

7. XANTOLIS Rafinesque, Sylva Tellur. 36. 1838.

刺榄属 ci lan shu

Trees or shrubs, usually spiny. Leaves alternate, sometimes closely clustered at end of branchlets; not stipulate. Flowers axillary, solitary or fascicled, 5-merous; bracts small. Calyx short tubular; sepals usually lanceolate, persistent. Corolla lobes longer than tube, hairy inside. Stamens usually inserted at base of corolla lobes; filaments usually with a cluster of rust colored villous hairs on each side, rarely on 1 side or at base; anthers sagittate, with long connective; staminodes petal-like, margin fimbriate, rarely dentate or entire, apex usually long awned. Ovary (4 or)5-locular, densely hirsute. Style longer than corolla. Fruit drupaceous, 1- or 2(or 3)-seeded. Seeds compressed, ellipsoid to subglobose; seed coat crusty, scar ovate to linear, ca. 2/3 as long to as long as seed or small and rounded.

About 14 species: Cambodia, India, Laos, Myanmar, Philippines, Thailand, Vietnam; four species in China.

- 1a. Seeds ± globose, 7–8 mm in diam.; leaves 2–4 cm, lateral veins numerous 3. *X. longispinosa*
- 1b. Seeds oblong to ellipsoid, 18–30 mm long; leaves 5–15 cm, lateral veins few.
 - 2a. Corolla pale yellow, lobes fimbriate at base; sepals 3–4 × 2.5–4 mm, with yellowish brown hairs on inside; seeds ca. 18 mm 4. *X. shweliensis*
 - 2b. Corolla white, lobes entire; sepals 4–6 × 1.5–3 mm, with gray or white hairs on inside; seeds 20–30 mm.
 - 3a. Leaf blade lanceolate to oblanceolate, lateral veins 13–17 pairs; corolla lobes lanceolate; ovary with dense reddish-brown hairs 1. *X. stenosepala*
 - 3b. Leaf blade ovate to obovate, lateral veins 9–13 pairs; corolla lobes rounded; ovary with silky white hairs 2. *X. boniana*

1. *Xantolis stenosepala* (Hu) P. Royen, Blumea 8: 216. 1957.

滇刺榄 dian ci lan

Trees 6–15(–20) m tall. Bark grayish brown. Branchlets gray, pale yellowish brown tomentose or glabrous. Petiole 0.8–1.8 cm; leaf blade lanceolate, oblanceolate, or oblong-lanceolate, (5–)7–15 × 2.5–6 cm, base broadly cuneate, apex acuminate; lateral veins 15–17 pairs. Flowers solitary or in several-flowered clusters. Pedicel 6–10 mm, gray sericeous. Sepals 5, lanceolate, ovate-lanceolate, or ovate, 4–6 × 1.5–3 mm, outside gray sericeous, inside rust colored sericeous. Corolla white, tube short; lobes 5, lanceolate, ovate-lanceolate, or oblong, 5–6.5 × 2–2.5 mm. Stamens 5, 3–5 mm, with a cluster of villous hairs on each side at base; staminodes 5, lanceolate, ca. 4 mm, apex acuminate and awned, margin densely pubescent. Ovary ovoid-globose, 1–2 mm, base villous, glabrous toward apex. Style 4–2 mm. Fruit brown, oblong-ovate, 3–4 × 1.7–2.2(–3) cm, rust colored sericeous to pubescent or subglabrous, with persistent calyx and style, 1(–3)-seeded. Seeds ellipsoid, compressed, 2–2.5 × ca. 1.2 cm, both ends rounded; scar narrowly oblong.

* 1100–1800 m. Yunnan (Xishuangbanna Zhou).

- 1a. Sepals lanceolate to ovate-lanceolate; fruit rust colored, sericeous to pubescent 1a. var. *stenosepala*
- 1b. Sepals ovate; fruit subglabrous 1b. var. *brevistylis*

1a. *Xantolis stenosepala* var. *stenosepala*

滇刺榄(原变种) dian ci lan (yuan bian zhong)

Adinandra stenosepala Hu, Bull. Fan. Mem. Inst. Biol. 8: 146. 1938; *Planchonella stenosepala* (Hu) Hu.

Sepals lanceolate to ovate-lanceolate, 4–6 × 1.5–3 mm. Corolla lobes lanceolate, ca. 6.5 × 2 mm. Style 1–1.2 cm. Fruit rust colored, sericeous to pubescent. Fl. and fr. throughout the year.

* Forests or around villages; 1100–1800 m. Yunnan (Xishuangbanna Zhou).

The fruit are edible.

1b. *Xantolis stenosepala* var. *brevistylis* C. Y. Wu, Fl. Yunnan. 1: 309. 1977.

短柱滇刺榄 duan zhu dian ci lan

Sepals ovate, 3–4 × 2–3 mm. Corolla lobes oblong, ca. 5 × 2.5 mm. Style 4–7 mm, base glabrous. Fruit subglabrous. Fl. Apr.

* Dense forest in valleys; ca. 1100 m. Yunnan (Xishuangbanna Zhou).

2. *Xantolis boniana* (Dubard) P. Royen var. *rostrata* (Merrill) P. Royen, Blumea 8: 213. 1957.

