

## BRETSCHNEIDERACEAE

伯乐树科 bo le shu ke

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Trees. Myrosin cells present in bark of branches and in inflorescence, producing glucosinolates. Leaves alternate, imparipinnate; leaflets petiolulate, opposite or lower ones alternate, entire; veins pinnate; stipules absent. Racemes terminal, erect. Flowers bisexual, zygomorphic. Calyx broadly campanulate, 5-lobed. Petals 5, free, imbricate, unequal, clawed, adnate from middle to upper part of calyx tube. Stamens 8, attached to thin, annular nectary disc at base of petals, shorter than petals; filaments filiform, hairy, especially in basal 1/2. Pistil 1; ovary superior, sessile, 3–5-loculed; placentation axile; ovules 2 per locule, pendulous; style longer than stamens; stigma capitate, minute. Fruit a capsule; valves 3–5, thick walled, dehiscent. Seeds oblong; endosperm absent.

One species: S China, N Thailand, N Vietnam.

The taxonomic placement of the Bretschneideraceae has been enigmatic, with alliances postulated among such widely divergent families as Capparaceae, Fabaceae, Hippocastanaceae, Moringaceae, and Sapindaceae. Two studies (Boufford et al., *Biochem. Syst. Ecol.* 17: 375–379. 1989; Tobe & Peng, *Bot. J. Linn. Soc.* 103: 139–152. 1990) indicate a close relationship with Hippocastanaceae and Sapindaceae. More recent evidence aligns *Bretschneidera* with the monotypic *Akania* J. D. Hooker (from Australia) in the Akaniaceae, distinct from the Sapindaceae (Doweld, *Bot. J. Linn. Soc.* 120: 379–389. 1996; Rodman, *Syst. Bot.* 16: 598–618 and 619–629. 1991; Rodman et al., *Ann. Missouri Bot. Gard.* 80: 866–699. 1993).

Chen Wei-chiu. 1984. Bretschneideraceae. *In*: Fu Shu-hsia & Fu Kun-tsun, eds., *Fl. Reipubl. Popularis Sin.* 34(1): 8–10.

### 1. BRETSCHNEIDERA Hemsley, Hooker's Icon. Pl. 28: t. 2708. 1891.

伯乐树属 bo le shu shu

Morphological characters and geographical distribution are the same as those for the family.

1. *Bretschneidera sinensis* Hemsley, Hooker's Icon. Pl. 28: t. 2708. 1891.

伯乐树 bo le shu

*Bretschneidera yunshanensis* Chun & F. C. How.

Trees 10–20 m tall; bark gray-brown. Leaves 25–75 cm, sparsely hairy in leaf axils or glabrous; petiole 10–25 cm; petiolules 2–10 mm; leaflets 7–15, green adaxially, green to glaucous abaxially, narrowly elliptic, rhombic-oblong, oblong-lanceolate, or ovate-lanceolate, slightly oblique, 6–26 × 3–9 cm, papery or leathery, glabrous adaxially, minutely pubescent abaxially, base obtuse to rounded to cuneate, margin entire, apex acuminate to acute; lateral veins in 8–15 pairs. Inflorescence 20–36 cm. Flowers 3–5 cm in diam., pedicel 2–4 cm. Calyx 1.5–2.3 × 1.2–2.7 cm, 5-lobed. Petals white to pink, becoming darker with age, red striate, broadly spatulate to obovate-cuneate, 1.8–2 × 1–1.5 cm, base rounded, apex notched; upper petal hoodlike, covering stamens and style. Filaments 2.5–3 cm, hairy at base, curving downward apically. Ovary and style hairy; style 3–4 cm, bent abruptly downward apically. Capsule ellipsoid-globose to subglobose to ovoid or obovoid, 3–5.5 × 2–3.5 cm, warty, minutely hairy; valves 1.2–5 mm thick; fruiting pedicel 2.5–3.5 cm. Seeds red, ellipsoid-globose, compressed, 1.5–2.5 × 1.2–1.8 cm, smooth. Fl. Mar–Sep, fr. Aug–Apr.  $2n = 18^*$ .

Forests; 300–1700 m. Fujian, Guangdong, Guangxi, Guizhou, Hubei, Hunan, Jiangxi, Sichuan, Taiwan, Yunnan, Zhejiang [N Thailand, N Vietnam].

Since *Bretschneidera* was found only recently in Taiwan and Thailand, it seems possible that the genus might also be found in Laos and N Myanmar. The trees are most conspicuous, and should be sought in the early spring when the showy flowers are open.

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