

33. **ADONIS** Linnaeus, Sp. Pl. 1: 547. 1753.

侧金盏花属 *ce jin zhan hua shu*

Fu Dezhi (傅德志); Orbélia R. Robinson

Herbs annual or perennial. Basal and lower stem leaves usually scaly. Upper stem leaves alternate, palmately or pinnately divided. Inflorescences terminal on branches or branchlets, 1-flowered; bracts absent. Flowers radially symmetric, bisexual. Sepals 5–8. Petals 5–24. Stamens numerous; filaments linear. Pistils numerous, spirally arranged; ovary 1-ovuled. Styles persistent; stigma small. Achenes usually with raised veins.

About 30 species: Asia, Europe; ten species (three endemic) in China.

1a. Plants annual with roots; petals orange; achenes glabrous; persistent styles straight 10. *A. aestivalis*

1b. Plants perennial with rhizome; petals white, blue, or yellow; achenes usually pubescent; persistent styles bent.

2a. Leaves sessile to subsessile (occasionally shortly petiolate on *A. bobroviana*).

3a. Leaves glabrous.

4a. Stems ca. 40 cm tall, 3–5 mm in diam.; stem leaves ca. 15; flowers 4–5.5 cm in diam.; sepals glabrous 8. *A. sibirica*

4b. Stems 4–20 cm tall, 1.2–2 mm in diam.; stem leaves ca. 4; flowers 2.5–4 cm in diam.; sepals shortly ciliate 6. *A. ramosa*

3b. Leaves hairy.

5a. Stems and leaves hairs glandular 7. *A. bobroviana*

5b. Stems and leaves hairs eglandular 9. *A. tianschanica*

2b. Leaves basally on stem petiolate, sometimes shortly petiolate apically on stem.

6a. Petals white, pale blue, or pale purple.

7a. Leaf blade pentagonal or triangular-ovate; petals white 1. *A. davidii*

7b. Leaf blade oblong to narrowly oblong-ovate, rarely triangular; petals pale blue to pale purple 2. *A. coerulea*

6b. Petals yellow.

8a. Leaves abaxially pubescent when young 4. *A. chrysocyathus*

8b. Leaves glabrous.

9a. Stems 25–40 cm; sepals ca. 6, pale green, 0.7–1.2 cm 3. *A. sutchuenensis*

9b. Stems 5–15 cm; sepals ca. 9, pale grayish purple, 1.4–1.8 cm 5. *A. amurensis*

1. **Adonis davidii** Franchet, Nouv. Arch. Mus. Hist. Nat., sér. 2, 8: 188. 1886.

短柱侧金盏花 *duan zhu ce jin zhan hua*

Adonis brevistyla Franchet; *A. delavayi* Franchet.

Plants perennial. Rhizome ca. 8 mm in diam. Stems (10–) 20–40(–58) cm tall, usually branched from base, glabrous, basally with membranous scales. Stem leaves with petiole to 7 cm basally on stem, shortly petiolate or sessile toward stem apex; leaf blade pentagonal to triangular-ovate, 3.5–9 × 3.5–10 cm, 3-sect, glabrous; leaflets 2 × pinnately divided; ultimate segments narrowly ovate to lanceolate, margin toothed and teeth acute. Flowers (1.5–)1.8–2.8 cm in diam. Sepals 5–7, elliptic, 5–8 mm, glabrous, rarely ciliate. Petals 7–14, white, sometimes tinged with purple, obovate-oblong to oblong, 1–1.4 cm, apex rounded to ± acute. Stamens as long as sepals. Ovary sparsely puberulous. Styles very short; stigma globose. Achenes obovoid, 3–4 mm, sparsely pubescent. Fl. Apr–Aug.

Forests, forest margins, grassy slopes, river banks; 1900–3500 m. S Gansu, S Guizhou, W Hubei, S Shaanxi, S Shanxi, N Sichuan, SE Xizang, NW Yunnan [Bhutan].

2. **Adonis coerulea** Maximowicz, Bull. Acad. Imp. Sci. Saint-Pétersbourg 23: 306. 1877.

