4221, Yangbi Xian, 2500 m, 2 June 1963, fl. (KUN, 2 sheets); 1984 Sino-Amer. Bot. Exped. 589, W side of Diancang Shan mountain range, vicinity of Dajiuping, broad-leaved evergreen fagaceous forest, 2500-2600 m, 25°50'N, 99°59'E, tree 10 m tall, fl. greenish white, in fl. clustered at branch apex, 30 June 1984 (BM, MO, 2 sheets); Yü 16894, Zhengkang (Chengkang), Hsiaoaifang, 2550 m, in forest, 22 July 1938, fl. (KUN, 2 sheets, PE, 2 sheets).

Acknowledgements

This study was supported by a grant from the National Science Foundation (DEB 0108536) to

J. WEN. The illustration was kindly provided by Zorica Dabich. Field work to Gaoligongshan was conducted as a collaborative effort among scientists at the Field Museum, the Gaoligongshan National Nature Preserve, and Southwest Forest College of China. We thank the curators of BM, F, KUN, MO, PE, and SWFC for permitting the examination of their specimens, and Dr. Porter P. LOWRY for advice.

REFERENCES

FENG K.M. & LI Y.R. 1979. — Araliaceae: 414-515, in Wu C.Y. (ed.), *Flora Yunnanica*. Vol. 2. Science Press, Beijing (in Chinese).

HOO G. & TSENG C.J. 1978. — Angiospermae, Dicotyledoneae, Araliaceae. Flora Reipublicae Popularis Sinicae. Vol. 54. Science Press, Beijing. (In Chinese)

SHANG C.B. 1985. — Araliaceae: 1720-1823, in CHENG W.C. (ed.), *Silva Sinica*. Vol. 2. Chinese Forestry Press, Beijing (in Chinese).

WEN J. 1993. — Generic delimitation of *Aralia* L. (Araliaceae). *Brittonia* 45: 47-55.

Manuscript received 6 July 2002; revised version accepted 17 September 2002.

220 ADANSONIA, sér. 3 • 2002 • 24 (2)