

1. AMMANNIA Linnaeus, Sp. Pl. 1: 119. 1753

水苋菜属 shui xian cai shu

Qin Haining (覃海宁); Shirley Graham

Herbs, annual, tending to become anthocyanic with age. Stems erect, glabrous; young branches often 4-angled or narrowly winged. Leaves opposite, usually decussate, sessile or subsessile, membranous. Inflorescences cymose, with small, white, membranous bracteoles. Flowers 4(–6)-merous, actinomorphic. Floral tube campanulate or urceolate, becoming globose or nearly so in fruit, 4(–6)-lobed, noticeably 4–8-veined; sepals short, less than 1/3 length of floral tube; epicalyx segments between sepals small or absent. Petals absent to 4, caducous. Stamens 2–8. Ovary incompletely [1 or]2–4-loculed, globose; ovules numerous; style much shorter to much longer than ovary, style base persistent in fruit; stigma capitate. Capsule globose, hyaline, smooth walled, not finely striated, irregularly dehiscent from apex. Seeds many, golden-brown, obovoid, concave-convex, ca. 1 mm. $2n = 18, 24, 26, 28, 30, 32, 34, 36, 40, 48, 66$.

About 25 species: widely distributed in tropical and subtropical areas, mainly in Africa and Asia; four species (one naturalized) in China.

- 1a. Leaves basally attenuate to truncate; petals absent; style shorter than ovary 1. *A. baccifera*
- 1b. Leaves basally ± auriculate, often clasping; petals present.
 - 2a. Style ca. 1/2 as long as ovary or shorter; capsule ca. 1.5 mm in diam. 2. *A. multiflora*
 - 2b. Style ca. as long as ovary or longer; capsule 1.5–3.5 mm in diam.
 - 3a. Capsule 1.5–3.5 mm in diam.; flowers 3–15, commonly 7, in axillary cymes 3. *A. auriculata*
 - 3b. Capsule 3.5–5 mm in diam.; flowers 3–5, commonly 3, in axillary cymes 4. *A. coccinea*

1. *Ammannia baccifera* Linnaeus, Sp. Pl. 1: 120. 1753.

水苋菜 shui xian cai

Ammannia baccifera subf. *contracta* Koehne; *A. baccifera* subsp. *viridis* (Willdenow ex Hornemann) Koehne; *A. discolor* Nakai; *A. indica* Lamarck; *A. vescicatoria* Roxburgh; *A. viridis* Willdenow ex Hornemann.

Herbs, annual, 10–50[–100] cm tall. Stem with numerous, ascending branches. Leaves opposite on basal stem portion, opposite or alternate toward stem apices, narrowly elliptic or oblanceolate to linear, 5–60 × 3–10 mm, base attenuate, truncate, or subcordate. Flowers 3 to many in dense axillary cymes; pedicels subsessile, to 1 mm; peduncle absent to 1 mm; bracteoles minute, not reaching floral tube. Floral tube campanulate, tapering at base, 1–2 mm; sepals 4, ca. 0.5 mm, deltate; epicalyx absent. Petals absent. Stamens 4. Style absent to 0.3 mm, much shorter than ovary. Capsules 1–2 mm in diam., 1/4–1/2 exserted. Fl. Aug–Oct, fr. Sep–Dec. $2n = 24, 26$.

Wet places, farmland. Anhui, Fujian, Guangdong, Guangxi, Hebei, Hubei, Hunan, Jiangsu, Jiangxi, Shanxi, Taiwan, Yunnan, Zhejiang [Afghanistan, Bhutan, Cambodia, India, Laos, Malaysia, Nepal, Philippines, Thailand, Vietnam; tropical Africa, Australia, Caribbean islands].

2. *Ammannia multiflora* Roxburgh, Fl. Ind. 1: 447. 1820.

多花水苋菜 duo hua shui xian cai

Ammannia australasica F. Mueller; *A. japonica* Miquel; *A. parviflora* Candolle; *A. multiflora* var. *parviflora* (Candolle) Koehne; *Suffrenia dichotoma* Miquel.

Herbs, annual, 8–65 cm tall. Stems with numerous, ascending, short branches. Leaves opposite, narrowly elliptic, broadly linear, or lanceolate-oblong, 1–2.5 cm × 3–12 mm, base attenuate to cordate. Flowers 3–7(–20) in dense axillary cymes; pedicels 1–2[–6] mm; peduncle 1–2 mm; bracteoles linear, not reaching floral tube. Floral tube campanulate, ca. 1.5 mm, 4-ribbed;

sepals 4, deltate. Petals 4, pink to whitish, obovate, minute. Stamens 4, rarely 6–8. Style 1/3–1/2 as long as ovary. Capsules red-brown or red-wine colored, ca. 1.5 mm in diam., ca. 1/2 exserted. Fl. Jul–Aug, fr. Sep. $2n = 18$.

Wet places, farmland. S China (including Taiwan) [tropics and subtropics of Africa, Asia, and Australia].

The differences between this species and *Ammannia auriculata* are minor or overlapping.

3. *Ammannia auriculata* Willdenow, Hort. Berol. 1: 7. 1803.

耳基水苋 er ji shui xian

Ammannia arenaria Kunth; *A. auriculata* Willdenow var. *arenaria* (Kunth) Koehne.

Herbs, 15–60 cm tall. Stems branched. Leaves opposite, narrowly lanceolate or oblong-lanceolate, 1.5–7.5 cm × 3–15 mm, base cordate-auriculate, clasping. Flowers (1–)3–15, commonly ca. 7, in axillary cymes; pedicels 1–3(–6) mm; peduncle 3–9 mm, commonly ca. 5 mm; bracteoles linear, not reaching

floral tube. Floral tube campanulate to urceolate, 1.5–2 mm, conspicuously 4–8-ribbed; sepals 4, broadly deltate; epicalyx segments minute, thickened. Petals 4, rose-purple, suborbicular, ca. 1.5 mm, sometimes absent. Stamens 4–8, long-exserted. Style ca. as long as or longer than ovary. Capsules 1.5–3(–3.5) mm in diam., equal to surpassing floral tube. Fl. Aug–Dec, fr. Aug–Dec. $2n = 30, 32$.

Wet places, rice farms. Anhui, Fujian, Gansu, Guangdong, Hebei, Henan, Hubei, Jiangsu, Shanxi, Yunnan, Zhejiang [pantropical].

4. *Ammannia coccinea* Rottbøll, Descr. Icon. Rar. Pl. 7. 1773.

长叶水苋菜 chang ye shui xian cai

Herbs, annual, to 60[–100] cm tall. Stems branched. Leaves opposite, sessile, linear-lanceolate, 1.6–8 cm × 3[–15] mm, glaucescent, base cordate to auriculate, clasping. Flowers (1–)3–5 in axillary cymes; pedicels ca. 2 mm; peduncle absent to 9 mm; bracteoles reaching floral tube. Floral tube urceolate, 3–5 mm; sepals 4(or 5), broadly deltate; epicalyx segments thickened, ca. as long as sepals. Petals 4(or 5), rose-purple, obovate, ca. 2 mm. Stamens 4(–7), slightly exserted. Style ca. as long as or longer than ovary, well-exserted. Capsules 3.5–5 mm in diam., equal to or exceeding floral tube, rarely included. Fl. Jul–Oct, fr. Aug–Nov. $2n = 66$.

Naturalized. SW Taiwan (Tainan) [native to North America].