蓝侧金盏花 *lan ce jin zhan hua*

Adonis coerulea f. *integra* W. T. Wang; *A. coerulea* f. *puberula* W. T. Wang.

Plants perennial, glabrous except pistils. Rhizome robust. Stems 3–15 cm tall, usually branched near base, basally and lower stem with sheathlike scales. Stem leaves with petiole to 3.2 cm basally on stem, shortly petiolate or sessile toward stem apex; leaf blade oblong, narrowly oblong-ovate, or rarely triangular, 1–4.8 × 1–2 cm, 2 or 3 × finely pinnately divided; ultimate segments narrowly lanceolate to lanceolate-linear, apex mucronate. Flowers 1–1.8 cm in diam. Sepals 5–7, obovate-elliptic to ovate, 4–6 mm, apex rounded. Petals ca. 8, pale purple to pale blue, narrowly obovate, 5.5–11 mm, apically with few small teeth. Anthers ellipsoid. Styles very short. Achenes obovoid, ca. 2 mm, basally pubescent. Fl. Apr–Jul. $2n = 16^*$.

• Scrub, grassy slopes; 2300–5000 m. Gansu, C Qinghai, W Sichuan, NE Xizang.

3. **Adonis sutchuenensis** Franchet, Bull. Soc. Philom. Paris 6: 89. 1894.

蜀侧金盏花 *shu ce jin zhan hua*

Plants perennial. Stems (15–)25–40 cm tall, branched or unbranched, basally and lower stem with membranous sheath; sheath leaflike, apically parted. Leaves with petiole to 5 cm; leaf blade ovate-

pentagonal, 3.5–6.8 × 5–8 cm, 3-sect, glabrous; leaflets 2 × pinnately divided; ultimate segments teeth acute. Flowers (2–)3.5–4(–4.8) cm in diam. Sepals ca. 6, pale green, usually oblanceolate, 7–12 mm, glabrous or sparsely pubescent. Petals 8–12, yellow, oblanceolate to oblong-oblanceolate, (1–) 1.5–2(–2.4) cm. Stamens ca. 1/3 as long as petals. Ovary sparsely pubescent. Styles short or inconspicuous; stigma globose. Fl. Apr–Jun.

• Forests, among shrubs, grassy slopes; 1100–3300 m. S Shaanxi, N Sichuan.

4. *Adonis chrysocyathus* J. D. Hooker & Thomson in J. D. Hooker, Fl. Brit. Ind. 1: 15. 1872.

金黄侧金盏花 jin huang ce jin zhan hua

Plants perennial. Rhizome long. Stems to 40 cm tall, unbranched, basally with sheathlike scales. Stem leaves with petiole to 15 cm basally on stem, shortly petiolate or sessile toward stem apex; leaf blade ovate-pentagonal, 3.5–5 × 3–4.5 cm, 3 × pinnately divided, abaxially pubescent when young, glabrate; ultimate segments ovate-rhombic to sublanceolate, base cuneate, apex acute. Pedicel short, pubescent. Sepals 6–8, pale purple, ovate, ca. 1.5 × 6–7 mm, abaxially pubescent, apex unequally toothed. Petals 16–24, yellow, oblanceolate, 2–2.8 × 0.8–1 cm, apex obtuse. Aggregate fruit globose, ca. 1 cm in diam. Achenes 5–7 mm, glabrous; persistent styles long, bent. Fl. May–Jun, fr. Aug.

Grassy slopes on mountains; 2200–2600 m. W Xinjiang, W Xizang [Kashmir, Pakistan, Russia].

This species is used medicinally.

5. *Adonis amurensis* Regel & Radde, Bull. Soc. Imp. Naturalistes Moscou 34(2): 35. 1861.

侧金盏花 ce jin zhan hua

Adonis vernalis Linnaeus var. *amurensis* (Regel & Radde) Finet & Gagnepain.

