

12. URENA Linnaeus, Sp. Pl. 2: 692. 1753.

梵天花属 fan tian hua shu

Herbs perennial or shrubs, stellate. Leaves alternate; leaf blade orbicular or ovate, palmately lobed or sinuate, with 1 or more prominent foliar nectaries on abaxial surface. Flowers solitary or nearly fascicled, rarely racemelike, axillary or rarely aggregated on twig tips. Epicalyx campanulate, 5-lobed. Calyx 5-parted. Petals 5, stellate puberulent abaxially. Staminal column truncate or slightly incised; anthers numerous, on outside of staminal column only, nearly sessile. Ovary 5-loculed; ovule 1 per locule; style branches 10, reflexed; stigma discoid, apically ciliate. Fruit a schizocarp, subglobose; mericarps 5, ovoid, usually with spines, these each with a cluster of short barbs at tips. Seed 1, obovoid-trigonous or reniform, glabrous.

About six species: in tropical and subtropical regions; three species (one endemic) in China.

Some authorities have restricted *Urena* to the taxa with barb-tipped setae, sometimes treating these as a single, very variable, pantropical species, and placed other species, including *U. repanda*, in *Pavonia*. Some species of *Triumfetta* (Tiliaceae s.l.) are superficially rather similar and have been confused with this genus.

- 1a. Mericarps glabrous or striate; epicalyx lobes long acuminate separated by rounded sinuses; calyx persistent; flowers ± aggregated into terminal inflorescences 3. *U. repanda*
- 1b. Mericarps with prominent barb-tipped setae, puberulent; epicalyx lobes oblong-lanceolate to -ovate, acute, separated by acute sinuses; calyx caducous; flowers axillary, solitary or in small fascicles.
 - 2a. Epicalyx cupular in fruit, stiff, appressed to mericarps, lobes 4.5–5 × 2.5–3 mm; leaf blades on proximal part of stem angular or shallowly lobed 1. *U. lobata*
 - 2b. Epicalyx spreading or reflexed, flexible, lobes 3–4 × 1–1.5 mm; leaf blades on proximal part of stem angular or palmately lobed or mostly deeply and often doubly incised 2. *U. procumbens*

1. *Urena lobata* Linnaeus, Sp. Pl. 2: 692. 1753.

地桃花 di tao hua

Subshrublike herbs, erect, to 1 m tall. Branchlets stellate tomentose. Stipules filiform, ca. 2 mm, caducous; petiole 1–4 cm, gray-white stellate; leaf blades on proximal part of stem nearly orbicular, 4–5 × 5–6 cm, base rounded or nearly cordate, margin serrate, apex 3-lobed, blades on middle part of stem ovate, 5–7 × 3–6.5 cm, those on distal part of stem oblong to lanceolate, 4–7 × 1.5–3 cm, abaxially gray stellate puberulent, adaxially puberulent. Flowers solitary or slightly aggregated, axillary. Pedicel ca. 3 mm, woolly. Epicalyx lobes connate for ca. 1/3 length, ca. 6 mm, puberulent. Calyx cup-shaped, lobes 5, slightly shorter than bracteoles, stellate puberulent, caducous. Corolla reddish, ca. 15 mm in diam.; petals 5, obovate, ca. 1.5 cm, abaxially stellate puberulent. Staminal column ca. 15 mm, glabrous. Style branches 10, hirsute. Fruit flattened globose, ca. 1 cm in diam.; mericarps stellate puberulent and spiny with hooked spines. Fl. Jul–Oct.

Grasslands, scrub, roadsides; 500–2200 m. Anhui, Fujian, Guangdong, Guangxi, Guizhou, Hainan, Hubei, Hunan, Jiangsu, Jiangxi, Sichuan, Taiwan, Xizang, Yunnan, Zhejiang [Bangladesh, Bhutan, Cambodia, India, Indonesia, Japan, Laos, Myanmar, Nepal, Thailand, Vietnam; pantropical].

This is a polymorphic species for which many infraspecific taxa have been described from throughout its range.

- 1a. Leaf blades on proximal part of stem suborbicular in outline, those on distal part of stem lanceolate to oblong; epicalyx nearly as long as sepals 1a. var. *lobata*
- 1b. Leaf blades on proximal part of stem ovate in outline, those on distal part of stem ovate

to elliptic or nearly orbicular; epicalyx shorter or longer than sepals.

