

1. ENKIANTHUS Loureiro, Fl. Cochinch. 1: 276. 1790.

吊钟花属 diao zhong hua shu

Fang Ruizheng (方瑞征 Fang Rhui-cheng); Peter F. Stevens

Shrubs or small trees, deciduous, rarely evergreen. Leaves clustered at ends of twigs, petiolate; leaf blade serrate or subentire. Inflorescence terminal, in umbels or corymbose racemes, flowers rarely solitary or in pairs, 5-merous. Corolla broadly campanulate to urceolate; lobes short. Stamens much shorter than corolla; filaments flattened, distinctly dilated towards base; anthers oblong, thecae each dehiscent by an elongate slit, awned at apex; pollen grains single. Ovary superior, with few ovules per locule; stigma truncate. Capsule loculicidal, ovoid. Seeds several or one; testa lamellate-winged.

Twelve species: from the E Himalayas through China to Japan, extending south to Indochina; seven species (four endemic) in China.

- 1a. Flowers solitary, rarely in pairs; leaves abaxially puberulous, adaxially glabrous 3. *E. pauciflorus*
- 1b. Flowers in corymbose racemes or umbels; leaves glabrous, or with other than unicellular hairs.
 - 2a. Pedicels in fruit pendulous; flowers in corymbose racemes.
 - 3a. Leaves glabrous on both surfaces; pedicels glabrous or pubescent 1. *E. chinensis*
 - 3b. Leaves abaxially densely or sparsely hispidulous on veins, adaxially sparsely shortly setulose and puberulous on veins or glabrous; pedicels densely pubescent, sometimes also with glandular hairs 2. *E. deflexus*
 - 2b. Pedicels in fruit erect; flowers in umbels.
 - 4a. Corolla urceolate; leaf margin ciliate, both surfaces glabrous 7. *E. perulatus*
 - 4b. Corolla campanulate; leaf margin denticulate or entire, both surfaces glabrous or with hairs.
 - 5a. Leaf margin denticulate from base to apex, leaf blade sometimes hispidulous 4. *E. serrulatus*
 - 5b. Leaf margin entire or only sinuate-serrulate towards apex; leaf blade never hispidulous.
 - 6a. Corolla broadly campanulate; leaf with fine veins distinctly raised on both surfaces; both surfaces glabrous 5. *E. quinqueflorus*
 - 6b. Corolla tubular-campanulate; leaf with fine veins inconspicuous on both surfaces; abaxially densely floccose towards base on midvein 6. *E. serotinus*

1. *Enkianthus chinensis* Franchet, J. Bot. (Morot) 9: 371. 1895.

灯笼吊钟花 deng long diao zhong hua

Bodinierella cavaleriei H. Léveillé; *Enkianthus brachyphyllus* Franchet; *E. cerasiflorus* (H. Léveillé) H. Léveillé; *E. leveilleanus* Craib; *E. rosthornii* Diels; *E. sinohimalaicus* Craib; *Zenobia cerasiflora* H. Léveillé.

Shrubs or small trees, deciduous, 2.5–8 m tall. Twigs glabrous. Leaf petiole 0.5–1.5 cm, glabrous; leaf blade elliptic or oblong-elliptic, ca. 1.5 × 1.5–2.5 cm, papery to thinly papery, glabrous, midvein raised abaxially, impressed adaxially; secondary and fine veins inconspicuous, base cuneate or broadly cuneate, margin serrulate, apex acute. Inflorescences corymbose-racemose or umbellate; rachis 3–7 cm, slender, 10–20-flowered, glabrous or pubescent. Pedicel 1.5–3 cm, slender, glabrous or pubescent. Calyx glabrous or slightly ciliolate; lobes triangular, 2–3 mm. Corolla yellowish orange-striped and red, broadly campanulate, 7–10 mm; lobes slightly recurved, usually dark red. Filaments puberulous. Ovary glabrous; style glabrous or pubescent. Capsule pendulous, 4–7 mm; stalk distinctly recurved, 1–3.5 cm. Fl. May–Jul, fr. Jul–Sep.

- Mixed forests, disturbed forests, thickets, sunny mountain slopes, mountain ridges; 900–1200(–3100) m. Anhui, Fujian, Guangdong, Guizhou, Guangxi, Hubei, Hunan, Jiangxi, Sichuan, Yunnan, Zhejiang.

2. *Enkianthus deflexus* (Griffith) C. K. Schneider, Ill. Handb. Laubholz. 2: 521. 1911.