Plants perennial. Rhizome short, thick. Stems 5–15 cm tall in flower, to 30 cm tall in fruit, unbranched or rarely branched, glabrous, basally with membranous scales. Leaves not fully expanded at anthesis; petiole to 6.5 cm; leaf blade triangular, ca. 7.5 × 9 cm, glabrous, 2 or 3 × finely pinnately divided; leaflets long petiolulate; ultimate segments narrowly ovate to lanceolate, apex acute. Flowers 2.8–3.5 cm in diam. Sepals ca. 9, pale grayish purple, oblong to obovate-oblong, 1.4–1.8 cm, glabrous or sparsely pubescent. Petals ca. 10, yellow, obovate-oblong to narrowly lanceolate, 1.4–2 × 0.5–0.7 cm, glabrous. Stamens ca. 3 mm, glabrous. Ovary puberulous. Styles ca. 0.8 mm, bent; stigma globose. Achenes obovoid, ca. 3.8 mm, pubescent. Fl. Mar–Apr.

Forests, grassy slopes. E Heilongjiang, Jilin, Liaoning [Japan, Korea, Russia].

This species is used medicinally.

6. *Adonis ramosa* Franchet, Bull. Soc. Philom. Paris 6: 91. 1894.

辽吉侧金盏花 liao ji ce jin zhan hua

Adonis pseudoamurensis W. T. Wang; *A. ramosa* subsp. *fupingensis* W. T. Wang.

Plants perennial. Rhizome ca. 1.5 cm, ca. 5 mm in diam. Stems 4–20 cm tall, 1.2–2 mm in diam., glabrous or apically sparsely pubescent, branched. Basal leaves and lower stem leaves scalelike, ovate to lanceolate, 0.7–1.8 cm. Leaves apically on stem ca. 4, sessile to subsessile; leaf blade broadly rhombic, 4–8 × 4–8 cm, glabrous, 2 or 3 × pinnately divided; ultimate segments linear to linear-lanceolate, 1–1.5 cm wide, apex acute. Flowers 2.5–4 cm in diam. Sepals ca. 5, gray-purple, broadly ovate, rhombic-ovate, or broadly rhombic, 7.5–10 × 6–9 mm, margin entire, shortly ciliate, and apically with 1 or 2 small teeth, apex obtuse, rounded, or sometimes acute. Petals ca. 13, yellow, oblong-oblanceolate, 1.2–3 × 0.3–0.7 cm. Stamens to 4.5 mm; anthers oblong, ca. 1.2 mm. Pistils subglabrous. Styles ca. 0.8 mm. Fl. Mar–Apr.

Sunny slopes. Jilin, Liaoning [Japan, Korea, Russia].

7. *Adonis bobroviana* Sim., Novosti Sist. Vyssh. Rast. 1968: 127. 1968.

甘青侧金盏花 gan qing ce jin zhan hua

Plants perennial. Rhizome ca. 10 cm, ca. 1.2 cm in diam., apically branched. Stems to 30 cm tall, branched from base, with very short glandular hairs; branches long, erect or inclined, basally with membranous scales. Upper stem leaves shortly petiolate or sessile, ovate to narrowly ovate, 4–7 × 2–3.6 cm, 2 or 3 × pinnately divided; ultimate segments lanceolate to linear, 0.5–2 mm wide, margin sparsely glandular ciliate to glabrate, apex acute. Flowers 2–4 cm in diam. Sepals 5, pale green tinged with purple, rhombic-ovate, 5–17 × 1.5–8 mm, margin apically sometimes with teeth and sparsely glandular ciliate. Petals 9–13, yellow, abaxially tinged with purple, oblanceolate to oblong, 1–2 × 0.3–0.8 cm. Stamens to 4 mm; anthers narrowly oblong, ca. 1.2 mm. Styles short, bent. Achenes obovoid, ca. 4 mm, pubescent; persistent styles bent into a hook. Fl. Apr–Jul.

• Dry grassy slopes; 1900–2200 m. C Gansu, S and W Nei Mongol, Ningxia, N Qinghai.

8. *Adonis sibirica* Patr. ex Ledebour, Index Sem. Hort. Dorpat., Suppl. 2: 1. 1824.

