

Magnolia bidoupensis (Magnoliaceae), a new species from Vietnam

Quang Nam Vu^{1,2,3,*} & Nian-He Xia¹

¹⁾ Key Laboratory of Plant Resources Conservation and Sustainable Utilization, South China Botanical Garden, The Chinese Academy of Sciences, CN-510650 Guangzhou, PR China

²⁾ Graduate University, Chinese Academy of Sciences, Beijing 100, PR China

³⁾ Department of Biology, Vietnam Forestry University, Xuanmai, Hanoi, Vietnam (*corresponding author's e-mail: namvq1975@gmail.com)

Received 20 Oct. 2010, revised version received 1 Nov. 2010, accepted 2 Nov. 2010

Vu, Q. N. & Xia, N. H. 2011: *Magnolia bidoupensis* (Magnoliaceae), a new species from Vietnam. — *Ann. Bot. Fennici* 48: 525–527.

Magnolia bidoupensis Q.N. Vu *sp. nova* (Magnoliaceae) from Bidoup-Nuiba National Park, Lam Dong Province, S Vietnam is described and illustrated. It is morphologically close to *M. odoratissima* and *M. albosericca*, from which it differs chiefly by having a thickly leathery, broadly elliptic or ovate leaf blade with a broadly rounded base and an obtuse apex, smaller flowers, clavate stamens with an obtuse apex, and irregularly 3-winged ovules.

During the revision of the family Magnoliaceae in Vietnam, several herbarium sheets ‘VH 4182’ of a flowering *Magnolia* (HN, see paratypes below) were examined for identification. We waited for fruiting specimens to be collected by the first author in December 2009. After comparison with closely similar species, the specimens could not be placed in any of the previously described species and thus we here describe a new species.

Magnolia bidoupensis* Q.N. Vu, *sp. nova
(Fig. 1)

Species nova insignis foliorum laminis juvenibus orbiculatis, 4–5 cm diam., maturis crassis coriaceis, supra nitidis, late ellipticis vel ovatis, 14–18.5 cm longis, 8.5–12 cm latis, basi late rotundatis, apice obtusis, floribus minoribus,

2–2.7 cm longis, 1.7–2 cm diam., staminibus clavatis, appendice apice obtusa, antheris 4–6 mm longis, ovulis 2, irregulariter 3-alatis.

TYPE: S Vietnam. Lam Dong Province, Lac Duong District, Da Chay Community, 12°11′30.90″N, 108°43′04.81″E, 1650 m, 3 Dec. 2009 *Nam 31209.18* (holotype VNF; isotype IBSC). — PARATYPES: S Vietnam. Lam Dong Province., Lac Duong Dist., Da Chay Comm., Hon Giao Mount.: 12°11′33″N, 108°42′42″E, elevation 1910 m, 20 May 2009 *Jun Wen 11050*, collected with Nguyen Tien Hiep, Nguyen Quang Hieu & Le Van Son (pers. herb. Jun Wen); Bidoup-Nuiba National Park, 23 April 1997 *L. Averyanov, N. Q. Binh, N. T. Hiep* ‘‘VH 4182’’ (HN).

ETYMOLOGY: The specific epithet *bidoupensis* is derived from the type locality ‘Bidoup-Nuiba National Park’.

Evergreen trees, to 8 m tall and 18 cm in diam. Bark gray, slightly fissured. Young leaves and twigs densely white long sericeous, becoming glabrous when mature, old twigs becoming dotted with lenticels. Stipular scar nearly