- 2a. Leaf blade abaxially densely rough puberulent and woolly; epicalyx densely yellow woolly 1b. var. *glauca*
- 2b. Leaf blade abaxially tomentose and hirsute; epicalyx stellate pilose or stellate villous.
 - 3a. Leaf blade abaxially with some hairs straight and erect 1e. var. *chinensis*
 - 3b. Leaf blade abaxially with hairs long and twisted with each other.
 - 4a. Leaf blade abaxially with hairs uniformly long and slender; petals ca. 1 cm 1c. var. *henryi*
 - 4b. Leaf blade abaxially with more than one type of hair, some slender, others long and robust, those on veins villous and tufted; petals 1.5–2.5 cm 1d. var. *yunnanensis*

1a. *Urena lobata* var. *lobata*

地桃花(原变种) di tao hua (yuan bian zhong)

Urena diversifolia Schumacher; *U. lobata* var. *tomentosa* (Blume) Walpers; *U. monopetala* Loureiro; *U. tomentosa* Blume.

Leaf blades on proximal part of stem suborbicular and lobed, those on distal part of stem lanceolate to oblong. Epicalyx nearly as long as sepals. Petals ca. 1.5 cm.

500–2200 m. Anhui, Fujian, Guangdong, Guangxi, Guizhou, Hainan, Hunan, Jiangsu, Jiangxi, Sichuan, Taiwan, Xizang, Yunnan, Zhejiang [Bhutan, Cambodia, India, Japan, Laos, Myanmar, Nepal, Thai-

land, Vietnam; pantropical].

1b. *Urena lobata* var. *glauca* (Blume) Borssum Waalkes, *Blumea* 14: 144. 1966.

粗叶地桃花 cu ye di tao hua

Urena lappago Smith var. *glauca* Blume, *Bijdr.* 65. 1825; *U. lobata* var. *scabriuscula* (Candolle) Walpers; *U. scabriuscula* Candolle.

Leaf blade densely rough puberulent and woolly; blades on proximal part of stem wider and rarely lobed, base subcordate, apex usually 3-lobed, those on distal part of stem ovate or suborbicular, margin serrate. Epicalyx lobes filiform, slightly longer than sepals, densely yellow woolly. Petals 1–1.3 cm.

Grasslands, scrub, roadsides; 500–1500 m. Fujian, Guangdong, Guizhou, Sichuan, Yunnan [Bangladesh, India, Indonesia, Myanmar].

1c. *Urena lobata* var. *henryi* S. Y. Hu, *Fl. China, Malvaceae* [Fam. 153], 75. 1955.

湖北地桃花 hu bei di tao hua

Leaf blade membranous, abaxially gray puberulent, hairs uniform, twisted, adaxially minutely pilose; blades on proximal part of stem ovate, 6–8 × 4–5 cm, base rounded, those on distal part of stem elliptic, attenuate at both ends. Epicalyx and sepals puberulent. Petals ca. 1 cm.

• Hubei.

1d. *Urena lobata* var. *yunnanensis* S. Y. Hu, *Fl. China, Malvaceae* [Fam. 153], 77. 1955.

云南地桃花 yun nan di tao hua

Leaf blade abaxially densely gray-white stellate puberulent, hairs twisted, some slender, others robust, adaxially scabrous and stellate; blades on proximal part of stem ovate, usually 3–5-lobed, those on distal part of stem ovate or elliptic, margin irregularly dentate. Epicalyx ca. 4 mm, shorter than sepals, stellate pilose. Petals pink, 1.5–2.5 cm. Capsule 7–8 mm in diam.

• Scrub on slopes, grasslands in valleys; 1300–2200 m. Guangxi, Guizhou, Sichuan, Yunnan.

1e. *Urena lobata* var. *chinensis* (Osbeck) S. Y. Hu, *Fl. China, Malvaceae* [Fam. 153], 77. 1955.

中华地桃花 zhong hua di tao hua

Urena chinensis Osbeck, *Dagb. Ostind. Resa*, 225. 1757.

Herbs subshrublike, to 2 m tall. Petiole gray-yellow stellate; leaf blade abaxially gray-yellow villous and stellate puberulent, long scabrous along veins, adaxially sparsely long stellate hairy or subglabrous, margin serrate; blades on proximal part of stem ovate or suborbicular, usually 3–5-lobed, those on distal part of stem ovate. Epicalyx nearly as long as or slightly longer than sepals, stellate villous. Petals 1.2–1.5 cm.

