

4. HOUPŌĚA N. H. Xia & C. Y. Wu, **nom. nov.**

厚朴属 hou po shu

Replaced synonym: *Magnolia* sect. *Rytidospermum* Spach, Hist. Nat. Vég. Phan. 7: 474. 1839, not *Rhytidpermum* Link, Handbuch 1: 579. 1829, nor *Rhytidospermum* Schultz Bipontinus in Webb & Berthelot, Hist. Nat. Iles Canaries 3(2, 2): 277. 1844, nor *Rytidosperma* Steudel, Syn. Pl. Glum. 1: 425. 1854.

Trees or shrubs, deciduous. Bark usually gray, smooth. Twigs with annular stipular scar. Stipules membranous, adnate to petiole, leaving stipular scar on petiole. Leaves spirally arranged, often fascicled and pseudowhorled, folded in bud, erect when young; leaf blade membranous or thickly papery, margin entire or rarely shallowly 2-lobed at apex. Flowers terminal, solitary, bisexual, large, fragrant. Spathaceous bract 1. Tepals 9–12, in 3 or 4 whorls, usually white, subequal. Stamens caducous; filaments flat; connective exerted and forming a short mucro; anthers dehiscing introrsely. Gynoecium without a gynophore; carpels numerous, distinct; ovules usually 2(–4) per carpel; styles curved outward, adaxially papillate. Fruit usually cylindrical when mature; mature carpels distinct, leathery or subwoody, dehiscing along dorsal sutures, persistent on torus, apex long beaked.

Nine species: E North America and temperate regions of SE Asia; three species (one endemic, one introduced) in China.

- 1a. Inner and outer tepals patent at anthesis; basal mature carpels decurrent along fruit axis and tapered at base 1. *H. obovata*
1b. Inner tepals erect and outer ones reflexed at anthesis; basal mature carpels not decurrent along fruit axis but rotund at base.
2a. Vegetative buds glabrous, leaf abaxial surface gray villous; leaf blade cuneate at base; mature carpels with a 3–4 mm beak 2. *H. officinalis*
2b. Vegetative buds and abaxial surface of young leaves covered with reddish brown and curved indumentum; leaf blade broadly cuneate, obtuse, or cordate at base; mature carpels with a 5–8 mm beak 3. *H. rostrata*

1. HoupoĚa obovata (Thunberg) N. H. Xia & C. Y. Wu, **comb. nov.**

日本厚朴 ri ben hou po

Basionym: *Magnolia obovata* Thunberg, Trans. Linn. Soc. London 2: 336. 1794; *Liriodendron liliiflorum* Steudel; *M. glauca* Thunberg (1784), not (Linnaeus) Linnaeus (1759); *M. honogi* P. Parmentier; *M. honokii* Siebold; *M. hypoleuca* Siebold & Zuccarini; *M. hypoleuca* var. *concolor* Siebold & Zuccarini; *Yulania japonica* Spach var. *obovata* (Thunberg) P. Parmentier.

Trees, to 30 m tall. Twigs green at first then becoming purple, glabrous; vegetative buds glabrous. Stipular scar ca. 1/2 as long or longer than petiole. Leaves clustered on twigs; petiole 2.5–4.5(–7) cm, at first white villous; leaf blade obovate, 20–38(–45) × 12–18(–20) cm, abaxially glaucous, adaxially green and white curved villous, secondary veins 20–24 on each side of midvein, base cuneate to broadly cuneate, apex shortly acute. Flowers cupular, 14–20 cm in diam., erect, very fragrant. Tepals 9–12, milky white; outer 3 tepals yellowish green but outside flushed red, shorter; inner 6 or 9 tepals obovate to elliptic-obovate, 8.5–12 × 1.5–4.5 cm. Stamens 1.5–2 cm; filaments purplish red; connective exerted and forming a mucro. Gynoecium ca. 3 cm. Fruit red when mature, terete, 12–20 × ca. 6 cm, pendulous; mature carpels long beaked, basal ones decurrent along receptacles and becoming cuneate at base; testa bright red; endotesta black. Fl. Jun–Jul, fr. Sep–Oct.

Cultivated in NE China as well as in Guangdong [native to Japan].

This species is grown as an ornamental. It is used medicinally and for timber.