毛叶吊钟花 mao ye diao zhong hua

Shrubs or trees, deciduous, 1.5–5 m tall. Twigs subglabrous. Leaf petiole 0.5–1.5 cm, pubescent, hispidulous, or glabrous; leaf blade elliptic, obovate-elliptic, or oblong-elliptic, 3–7 × 1.5–3 cm, thinly papery, abaxially hispidulous on veins or glabrescent, adaxially sparsely shortly setulose and puberulous on veins or glabrous, midvein raised abaxially, adaxially slightly impressed, secondary and fine veins slender and inconspicuous, base cuneate to broadly cuneate, margin serrulate, apex acute. Inflorescence corymbose-racemose; rachis to 5–7 cm, many flowered, densely pubescent or scattered glandular pubescent. Pedicel flattened, terete, 1.5–3 cm, slender, densely pubescent, with glandular hairs or not. Calyx ciliolate; lobes ovate-triangular, 2–3 mm. Corolla white, brick red, or pale yellow, broadly campanulate, 0.8–1.5 cm; lobes erect, broadly triangular. Filaments puberulous. Ovary shortly setulose, pubescent, or glabrous; style pubescent to glabrous. Capsule pendulous, 5–7 mm; stalk erect or distinctly recurved, 2.5–3.5 cm. Fl. Apr–Jul, fr. Jun–Jul.

Pinus or *Quercus* forests, mixed forests on mountain slopes, disturbed forests, thickets; 1000–3300(–3900) m. S Gansu, Guizhou, Guangdong, Hubei, Sichuan, Xizang, Yunnan [Bhutan, NE India (Darjiling), Myanmar, Nepal, Sikkim].

- 1a. Leaf blade with conspicuous hairs on both surfaces, abaxially hispidulous on veins 2a. var. *deflexus*
- 1b. Leaf blade glabrescent on both surfaces or abaxially very sparsely hispidulous on midvein 2b. var. *glabrescens*

2a. *Enkianthus deflexus* var. *deflexus*

毛叶吊钟花(原变种) mao ye diao zhong hua (yuan bian zhong)

Rhodora deflexa Griffith, Itin. Pl. Khasyah Mts. [Posthum. Papers 2]: 148. 1848; *Enkianthus deflexus* var. *variegatus* (Forrest) Forrest; *E. himalaicus* J. D. Hooker & Thomson; *E. sulcatus* Craib; *E. variegatus* Forrest.

Leaf petiole pubescent or hispidulous; leaf blade with conspicuous hairs on both surfaces, abaxially hispidulous on veins. Inflorescence rachis and pedicels pubescent.

Pinus or *Quercus* forests, disturbed forests, thickets; 1000–3300(–3900) m. Guizhou, Guangdong, Hubei, Sichuan, Xizang, Yunnan [Bhutan, NE India (Darjiling), Myanmar, Nepal, Sikkim].

2b. *Enkianthus deflexus* var. *glabrescens* R. C. Fang, Novon 9: 162. 1999.

腺梗吊钟花 xian geng diao zhong hua

Leaf petiole glabrous; leaf blade glabrescent on both surfaces or abaxially sparsely hispidulous on midvein. Inflorescence rachis and pedicels pubescent, also with glandular hairs.

• Mixed forests on mountain slopes; ca. 1600 m. S Gansu (Wenxian).

3. *Enkianthus pauciflorus* E. H. Wilson, Gard. Chron., ser. 3, 41: 363. 1907.

少花吊钟花 shao hua diao zhong hua

Shrubs 1–3 m tall. Twigs puberulous. Leaf petiole 2–6 mm, puberulous, winged in upper part; leaf blade elliptic or obovate, 1.5–3 × 1–1.2 cm, thinly papery, abaxially puberulous, adaxially glabrous, midvein raised abaxially, inconspicuous adaxially, secondary and fine veins slightly distinct abaxially, inconspicuous adaxially, base cuneate, margin serrulate, apex acuminate, mucronate. Flowers solitary, rarely in pairs, axillary. Pedicel flattened, ca. 1 cm, puberulous. Calyx glabrous; lobes ovate, 1–1.5 mm, apex acute. Corolla yellow with red stripes, or red, urceolate, 8–10 mm; lobes usually reflexed, short. Filaments pubescent. Ovary glabrous or puberulous; style glabrous. Capsule 3–5 mm; stalk distinctly recurved, ca. 1 cm, slender. Fl. May, fr. Jun–Oct.

• Alpine thickets, humus-clad cliffs on mountains; 3000–3700 m. Sichuan, Yunnan.

4. *Enkianthus serrulatus* (E. H. Wilson) C. K. Schneider, Ill. Handb. Laubholz. 2: 519. 1911.

齿缘吊钟花 chi yuan diao zhong hua

Enkianthus quinqueflorus Loureiro var. *serrulatus* E. H. Wilson, Gard. Chron., ser. 3, 41: 344. 1907; *E. calophyllus* T. Z. Hsu; *E. hirtinervus* M. Y. Fang; *E. serrulatus* var. *hirtinervus* (M. Y. Fang) T. Z. Hsu; *E. serrulatus* var. *sichuanensis* (T. Z. Hsu) R. C. Fang; *E. sichuanensis* T. Z. Hsu.