北侧金盏花 bei ce jin zhan hua

Plants perennial, glabrous except for pistils. Rhizome thick. Stems ca. 40 cm tall, 3–5 mm in diam., basally with sheathlike scales. Stem leaves ca. 15, sessile, ovate to triangular, ca. 6 × 4 cm, 2 or 3 × finely pinnately divided; ultimate segments narrowly linear to narrowly lanceolate, 1–1.5 mm wide, sometimes with small teeth. Flowers 4–5.5 cm in diam. Sepals yellowish green, rounded-ovate, ca. 1.5 × 6 mm, apex attenuate. Petals

yellow, narrowly obovate, 2–2.3 × 0.6–0.8 cm, apex rounded to obtuse and with unequal teeth. Stamens ca. 1.2 cm; anthers narrowly oblong, ca. 1 mm. Styles ca. 1 mm, bent. Achenes ca. 4 mm, sparsely pubescent. Fl. Jun.

Sunny slopes; ca. 1900 m. NE Nei Mongol, N Xinjiang [Mongolia, Russia; Europe].

9. *Adonis tianschanica* (Adolf) Lipschitz ex Bobrov, Fl. URSS 7: 531. 1937.

天山侧金盏花 *tian shan ce jin zhan hua*

Adonis turkestanica Adolf var. *tianschanica* Adolf, Trudy Prikl. Bot. Selektiv. 23: 328. 1930.

Plants perennial. Rhizome ca. 1.5 cm in diam. Stems ca. 30 cm tall, branched from base, sparsely covered with a bent pubescence, basally with sheathlike scales. Leaves sessile, ovate to ovate-triangular, 2–4 cm, 2 or 3 × pinnately divided; ultimate segments linear to lanceolate-linear, ca. 1 mm wide. Flowers 3.5–5 cm in diam. Sepals pale purple, slightly shorter than petals, basally pubescent. Petals lanceolate, 1.5–2.5 × 0.3–0.8 cm. Stamens glabrous; anthers oblong, ca. 1.5 mm. Styles very short. Aggregate fruit pendulous, globose, ca. 2 cm in diam. Achenes narrowly obovoid, 3–5 mm, conspicuously reticulate, sparsely pubescent. Fl. May.

Slopes; ca. 1900 m. W Xinjiang [Russia].

10. *Adonis aestivalis* Linnaeus, Sp. Pl., ed. 2, 1: 771. 1762.

夏侧金盏花 *xia ce jin zhan hua*

Plants annual. Stems 10–20 cm tall, branched or unbranched, basally sparsely pubescent. Leaves long petiolate, clustered apically on stem; leaf blade ca. 3.5 cm, increasing in size upward on stem to 6 cm, glabrous or abaxially sparsely pubescent; upper stem leaves finely 2 or 3 × pinnately divided; ultimate segments linear to lanceolate-linear, 0.4–0.8 mm wide. Sepals 5, narrowly rhombic to narrowly ovate, membranous. Petals orange. Ovary narrowly ovoid with a dorsal ridge, apically narrowed. Achenes ovoid, ca. 3.5 mm, reticulate-veined, with conspicuous dorsal and ventral ridges. Fl. Jun.

Grassland by fields; 1000–2900. N Xinjiang, SW Xizang [Kashmir, Pakistan, Russia; SW Asia, Europe].

1a. Pedicel exerted from apical leaves at anthesis; flowers 4–5.5 mm in diam. 10a. var. *aestivalis*

1b. Pedicel included in apical leaves at anthesis; flowers ca. 8 mm in diam. 10b. var. *parviflora*

10a. *Adonis aestivalis* var. *aestivalis*

夏侧金盏花(原变种) *xia ce jin zhan hua* (yuan bian zhong)

Pedicel exerted from apical leaves at anthesis; flowers 4–5.5 mm in diam.

Grassland by fields; ca. 1300 m. N Xinjiang [Kashmir, Pakistan, Russia; SW Asia, Europe].

10b. *Adonis aestivalis* var. *parviflora* M. Bieberstein, Fl. Taur.-Caucas. 3: 378. 1819.

小侧金盏花 *xiao ce jin zhan hua*

Adonis parviflora Fischer ex de Candolle.

Pedicel included in apical leaves at anthesis; flowers ca. 8 mm in diam.

1000–2900. N Xinjiang, SW Xizang [SW Asia, Europe].

Flora of China 6: 389–391. 2001.