2. HoupoĚa officinalis (Rehder & E. H. Wilson) N. H. Xia & C. Y. Wu, **comb. nov.**

厚朴 hou po

Basionym: *Magnolia officinalis* Rehder & E. H. Wilson in Sargent, Pl. Wilson. 1: 391. 1913; *M. cathayana* D. L. Fu & T. B. Chao; *M. officinalis* subsp. *biloba* (Rehder & E. H. Wilson) Y. W. Law; *M. officinalis* var. *biloba* Rehder & E. H. Wilson; *M. officinalis* var. *glabra* D. L. Fu et al.; *M. officinalis* var. *pubescens* C. Y. Deng.

Trees, to 20 m tall. Bark brown, thick, not fissured. Twigs pale yellow to grayish yellow, thick and strong, sericeous at first; terminal buds ovoid-conical, large, glabrous. Stipular scar ca. 2/3 as long as petiole. Petiole thick and strong, 2.5–4 cm. Leaves 7–9 clustered on twig apex; leaf blade oblong-obovate, 22–45 × 10–24 cm, nearly leathery, abaxially grayish green, glaucous, and gray villous, adaxially green and glabrous, base cuneate, margin entire or slightly wavy, apex shortly acute, obtuse, emarginate, or sometimes 2-lobed. Peduncle short and thick, villous; bract scar ca. 1 cm basal to tepals. Flowers 10–15 cm in diam., fragrant. Tepals 9–12(–17), white, thickly fleshy; outer 3 tepals pale green, oblong-obovate, 8–10 × 4–5 cm, usually reflexed at anthesis; tepals of inner 2 whorls obovate-spoon-shaped, 8–8.5 × 3–4.5 cm, base clawed; inner tepals 7–8.5 cm, erect at anthesis. Stamens numerous, 2–3 cm; filaments red, 4–12 mm; anthers 1.2–1.5 cm, dehiscing introrsely. Gynoecium ellipsoid-ovoid, 2.5–3 cm. Fruit ellipsoid-ovoid, 9–15 cm; mature carpels with a 3–4 mm beak. Seeds triangular-obovoid, ca. 1 cm. Fl. May–Jun, fr. Aug–Oct. $2n = 38^*$.

• Forests; 300–1500 m. Anhui, Fujian, SE Gansu, N Guangdong, Guangxi, NE Guizhou, SE Henan, W Hubei, NW Hunan, Jiangxi, S Shaanxi, E and S Sichuan, Zhejiang.

This species is grown as an ornamental. It is used medicinally and for timber.

3. HoupoĚa rostrata (W. W. Smith) N. H. Xia & C. Y. Wu,

comb. nov.

长喙厚朴 chang hui hou po

Basionym: *Magnolia rostrata* W. W. Smith, Notes Roy. Bot. Gard. Edinburgh 12: 213. 1920.

Trees, to 25 m tall. Bark pale gray. Vegetative buds and young twigs reddish brown curved villous. Twigs green at first then turning brown, strong and thick; axillary vegetative buds grayish green, terete, glabrous. Stipular scar significantly prominent, nearly 1/3–2/3 as long as petiole. Leaves 7–9 clustered on twig apex; petiole strong and thick, 4–7 cm, at first with trichomes; leaf blade obovate to broadly obovate, 34–50 × 21–23 cm, thickly papery, abaxially glaucous and reddish brown curved villous, adaxially green and glossy, secondary veins 28–30 on each side of midvein, base broadly cuneate to cordate, apex broadly rotund, shortly acute, or sometimes 2-cleft. Flowers appearing after leaves, 8–9 cm in diam., fragrant. Tepals 9–12; tepals of outer whorl outside green flushed slightly pink and inside pink, oblong-elliptic, 8–13 × ca. 5.6 cm, reflexed; tepals of inner 2 whorls purely white, obovate-spoon-shaped, 12–14 cm, erect, base clawed. Stamens purplish red; filaments ca. 5 mm; connective exserted and forming a triangular mucro; anthers ca. 1 cm. Gynoecium cylindrical. Fruit terete, 11–20 × ca. 4 cm, erect, base broadly rounded, apex gradually narrowing; mature carpels with a 5–8 mm curved beak. Seeds ca. 7 × 5 mm, flat. Fl. May–Jul, fr. Sep–Oct.

Broad-leaved forests; 2100–3000 m. SE Xizang (Mêdog), W Yunnan [NE Myanmar].

This species is grown as an ornamental and is used medicinally.

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