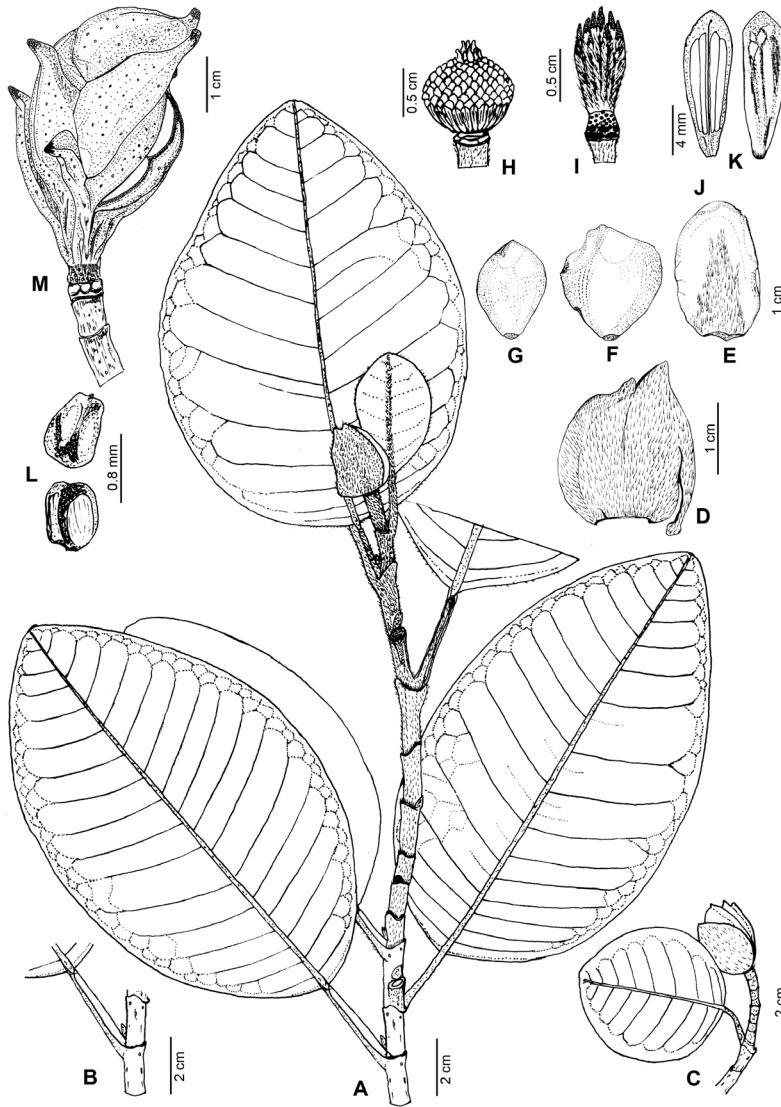


Fig. 1. *Magnolia bidouensis* (from the holotype and paratype Averyanov *et al.* VH 4182, drawn by Vu Quang Nam). — **A:** Habit. — **B:** Petiole with stipular scar. — **C:** Young leaf and flowering bud. — **D:** Spathe. — **E–G:** Tepals. — **H:** Androecium and gynoecium. — **I:** Gynoecium. — **K:** Stamens. — **L:** Ovules. — **M:** Fruit.

reaching apex of petiole. Petiole 1.2–4 cm long, appressed white long sericeous when young. Leaves spirally arranged, young leaf blade usually nearly orbicular, 4–5 cm in diam., mature leaf blade thickly leathery, shiny above, broadly elliptic or ovate, (6.5–11.5)–14–18.5 × (5–7)–8.5–12 cm, base broadly rounded to rarely broadly cuneate, apex obtuse to rarely emarginate, lower surface densely appressed white long hairy, later glabrescent, margins sometimes slightly undulate; midvein abaxially prominent, adaxially flattened, secondary veins 11–18 on each side of midvein, beneath more prominent, reticulate veins dense and prominent on both

surfaces when dry. Peduncle erect, ca. 1–2.5 × 0.5 cm, with one to several internodes, densely sericeous, spathaceous bract(s) one to several, ca. 2.8 cm high, densely sericeous outside; pedicel absent to very short. Flower terminal, solitary, ovoid, 2–2.7 × 1.7–2 cm, white. Tepals 9, in 3 whorls and different from each other, 3 tepals of outer whorl elliptic, ca. 2 × 1.4 cm, abaxially white felty near base, margin wavy, 2 inner whorls hairless, spathulate, tepals of mid whorl broadly short obovate, broadest at middle, apex rounded, ca. 1.8 × 1.7 cm, inner tepals obovate, with upper 1/3 broadest from obtuse apex, ca. 1.9 × 1.4 cm. Stamens many, subequal, introrsely

Table 1. Morphological differences among *Magnolia bidouensis*, *M. odoratissima* and *M. albosericca*.