啄果刺榄 zhuo guo ci lan

Sideroxylon rostrata Merrill, Philipp. J. Sci. 21: 351. 1922; *Planchonella rostrata* (Merrill) H. J. Lam.

Trees 10–20 m tall. Branchlets terete to compressed apically, rust colored sericeous when young, glabrescent. Petiole 0.8–1.5 cm, rust colored sericeous, glabrescent; leaf blade elliptic, ovate, or obovate, 6–15 × 3–6 cm, almost leathery, both surfaces yellowish rust colored lanate when young, glabrescent and shiny or rust colored tomentose along veins when mature, base cuneate, apex obtuse to acuminate; lateral veins 9–13 pairs. Flowers white. Pedicel 6–10 mm, rust colored tomentose, glabrescent. Sepals ovate-lanceolate, 4–5.5 × 2–3 mm, both surfaces white appressed tomentose, margin membranous. Corolla glabrous. Stamines broadly triangular. Ovary ovoid, 2–3 mm, white sericeous. Style terete, 0.9–1.1 cm. Fruit black, oliviform, 2–4 × 1.4–2.2 cm, base with persistent calyx, apex rostrate, pale yellow pubescent, 1- or 2-seeded; pericarp woody. Seeds oblong to

ellipsoid, 2–3 × 0.8–1.5 cm, shiny, yellowish brown; scar oblong, as long as seed. Fl. Jan–Feb.

* Forests in ravines; 2000–2400 m. Hainan.

No flowering specimens have been seen by the authors. The description of flowers is based on P. Royen (Blumea 8: 213. 1957).

Xantolis boniana var. *boniana* occurs in Laos and Vietnam.

3. *Xantolis longispinosa* (Merrill) H. S. Lo, Fl. Hainan. 3: 157. 1974.

琼刺榄 qiong ci lan

Sideroxylon longispinosum Merrill, Lingnan Sci. J. 13: 66. 1934; *S. embeliifolium* Merrill; *Xantolis embeliifolia* (Merrill) P. Royen.

Shrubs or trees 8–9(–13) m tall. Bark grayish yellow to grayish black. Branchlets glabrous, sometimes spiny; spines 1.5–3.5 cm, erect, hard, cuspidate. Petiole 1–3 mm; leaf blade usually obovate, 2–4(–8) × 1–2.3(–3) cm, base cuneate, apex rounded to obtuse; lateral veins ca. 10 pairs. Flowers solitary or in several-flowered clusters. Pedicel 3–5(–8) mm, rust colored pubescent. Sepals 5, ovate, 5–6 mm, both surfaces rust colored pubescent. Corolla white; lobes 5, outside pubescent on middle part but glabrescent, inside sparsely villous. Stamens 5; filaments thick with a cluster of rust colored villous hairs on each side at base; staminodes 5, lanceolate to ovate, margin yellowish brown pubescent. Ovary subglobose, ca. 1.5 mm, densely rust colored pubescent. Style ca. 3 mm, ca. 1.2 cm in fruit. Fruit green becoming pale brown, subglobose to subellipsoid, ca. 1.2 cm, glabrous or appressed rust colored tomentose, with enlarged calyx; stalk 8–10 mm, glabrous. Seeds subglobose, slightly compressed, ca. 8 mm in diam., glossy, brown; scar elliptic. Fl. Oct–Feb, fr. Jun–Oct.

* Forest at low to middle altitudes. Hainan.

4. *Xantolis shweliensis* (W. W. Smith) P. Royen, Blumea 8: 210. 1957.

瑞丽刺榄 rui li ci lan

Sideroxylon shweliensis W. W. Smith, Notes Roy. Bot. Gard. Edinburgh 12: 223. 1920.

Shrubs 1–2 m tall. Branchlets gray, striate, white tomentose or glabrous. Petiole 5–8 mm, white sericeous when young but soon glabrescent; leaf blade lanceolate to elliptic, 5–10 × 1.3–2.5 cm, papery, abaxially glabrous or scattered villous, adaxially shiny and glabrous or sparsely villous along midrib, base narrowly cuneate, apex obtuse to acuminate; lateral veins 9–12 pairs. Flowers solitary or in several-flowered clusters, pendent. Pedicel 3–4 mm, yellowish brown tomentose. Sepals 5, imbricate, ovate to triangular, 3–4 × 2.5–4 mm, outside villous toward apex, inside yellowish brown tomentose. Corolla pale yellow, 7.5–9 mm; lobes 5, ovate-lanceolate, 5–6 × 2–2.5 mm, margin fimbriate at base. Stamens 5 with a cluster of villous hairs on each side at base; staminodes lanceolate, 3–4 × 1–2 mm, apex acute. Ovary

conical, 5-locular, grayish yellow pubescent. Fruit ovoid, slightly beaked, ca. 3 cm. Seeds compressed-ellipsoid, ca. 1.8 × 1.2 cm, glossy, brown, scar elliptic, ca. 14 × 6 mm.

* Mixed forest; 2400–3000 m. Yunnan.

No specimen has been seen by the authors. The description is based on Royen (Blumea 8: 210. 1957) and information given by reviewers.

