## **1. PLUMBAGO** Linnaeus, Sp. Pl. 1: 151. 1753.

白花丹属 bai hua dan shu

Thela Loureiro.

Herbs perennial or rarely annual, rarely shrubs, sometimes lianous. Stems usually branched. Petiole base slightly expanded or auriculate, clasping or nearly clasping. Inflorescences spicate-racemose; spikelets 1-flowered; bracts and bractlets herbaceous, greenish. Flowers conspicuous. Pedicel very short, persistent. Calyx tubular, ribs herbaceous, with stalked glands, membranous between ribs; limb not expanded, enlarging after anthesis; lobes minute, usually triangular. Corolla salverform, tube much longer than calyx, limb rotate; lobes apically rounded or acuminate. Stamens hypogynous, as long as corolla tube; filaments basally expanded; anthers linear. Ovary ellipsoid, ovoid, or pyriform. Styles connate, terminally 5-branched; stigma on inner surface of style branches, covered with stalked or sessile glands.

About 17 species: mainly in tropics; two species in China.

- 1a. Rachis with sessile glands; corolla white to pale bluish white; calyx 10-13 mm1. P. zeylanica1b. Rachis lacking glands; corolla purple to dark red; calyx 7.5-9.5 mm2. P. indica
- 1. Plumbago zeylanica Linnaeus, Sp. Pl. 1: 151. 1753.

## 白花丹 bai hua dan

Shrubs or perennial herbs, erect, 1–3 m tall, evergreen. Branches spreading, often lianous. Petiole base sometimes auriculate; leaf blade ovate,  $(3-)5-8(-13) \times (1.8-)2.5-4(-7)$  cm, thin, base cuneate to obtuse, apex acuminate and mucronate. Inflorescences (3-)5-70-flowered; peduncle 0.5-1.5 cm, glandular; rachis glandular, (2-)3-8(-15) cm; bracts subovate,  $4-6(-8) \cdot (1-)1.5-2(-2.5)$  mm, apex acuminate; bractlets linear, ca.  $2 \times 0.5$  mm. Calyx 1-1.2 cm, glandular almost throughout, tube ca. 2 mm in diam. at middle. Corolla white to pale bluish white, tube 1.8-2.2 cm, limb 1.6-1.8 cm in diam.; lobes obovate to oblong-lanceolate, ca.  $7 \times (2-)4$  mm, apex mucronate to acuminate. Anthers blue, ca. 2 mm. Ovary ellipsoid, 5-angular. Style glabrous. Capsule pale yellow-brown, oblong. Seed red-brown, ca.  $7 \times 1.5 \times 0.6$  mm, apex acute. Fl. Oct–Mar, fr. Dec–Apr. 2n = 28.

100–1600 m. Fujian, Guangdong, Guangxi, S Guizhou, Hainan, Sichuan, Taiwan [Hawaii, Old World tropics].

## 1a. Plumbago zeylanica var. zeylanica

白花丹(原变种) bai hua dan (yuan bian zhong)

Plumbago viscosa Blanco; Thela alba Loureiro.

Corolla lobes obovate, apex mucronate.

Scrub and grassland; 100–1600 m. Fujian, Guangdong, Guangxi, S Guizhou, Hainan, Sichuan, Taiwan [Hawaii, Old World tropics].

Medicinal and ornamental.

**1b. Plumbago zeylanica** var. **oxypetala** Boissier in A. de Candolle, Prodr. 12: 693. 1848.

尖瓣白花丹 jian ban bai hua dan

Corolla lobes oblong-lanceolate, apex acuminate.

\* 200-700 m. Fujian.

**2. Plumbago indica** Linnaeus in Stickman, Herb. Amb. 24. 1754.

紫花丹 zi hua dan

Plumbago rosea Linnaeus; Thela coccinea Loureiro.

Herbs perennial, 0.5-2 m tall, evergreen. Stems pliable, often lianous, simple or branched from base. Petiole base without auricles; leaf blade narrowly ovate to elliptic-ovate, (3-)  $7-9.5(-13) \times (0.8-)3-4(-6)$  cm, papery, base rounded to obtuse, apex acute. Inflorescences (20-)35-90-flowered; peduncle 1-3 cm, not glandular; rachis (8-)10-40(-50) cm, not glandular; bracts ovate,  $2-3 \times 1.5-2$  mm, apex acuminate; bractlets obovate-elliptic to ovate, 2-2.5 × 1.5-2 mm, apex acute. Flowers heterostylous. Calyx 7.5-9.5 mm, glandular almost throughout, tube ca. 2 mm in diam. at middle. Corolla purple to dark red, tube 2-2.5 cm, limb ca. 2 cm in diam.; lobes obovate, ca. 12 × 7 mm, apex rounded and mucronate. Anthers blue, 1.5-2 mm. Ovary ellipsoid-ovoid, indistinctly angular. Style basally pilose; short-styled forms with style arms partly exserted, stigmatic glands without enlarged apex; long-styled form with style arms completely exserted from corolla throat, stigmatic glands capitate. Fruit not seen. Fl. Nov-Apr. 2n = 14.

Wet grasslands; near sea level to 300 m. Hainan, SE Yunnan [Old World tropics].

Medicinal and ornamental.