Characters	<i>M. bidouensis</i>	<i>M. odoratissima</i>	<i>M. albosericca</i>
Leaf blade	thickly leathery, shiny above, broadly elliptic or ovate, 14–18.5 × 8.5–12 cm	ovate–elliptic, elliptic or oblong–elliptic, 8–14 × 4–7 cm	thin, narrowly elliptic to obovate–elliptic, 18–30 × 6–12 cm
Base of leaf blade	broadly rounded to rarely broadly cuneate	cuneate to broadly cuneate	cuneate to narrowly cuneate
Apex of leaf blade	obtuse to rarely emarginate	acuminate to short acute	acuminate
Tepals of outer whorl	elliptic, ca. 2 × 1.4 cm, abaxially white pannose near base, margin wavy	obovate to oblong, 5–6 × 2.5–3 cm	oblong, 4–4.6 cm, abaxially white sericeous near base
Tepals of mid whorl	broadly short obovate, apex rounded, ca. 1.8 × 1.7 cm	obovate, 5–6 × 2–3 cm	obovate, 3–4 cm, abaxially white sericeous near base
Tepals of inner whorl	obovate, ca. 1.9 × 1.4 cm	obovate, 4–4.5 × 2–2.5 cm	obovate, 3–4 cm
Stamens	clavate, appendage with apex obtuse, anther 4–6 mm long	cylindrical, appendage triangular, anther 2 cm long	cylindrical, appendage triangular, anther 6–7 mm long

dehiscent, clavate, 6–10 × 2 mm, scar of tepals and stamens 3.5 mm, connectives produced into ca. 1 mm long appendages, apex obtuse, filaments ca. 1 mm long. Gynoecium narrowly obovoid to ellipsoid, ca. 1 × 0.6 cm, densely white appressed pubescent or sericeous, styles short. Ovules 2, irregular with 3 winged-shape and 3 deep-set faces, 0.8 mm long. Fruit ellipsoid, 4–5 × 2–2.5 cm, carpels 11–17, dorsally dehiscent, densely white appressed pubescent. Seeds 2, ca. 1 × 0.8 cm. Flowering April–September, fruiting October–December.

DISTRIBUTION. S Vietnam, Lam Dong Prov., Lac Duong Dist., Da Chay Comm., Hon Giao Mount., nearby the Hon Giao station of the Bidoup-Nuiba National Park. Local name: Da hop Bidoup.

HABITATS. Growing in montane evergreen broad-leaved forests, associated with species such as *Calophyllum balansae*, *Gordonia* sp. and some Ericaceae, usually co-dominant in the first forest stratum, at 1650–1910 m alt.

Magnolia bidouensis is a remarkably distinct species in several characters. Its closest

matches are *M. odoratissima* (Law & Zhou 1986) and *M. albosericca* (Chun 1964). A morphological comparison among the three species is given in Table 1.

Acknowledgements

The first author is thankful to the Vietnamese Government (2967/QĐ-BGDĐT) and the National Natural Science Foundation of China (30270100) for providing research facilities and financial support. We thank the members of HN for their help in specimen examination and the rangers in the Giang Ly and Hon Giao stations, belonging to Bidoup-Nuiba National Park, for their help in the field trip. The authors are grateful to Prof. Yang Qin-er (IBSC) for checking the Latin diagnosis.

References

- Chun, W. Y. 1964: A new Hainanese *Magnolia*. — *Acta Phytotax. Sin.* 9: 8–9.
- Law, Y. W. & Zhou, R. Z. 1986: A new species of Magnoliaceae from Guangtung and Yunnan, China. — *Bull. Bot. Res., Harbin* 6: 139–142.