

1. PISONIA Linnaeus, Sp. Pl. 2: 1026. 1753.

腺果藤属 xian guo teng shu

Calpidia Thouars; *Ceodes* J. R. Forster & G. Forster.

Shrubs, trees, or vines. Stems sometimes armed. Leaves opposite or alternate, petiolate, margin entire. Inflorescences axillary (or terminal), many-flowered cymes or panicles; bracts absent or inconspicuous, caducous. Flowers unisexual (plant dioecious), bisexual, or polygamous; bracteoles 2-4. Male perianth limb campanulate or funnelliform. Stamens 6-10. Female perianth ovate-tubular or cylindrical, 5-10-lobed. Ovary sessile, oblique. Stigma capitate or lobed. Fruit oblong or clavate, ribbed, with sticky glands. Seed oblong, with a deep longitudinal furrow; embryo straight, cotyledons recurved, enclosing the endosperm.

Between 35 and 40(-75) species: tropical and subtropical regions, most diverse in SE Asia and tropical America; three species in China.

Some authors place freestanding plants that have bisexual or polygamous flowers and fruits with sessile glands in the genus *Ceodes* and recognize up to 75 species, but most modern authors believe the similarities between the groups outweigh the differences and recognize only one genus with 35(-40) species. The very sticky fruits can attach to birds, and species of *Pisonia* are often common on isolated islands hosting colonies of sea birds.

- 1a. Plants climbing, spiny; flowers unisexual; fruit with rows of conspicuous stalked glands 1. *P. aculeata*
- 1b. Plants erect, not spiny; flowers bisexual or polygamous; fruit with sessile glands.
 - 2a. Flowers bisexual; inflorescence 1-4 cm; pedicel 1-1.5 mm, apex bracteolate; perianth tube funnelliform; fruit clavate, ca. 1.2 cm, muricate, aculeate, apex without persistent perianth 2. *P. grandis*
 - 2b. Flowers polygamous; inflorescence 5-12 cm; pedicel 1.5-6 mm, apex without bracteole; perianth tube campanulate; fruit subterete, 2.5-4 cm, smooth, apex with spreading persistent perianth 3. *P. umbellifera*

1. *Pisonia aculeata* Linnaeus, Sp. Pl. 2: 1026. 1753.

腺果藤 xian guo teng

Shrubs vinelike, climbing, to 20 m. Bark olive green. Stems with axillary spines, pilose or glabrous; branches pendent, often with 5-10 mm, recurved thorns. Petiole 1-1.5 cm; leaf blade ovate to elliptic, 3-10 × 1.5-5(-7) cm, ± leathery, abaxially greenish, adaxially dark green, glabrous, pubescent yellow-brown, lateral veins 4-6 pairs, base cuneate or rotund, apex acute or obtuse. Cymes axillary, yellow-brown pubescent. Pedicel with 3 ovate bracteoles near apex. Flowers unisexual; perianth yellow, fragrant. Male perianth tube funnelliform, puberulous, apex 5-lobed, lobes short triangular. Stamens 6-8, exerted; anthers subglobose. Female perianth tube ovate-tubular, apex 5-lobed; style exerted; stigma lacerate. Fruit clavate, 7-14 × 4 mm, 5-ribbed, with rows of stalked glands and brownish black pubescent; carpopodium long. Fl. Jan-Jun.

Thickets along seashores and open forests. Hainan, SE Taiwan [Africa, America, Asia, Australia].

2. *Pisonia grandis* R. Brown, Prodr. 1: 422. 1810.

抗风桐 kang feng tong

Ceodes grandis (R. Brown) D. Q. Lu.

Trees to 14(-30) m; trunk 30-50(-70) cm in diam. Bark white-gray, with conspicuous furrows and large leaf-scars; puberulous to nearly glabrous, lenticels conspicuous; branches unarmed. Petiole 1-8 cm; leaf blade elliptic, oblong, or ovate, (7-)10-20(-30) × (4-)8-15(-20) cm, papery or membranous, puberulous or glabrescent, lateral veins 8-10 pairs, base rounded or slightly cordate, mostly oblique, margin entire, apex acute to acuminate. Cymes terminal, 1-4 × 3-5 cm; peduncle ca. 1.5 cm, with light brown hairs. Flowers bisexual. Pedicel 1-1.5 mm, apex with 2-4 oblong bracteoles. Perianth tube funnelliform, ca. 4 mm, 5-lobed, with 5 rows of black glands.

Stamens 6-10, exerted. Stigma fimbriate, included. Fruit clavate, ca. 1.2 cm × 2.5 mm, 5-ribbed, with sessile glands, without persistent perianth, rib with a row of viscid prickles, hairy between the ribs. Seed 9-10 × 1.5-2 mm. Fl. summer, fr. late summer-autumn.

Forests. Hainan (Xisha Qundao), E Taiwan [India, Indonesia, Malaysia, Sri Lanka; NE Australia, Madagascar, Maldives, Pacific Islands].

In the Xisha Qundao (part of the South China Sea Islands archipelago), *Pisonia grandis* is a dominant tree in the forests, often forming pure stands.

3. *Pisonia umbellifera* (J. R. Forster & G. Forster) Seemann, Bonplandia 10: 154. 1862.

胶果木 jiao guo mu

Ceodes umbellifera J. R. Forster & G. Forster, Char. Gen. Pl. 71. 1775; *Calpidia excelsa* (Blume) Heimerl; *Pisonia alba* Spanoghe; *P. excelsa* Blume.

Trees 4-20(-28) m, tomentose or glabrous; branches unarmed. Petiole 1-2.5 cm; leaf blade black-brown when dry, elliptic, oblong, or ovate-lanceolate, 10-20 × 4.5-8 cm, papery, glabrous, lateral veins 8-10 pairs, base broad cuneate, apex acuminate or slightly obtuse. Cymes terminal, paniculate, 5-12 cm. Flowers polygamous. Pedicel 1.5-6 mm, with 1-3 bracteoles near base. Perianth tube white, campanulate, 5-7 mm, with brown hairs, apex 5-lobed. Stamens 7-10, slightly exerted; filaments unequal, base united in a ring; anthers subglobose. Ovary oblong, upper acuminate. Style slender; stigma fimbriate, slightly exerted. Fruit subterete, slightly curved, 2.5-4 cm × 6-7 mm, 5-ribbed, smooth, glutinous; carpopodium thick, ca. 1 cm, with spreading persistent perianth at apex. Fl. and fr. autumn-winter.

Moist thickets, open forests; low to medium elevations. Hainan, S Taiwan [India (Andaman Islands), Indonesia, Malaysia, Philippines, Thailand, Vietnam; Australia, Madagascar, Pacific Islands (Hawaii)].

