

96. ERYTHRINA Linnaeus, Sp. Pl. 2: 706. 1753.

刺桐属 ci tong shu

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Trees or shrubs [or perennial herbs], branches with prickles. Leaves pinnately 3-foliolate; stipules small; stipels fleshy and glandular; leaflets sometimes with stellate hairs. Inflorescence axillary or terminal, racemelike, noded, 2- or more flowered. Flowers conspicuous; bracts and bracteoles mostly deciduous. Calyx spathaceous, campanulate, or turbinate, truncate or 2-lobed. Corolla often red or orange, usually longer than calyx; petals extremely unequal; standard large, rounded or oblong, often folded longitudinally, erect or spreading, subsessile or long clawed, without appendages; wings short, sometimes absent; keels much shorter than standard. Stamens diadelphous; vexillary stamen free; anthers uniform. Ovary stipitate; ovules 2 to many; style inflexed; stigma small, terminal. Legume stipitate, mostly linear-oblong, often curved, dehiscent along ventral suture, rarely indehiscent, mostly leathery or woody, often constricted between seeds, not septate. Seeds 1–14, white, gray, or brown, rarely red with dark spots, ovoid; hilum lateral, oblong, without strophiole.

More than 100 species: tropics and subtropics; four species in China.

Erythrina corallodendron Linnaeus and *E. crista-galli* Linnaeus, and to a lesser extent *E. caffra* Thunberg, *E. humeana* Sprengel, *E. lysistemon* Hutchinson, and *E. speciosa* Andrews, have been introduced into China as ornamentals.

- 1a. Calyx spathaceous, splitting on one side.
 - 2a. Keels and wings subequal; stem prickles minute, usually black 3. *E. variegata*
 - 2b. Keels much longer than wings; stem prickles whitish 4. *E. stricta*
- 1b. Calyx campanulate or turbinate, lobes truncate or 2-lobed.
 - 3a. Keels subequal to wings; legume with seeds only toward apex 2. *E. subumbrans*
 - 3b. Keels longer than wings; legume with seeds uniformly distributed along length.
 - 4a. Leaflets 8–20(–25) cm; terminal leaflet usually reniform 1. *E. arborescens*
 - 4b. Leaflets 5–15 cm; terminal leaflet not reniform.
 - 5a. Leaflets rhomboid-ovate; seed red with black spots *E. corallodendron*
 - 5b. Leaflets ovate or lanceolate-elliptic; seed gray or bright brown *E. crista-galli*

1. *Erythrina arborescens* Roxburgh, Pl. Coromandel 3: 14. 1811.

鹦哥花 ying ge hua

Corallodendron arborescens (Roxburgh) Kuntze.

Trees. Trunk and branches with prickles. Stipules small; petiole longer than leaflets, without or with a few prickles; terminal leaflet reniform, 8–20(–25) cm, both surfaces glabrous, base truncate or almost cordate, margin entire, apex acute; lateral leaflets obliquely broadly cordate. Raceme solitary in axil of terminal leaf, erect, longer than leaves. Flowers in clusters of 3, red, pendulous; bract 1, ovate. Calyx turbinate, truncate or unequally 2-lobed. Corolla red; standard subovate, boat-shaped, ca. 3.2 cm; wings obliquely ovate, shorter than keels; keels ca. 1/2 as long as stamens. Filament slightly shorter than standard, connate near base. Ovary long stipitate; style as long as stamens. Legume curved, 12–19 × 2–3 cm, with obvious beak and stipe. Seeds 5–10, white or brown, reniform, ca. 2 cm. Fl. Jul–Sep, fr. Aug–Feb. $2n = 42$.

Mountain valleys, grassy slopes; 400–2100 m. Guizhou, Hainan, Sichuan, Xizang, Yunnan [Bangladesh, Bhutan, India, Myanmar, Nepal, Thailand].

Erythrina arborescens is used for ornament, timber, and medicine.

“*Erythrina tienensis*” (F. T. Wang & Tang, Ill. Treatm. Princ. Pl. China, 654. 1995) belongs here but was not validly published because no Latin description or diagnosis was provided (*Vienna Code*, Art. 36.1).

2. *Erythrina subumbrans* (Hasskarl) Merrill, Philipp. J. Sci., C, 5: 113. 1910.

翅果刺桐 chi guo ci tong

Hypaphorus subumbrans Hasskarl, Hort. Bogor. Descr. 198. 1858; *Erythrina secundiflora* Hasskarl (1848), not Brotero (1824); *H. subumbrans* var. *aculeata* Hasskarl; *H. subumbrans* var. *inermis* Hasskarl.

Trees, 12–15 m tall. Trunk up to 60 cm d.b.h., with robust prickles. Leaves pinnately 3-foliolate; stipules ovate, deciduous; petiole 10–12 cm, without prickles; petiolules ca. 7 mm; leaflets ovate-triangular, 10–15 cm × 7–10 mm, membranous, both surfaces glabrous, lateral veins 7 on each side, obviously convex abaxially, base rounded or broadly cuneate, margin entire, apex acuminate. Raceme 7–10 cm. Flowers ca. 4 cm. Calyx campanulate, 2-lobed, silky hairy. Standard scarlet, elliptic, 5–6 cm, apex obtuse, shortly clawed; wings obovate; keels subequal to wings. Ovary glabrous. Legume ca. 15 × 2.5 cm, with seeds restricted to apical part, indehiscent. Seeds 1–3, black. Fl. Aug–Oct, fr. to next Mar.