Shrubs or small trees, deciduous, 3–6 m tall. Twigs glabrous. Leaf petiole 6–10 mm, glabrous or sparsely hispidulous; leaf blade elliptic, oblong-elliptic, or obovate-elliptic, 5–8 × 1.6–2.6 cm, papery, both surfaces hispidulous or glabrous, or abaxially densely floccose toward base and adaxially glabrous,

midvein strongly raised abaxially, flat to slightly raised adaxially, secondary and fine veins slightly raised abaxially, inconspicuous adaxially, base broadly cuneate to narrowly obtuse, margin denticulate, apex shortly acuminate. Inflorescence umbellate, 2–6-flowered. Pedicel 1–2 cm, glabrous or pubescent. Calyx lobes triangular, ca. 2.2 mm, glabrous or ciliate. Corolla white, campanulate, ca. 1 cm; lobes recurved. Filaments pubescent. Ovary glabrous or pubescent; style glabrous. Capsule 5-angled, 7–10 mm; stalk erect, 2–3 cm. Fl. Apr, fr. May–Oct.

• Forest margins, mountain slopes, roadsides; 800–1800 m. Fujian, Guangdong, Guangxi, Guizhou, Hainan, Hubei, Hunan, Jiangxi, Sichuan, Yunnan, Zhejiang.

5. *Enkianthus quinqueflorus* Loureiro, Fl. Cochinch. 1: 277. 1790.

吊钟花 diao zhong hua

Enkianthus cavaleriei H. Léveillé; *E. dunnii* H. Léveillé; *E. quinqueflorus* var. *ciliatoserrulatus* P. C. Huang & K. M. Li; *E. uniflorus* Benthams; *E. xantoxanthus* H. Léveillé.

Shrubs or small trees, deciduous, 1–3(–10) m tall. Twigs glabrous. Leaf petiole 0.5–1.5 cm, glabrous; leaf blade elliptic, elliptic-lanceolate, or obovate-lanceolate, rarely lanceolate, 5–15 × 1.6–5 cm, leathery, glabrous, midvein abaxially raised, adaxially ± flat, secondary and fine veins distinctly raised on both surfaces, base cuneate, margin entire, sometimes sparsely sinuate-serrulate towards apex, apex acuminate or shortly abruptly acuminate. Inflorescence umbellate, 3–8-flowered. Pedicel 1–2 cm, glabrous. Calyx glabrous; lobes ovate-lanceolate or triangular-lanceolate, 2–3 mm. Corolla pink, red, or white, broadly campanulate, 0.8–1.2 cm; lobes recurved, triangular-ovate. Stamens ca. 4 mm; filaments pubescent. Ovary glabrous or densely pubescent. Capsule 5-angled, 7–12 mm; stalk erect, 2–3.5 mm. Fl. Jan–Jun, fr. Mar–Sep.

Mixed forests, hillsides, dry places; 600–1500(–2400) m. Fujian, Guangdong, Guangxi, Guizhou, Hainan, Hubei, Hunan, Jiangxi, Sichuan, Yunnan [Vietnam].

6. *Enkianthus serotinus* Chun & W. P. Fang, *Acta Phytotax. Sin.* 6: 159. 1957.

晚花吊钟花 *wan hua diao zhong hua*

Enkianthus tubulatus P. C. Tam.

Shrubs deciduous, 1.5–4 m tall. Twigs pilose or subglabrous. Leaf petiole 1–2 cm, glabrous; leaf blade elliptic, rhombic-elliptic, or lanceolate, 5–9 × 1.7–4 cm, thinly leathery, glabrous except abaxially densely floccose towards base on midvein, midvein distinct on both surfaces, secondary and fine veins inconspicuous on both surfaces, base cuneate, margin entire or sinuate-serrulate towards apex, apex acuminate or abruptly acuminate. Inflorescence umbellate, 2–7-flowered. Pedicel recurved, 1–1.5 cm, pilose. Calyx glabrous; lobes lanceolate, 2.5–3 mm. Corolla white, tubular-campanulate, gibbous at base, 8–9 mm; lobes recurved, broadly ovate, ciliate. Filaments pilose. Ovary glabrous. Capsule 8–11 mm tall; stalk erect, 2–3.5 cm. Fl. Apr–Jun, fr. Jul–Sep.

• Forests, thickets on slopes; 800–1500 m. Guangdong, Guangxi, Guizhou, Sichuan, Yunnan.

7. *Enkianthus perulatus* C. K. Schneider, *Ill. Handb. Laubholz.* 2: 520. 1911.

台湾吊钟花 *tai wan diao zhong hua*

Enkianthus perulatus var. *taiwanianus* (S. S. Ying) Y. C. Liu; *E. taiwanianus* S. S. Ying.

Shrubs deciduous, to 4 m tall. Twigs glabrous. Leaf petiole 1–2 cm, glabrous; leaf blade oblong, obovate-oblong, or oblong-lanceolate, 4–6 × ca. 1.5 cm, papery, glabrous except ciliate at margin, hairs 1–1.5 mm, midvein raised abaxially, impressed adaxially, base attenuate-cuneate or cuneate, margin and midvein ciliate, apex acuminate, mucronate. Inflorescence umbellate, several flowered. Pedicel 0.8–1.2 cm. Calyx lobes triangular, 2–3 mm. Corolla white, urceolate, 8–9 mm; lobes green, ovate-triangular, 1–1.2 mm. Stamens ca. 2/3 as long as corolla; filaments villous at base. Ovary glabrous. Capsule unknown.

Fagus forest margins; 1100–1600 m. N Taiwan (Taoyuan) [Japan].

This is a rare species.

