

2. TRIBULUS Linnaeus, Sp. Pl. 1: 386. 1753.

蒺藜属 ji li shu

Herbs, annual or biennial, prostrate. Leaves opposite, pinnate. Flowers axillary, solitary. Sepals 5. Petals 5, yellow, imbricate. Disk ring-shaped. Stamens 10, with glands, outer 5 longer and opposite petals, inner 5 shorter and alternate with petals. Fruit a schizocarp of 4 or 5 indehiscent prickly carpels. Seeds obliquely pendulous; endosperm thinly membranous.

About 15 species: mainly in the temperate zone; two species in China.

- 1a. Annual herbs; flowers ca. 1 cm in diam.; pedicel shorter than leaves 1. *T. terrestris*
1b. Perennial herbs; flowers ca. 3 cm in diam.; pedicel equal to or longer than leaves 2. *T. cistoides*

1. *Tribulus terrestris* Linnaeus, Sp. Pl. 1: 387. 1753.

蒺藜 ji li

Herbs, annual, prostrate, glabrous, pubescent, or hispid. Branches 20–60 cm. Leaves opposite, even-pinnate, 1.5–5 cm, with 6–16 leaflets; leaflet blades oblong to obliquely oblong, 5–10 × 2–5 mm, base slightly oblique, margin entire, apex acute to obtuse. Flower ca. 1 cm in diam. Pedicel shorter than leaves. Sepals persistent. Stamens inserted on base of disk, with scale-form appendages. Ovary 5-angled, 5-locular, with 3 or 4 ovules per locule; stigma 5-parted. Schizocarp 4–6 mm, hard, pubescent or glabrous, with 5 carpels with 2 hardened 4–6 mm spines at mid margin, surface spiny or prickly. Fl. May–Aug, fr. Jun–Sep. $2n = 24, 30, 36, 48$.

Sandy areas, wastelands, hillsides, residential areas; below 3300 m. Anhui, Fujian, Gansu, Guangdong, Guangxi, Hainan, Hebei, Heilongjiang, Henan, Hubei, Hunan, Jiangsu, Jiangxi, Jilin, Liaoning, Nei Mongol, Ningxia, Qinghai, Shaanxi, Shandong, Shanxi, Sichuan, Taiwan, Xinjiang, Xizang, Yunnan, Zhejiang [almost worldwide].

2. *Tribulus cistoides* Linnaeus, Sp. Pl. 1: 387. 1753.

大花蒺藜 da hua ji li

Tribulus taiwanensis T. C. Huang & T. H. Hsieh.

Herbs, perennial, prostrate to ascending. Stems 30–60 cm, densely pubescent; old branches with nodes, furrowed. Stipules opposite, 2.5–4.5 cm. Leaves with 8–14 leaflets; petiole very short; leaflet blades oblong to obovate-oblong, 6–15 × 3–6 mm, abaxially pilose, adaxially villous, base oblique, apex obtuse to acute. Flower ca. 3 cm in diam. Pedicel equal to or longer than leaves. Sepals lanceolate, ca. 8 mm, villous. Petals obovate-oblong, ca. 2 cm. Ovary yellowish hispid. Schizocarp 0.8–1.2 cm, with 4 spines or murications. Fl. May–Jun. $2n = 12, 24, 36$.

Beaches, sandy areas along seashores or river margins; usually near sea level. Hainan, Taiwan, Yunnan (along Yuan Jiang) [throughout tropics].

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