• Anhui, Fujian, Guangdong, Hunan, Jiangxi, Sichuan, Yunnan.

2. *Urena procumbens* Linnaeus, *Sp. Pl.* 2: 692. 1753.

梵天花 fan tian hua

Subshrubs to 80 cm tall. Branches procumbent; branchlets stellate puberulent. Stipules subulate, ca. 1.5 mm, caducous;

petiole 4–15 mm, hairy; leaf blades on proximal part of stem palmately 3–5-lobed to 1/2 blade, lobes rhomboid or obovate, gourd-shaped, 1–7 × 1–4 cm, both surfaces shortly stellate hirsute or densely woolly tomentose, base rounded to nearly cordate, margin serrate, apex obtuse. Flowers solitary or nearly fascicled, axillary. Pedicel 2–3 mm. Epicalyx ca. 7 mm, connate for ca. 1/3 length, sparsely stellate hairy. Calyx shorter than or nearly as long as epicalyx, lobes ovate, acute, stellate. Petals pink or white, 1–1.5 cm. Staminal column glabrous, as long as petals. Fruit globose, ca. 6 mm in diam., spiny and hirsute with long hairs and hooked spines. Seeds glabrous. Fl. Jun–Sep.

• Scrub; 500 m. Fujian, Guangdong, Guangxi, Hainan, Hunan, Jiangxi, Taiwan, Zhejiang.

The identity of *Urena procumbens* has been confused, with most authors including it within *U. sinuata* Linnaeus, and others, such as Guerke (Fl. Brasil. 12, 3: 457–596. 1892), suggesting that it might not belong to the Malvaceae. Hu (Fl. China, Malvaceae [Fam. 153], 178. 1955) typified this taxon as a close relative of the more widely distributed *U. sinuata*, distinguished by the relatively narrower leaf blades, not orbicular in outline, with uniform, not heterogeneous, hairs.

- 1a. Leaves 1.5–7 cm, shortly stellate
hirsute 2a. var. *procumbens*
1b. Leaves 1–2 cm, densely woolly
tomentose 2b. var. *microphylla*

2a. *Urena procumbens* var. *procumbens*

梵天花(原变种) fan tian hua (yuan bian zhong)

Leaves 1.5–7 cm, shortly stellate hirsute.

• Scrub. Fujian, Guangdong, Guangxi, Hainan, Hunan, Jiangxi, Taiwan, Zhejiang.

2b. *Urena procumbens* var. *microphylla* K. M. Feng, Acta Bot. Yunnan. 4: 28. 1982.

小叶梵天花 xiao ye fan tian hua

Leaves smaller and thicker, 1–2 cm, densely tomentose and woolly on both surfaces.

• About 500 m. Zhejiang (Pingyang).

3. *Urena repanda* Roxburgh ex Smith in Rees, Cycl. 37: *Urena* no. 6. 1819.

波叶梵天花 bo ye fan tian hua

Abutilon esquirolii H. Léveillé; *Malache repanda* (Roxburgh ex Smith) Kuntze; *Pavonia repanda* (Roxburgh ex Smith) Sprengel; *Urena speciosa* Wallich.

Herbs perennial, 0.5–1 m tall. Branches terete, densely stellate puberulent. Stipules filiform, 4–5 mm; petiole 1–7 cm, stellate; leaf blade ovate, 4–8 × 1–7 cm; blades on proximal part of stem usually 3-lobed, base rounded to nearly cordate, margin serrate, apex obtuse, those on distal part of stem ovate-oblong to lanceolate, abaxially gray stellate puberulent, adaxially stellate strigose and hirsute. Flowers aggregated on twig tips. Pedicel 1–3 mm. Epicalyx campanulate, connate for ca. 1/2 length, ca. 8 mm, long stellate hirsute. Sepals longer than bracteoles, ovate, acute, persistent, long stellate hirsute. Petals 5, pink, 2.5–3.5 cm. Staminal column glabrous. Ovary glabrous; style verrucose. Fruit nearly globose, ca. 8 mm diam., glabrous; mericarps obtriangular, ca. 4 mm, glabrous or striate. Seeds black, glabrous. Fl. Aug–Nov.

Scrub on slopes; 300–1600 m. Guangxi, Guizhou, Yunnan [Cambodia, N India, Laos, Thailand, Vietnam].

Flora of China 12: 280–282. 2007.