Forests; 300–600 m. Yunnan [East Timor, India, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Sri Lanka, Thailand, Vietnam; Indian Ocean islands (Mauritius)].

This plant is used for ornament, food, and green fertilizer.

3. *Erythrina variegata* Linnaeus, Herb. Amboin. 10. 1754.

刺桐 ci tong

Corallodendron orientale (Linnaeus) Kuntze; *Erythrina corallodendron* Linnaeus var. *orientalis* Linnaeus; *E. indica* Lamarck; *E. loureiroi* G. Don ["*loureiri*"]; *E. orientalis* (Linnaeus) Murray; *E. variegata* var. *orientalis* (Linnaeus) Merrill.

Trees, up to 20 m tall. Bark dark brown. Branches with obvious, black, straight and minute prickles; core pulpy. Leaves pinnately 3-foliolate, usually clustered at branch tip; stipules lanceolate, deciduous; petiole 10–15 cm, usually without prickles; leaflets broadly ovate or rhomboid-ovate, 15–30 × 15–30 cm, membranous, both surfaces glabrous, basal veins 3, lateral veins 5 pairs, base broadly cuneate or truncate, margin entire, apex acuminate to obtuse; base of leaflet with a pair of glands similar to stipules. Raceme terminal, 10–16 cm; peduncle robust, woody, 7–10 cm, pubescent; flowers paired. Calyx spathe-like, 2–3 cm, mouth oblique, split on one side. Corolla red, 6–7 cm; standard elliptic, 5–6 × ca. 2.5 cm, apex obtuse, shortly clawed; wings and keels subequal; keel petals separate. Ovary micro-villous; style glabrous. Legume black, reniform, ca. 1.5 × 1 cm. Seeds puniceous, oblong or oblong-ellipsoid. Fl. Feb–May, fr. Apr–Aug. $2n = 42$.

Fujian, Guangdong, Guangxi, Hainan, Taiwan [Bangladesh, Cambodia, India, Indonesia, Japan (Ryukyu Islands), Laos, Malaysia, Myanmar, Philippines, Sri Lanka, Thailand, Vietnam; Australia, Pacific islands; introduced to Africa and Central and South America].

Erythrina variegata is used as an ornamental and for timber and medicine.

4. *Erythrina stricta* Roxburgh, Fl. Ind., ed. 1832, 3: 251. 1832.

劲直刺桐 jin zhi ci tong

Trees, 7–12 m tall. Trunk straight. Branches with short whitish prickles. Leaves pinnately 3-foliolate; stipules deciduous; petiole 12–15 cm, rarely with prickles; terminal leaflet broadly triangular, almost rhomboid, or broadly reniform-oblate, 7–19 × 7–24.5 cm, both surfaces glabrous, lateral veins 5–8 pairs, base nearly cordate, truncate, or broadly cuneate, margin entire, apex acute or caudate with mucro 10–15 mm. Raceme ca. 15 cm, flowers in clusters of 3 or 4. Calyx spathe-like, undivided or apex slightly 2-lobed. Corolla red; standard elliptic-lanceolate or ovate-triangular, erect, 3–4.5 cm, subsessile; wings subobovate, 6–8 mm, shorter than calyx; keels much longer than wings. Ovary hairy, stipitate; style narrow, glabrous. Legume 7–12 × 0.7–1.5 cm, glabrous. Seeds 1–3 or more, light or dark brown, reniform. Fl. Mar–Jul, fr. Apr–Sep. $2n = 42$.

Forests by rivers, mountain slopes; ca. 1400 m. Guangxi, Xizang, Yunnan [Bhutan, Cambodia, India, Laos, Myanmar, Nepal, Thailand, Vietnam].

- 1a. Prickles usually dense; leaflet 7–15 cm long and wide 4a. var. *stricta*

- 1b. Prickles usually sparse; leaflet 17–19 × 21–24.5 cm 4b. var. *yunnanensis*

4a. *Erythrina stricta* var. *stricta*

劲直刺桐(原变种) jin zhi ci tong (yuan bian zhong)

Micropteryx stricta (Roxburgh) Duchassaing & Walpers.

Trees, 7–12 m tall. Branches with many prickles. Terminal leaflet broadly triangular or almost rhomboid, 7–15 × 7–15 cm, both surfaces glabrous, lateral veins 5 or 6 pairs, base truncate or nearly cordate, margin entire, apex acute. Raceme with flowers in clusters of 3. Seeds light brown. $2n = 42$.

Sparse forests by rivers. Guangxi, Xizang, Yunnan [Cambodia, India, Laos, Myanmar, Nepal, Thailand, Vietnam].

4b. *Erythrina stricta* var. *yunnanensis* (T. S. Tsai & T. T. Yu ex S. K. Lee) R. Sa, Novon 16: 267. 2006.

云南刺桐 yun nan ci tong

Erythrina yunnanensis T. S. Tsai & T. T. Yu ex S. K. Lee, Guihaia 13: 101. 1993.

Trees, ca. 7 m tall. Branches with few prickles. Terminal leaflet broadly reniform-oblate, 17–19 × 21–24.5 cm, lateral veins 7 or 8 pairs and convex, base broadly cuneate, apex caudate, mucro 10–15 mm; petiolules 11–15 cm; lateral leaflets oblate, 17–18 × 7–21 cm, base almost truncate to broadly cuneate, apex with short mucro. Raceme with flowers in clusters of 3 or 4. Legume compressed, without obvious constriction between seeds. Seeds dark brown.

- Mountain slopes; ca. 1400 m. Yunnan.

