
郁金香属  yu jin xiang shu

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*Amana* Honda; *Orithyia* D. Don.

Herbs perennial, bulbiferous. Bulbs truncate basally, sometimes elongate and tapering apically, covered with a tunic; tunic usually hairy inside. Stem simple or occasionally branched, proximal part usually underground. Leaves basal and cauline, spaced or ± crowded, rarely opposite, sessile and clasping at base, linear to narrowly ovate. Inflorescence usually 1-flowered; bracts absent or sometimes present. Flowers bisexual, erect, campanulate to saucer-shaped. Tepals 6, free, often colored, outer and inner ones different in shape, apex usually with a minute tuft of white hairs. Stamens 6, equal or 3 longer; filaments sometimes hairy; anthers basifixed. Ovary 3-loculed; ovules many per locule. Style columnar or very short; stigma 3-lobed. Fruit a loculicidal capsule. Seeds flat, usually subdeltoid.

About 150 species: temperate regions of N Africa, Asia, and Europe, mainly in C Asia and the Mediterranean region; 13 species (one endemic) in China.

1a. Bracts 2–4, much smaller than leaves.

1b. Bracts absent.

1a. Leaves conspicuously overtopping flower, 10–25 × 0.5–0.9(–1.2) cm; bracts usually 2, opposite, very rarely 3

and whorled ................................................................................................................................................................... 1. *T. edulis*

1b. Leaves slightly or scarcely overtopping flower, 7–15 × (0.5–)0.9–2.2 cm; bracts usually 3 or 4, whorled, very rarely 2 and opposite ............................................................... 2. *T. erythronioides*

3a. Filaments hairy at least toward base.

3b. Filaments glabrous.

4a. Tunic woolly-pubescent inside distally; capsule subglobose ................................................................. 10. *T. biflora*

4b. Tunic appressed hairy inside distally or glabrous; capsule oblong.

5a. Tepals yellow at base; filaments hairy at base ............................................................................................... 9. *T. patens*

5b. Tepals not yellow at base; filaments wholly hairy, rarely so only at base .............................................. 11. *T. dasystemon*

6a. Leaves 2, opposite; tunic glabrous inside ................................................................. 12. *T. heterophylla*

6b. Leaves 2–4 or more, spaced or ± crowded but never opposite; tunic usually hairy inside.

7a. Style 1.5–4 mm; stem glabrous.

7b. Style less than 1 mm.

8a. Stamens equal; style 1.5–2 mm .............................................................................................................. 8. *T. sinkiangensis*

8b. Stamens unequal, inner ones longer than outer; style to 4 mm .................................................... 13. *T. uniflora*

9a. Outer tepals yellow, not tinged with other color abaxially ................................................................. 4. *T. iliensis*

9b. Outer tepals yellow, tinged with violet, red, purplish, green or other deep color abaxially.

10a. Tunic with appressed hairs inside basally and distally .............................................................. 7. *T. altaica*

10b. Tunic with appressed hairs inside only distally.

11a. Stem usually densely or sparsely pubescent; filaments slightly dilated at middle and gradually narrowed at both ends ........................................................................................................ 4. *T. iliensis*

11b. Stem glabrous; filaments dilated in basal or distal part.

12a. Filaments gradually attenuate from base; leaves spaced ........................................ 3. *T. kolpakovskiana*

12b. Filaments dilated in distal part; leaves ± crowded.

13a. Leaves 3, 5–10 mm wide; flower solitary, tepals 1.5–2.5 cm ................ 5. *T. thianschanica*

13b. Leaves (3–)5 or 6(or 7), 10–15 mm wide; flowers 1–4, tepals 3–4 cm .... 6. *T. tetraphylla*

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1 Herbarium: Higher Plants, V. L. Komarov Botanical Institute, Russian Academy of Sciences, Prof. Popov Street 2, St. Petersburg 197376, Russia.

老鸦瓣 拉雅班


Bulb ovoid, 1.5–4 cm in diam.; tunic brownish, papery, densely villous-woolly inside. Stem usually simple, 10–25 cm, slender, glabrous. Leaves usually 2, glaucous, linear to narrowly oblong, 7–15 × (0.5–)0.9–2.2 cm, glabrous. Bracts usually 3 or 4, whorled, very rarely 2 and opposite, narrowly linear, 1.5–2 cm × 1–2 mm. Flower solitary; pedicel 2–4 cm. Tepals white, streaked with purple-red, narrowly elliptic-lanceolate or lanceolate, 2–3 cm × 4–7 mm. Inner stamens slightly longer than outer; filaments glabrous, slightly dilated near middle or base. Style ca. 4 mm. Capsule subglobose, 5–7 mm in diam., apex long beaked. Fl. Mar–Apr, fr. Apr–May. 2n = 24.

Grassy slopes, hillsides; near sea level to 1700 m. Anhui, Hubei, Hunan, Jiangsu, Jiangxi, Liaoning, Shaanxi, Shandong, Zhejiang [Japan, Korea].

Wu Zhengyi (editor’s note) believes that this and the following species would be better treated under the segregate genus **Amana** on the basis of morphology and geographic distribution.


阔叶老鸦瓣 胞叶老鸦瓣

**Amana latifolia** (Makino) Honda; **Tulipa edulis** (Miquel) Baker var. *latifolia* Makino; **T. latifolia** (Makino) Makino.

Bulb ovoid, 2–4 cm in diam.; tunic brownish, papery, densely villous-woolly inside. Stem usually simple, 10–25 cm, glabrous. Leaves usually 2, glaucous, linear to narrowly oblong, 7–15 × (0.5–)0.9–2.2 cm, glabrous. Bracts usually 3 or 4, whorled, very rarely 2 and opposite, narrowly linear, 1.5–2 cm × 1–2 mm. Flower solitary; pedicel 1–4 cm. Tepals white, streaked with purple-red, narrowly elliptic-lanceolate or lanceolate, 2–3 cm × 4–7 mm; outer ones abaxially tinged with greenish red to greenish purple. Stamens equal; filaments slightly dilated at middle and gradually narrowed at both ends, glabrous. Style very short. Capsule ellipsoid, 1.8–2.2 × 1.2–1.5 cm. Fl. and fr. Mar–May. 2n = 24.

Grassy or gravelly slopes, semideserts; 400–1400 m. Xinjiang [Kazakhstan].

Reports of **Tulipa gesneriana** Linnaeus and **T. schrenkii** Regel from China (e.g., in FRPS) are based on misidentified plants of *T. ilicifolia*.


迟花郁金香 II 利郁金香

**Tulipa aristata** Regel.

Bulb ovoid, 1.5–2 cm in diam.; tunic blackish brown, thinly leathery, appressed hairy inside distally. Stem 10–15 cm, glabrous. Leaves 3, ± crowded, spreading and slightly recurved apically, linear or linear-lanceolate, usually overtopping flower, 5–10 mm wide, margin usually crisped. Bracts absent. Flower solitary. Tepals yellow, suboblong, 1.5–2.5 × 0.5–1.5 cm; inner ones sometimes tinged with red. Stamens 1.2–1.7 cm, equal; filaments glabrous, abruptly dilated from middle to apex. Style very short. Fl. May–Jun.

Steppes; 1000–1800 m. NW Xinjiang [Kazakhstan].


伊犁郁金香 伊犁郁金香

Bulb ovoid, 1–2 cm in diam.; tunic blackish brown, thinly leathery, appressed hairy inside distally. Stem 10–20(–30) cm, densely or sparsely pubescent distally, very rarely glabrous. Leaves 3 or 4, spaced or ± crowded, linear or linear-lanceolate, usually not overtopping flower, 0.5–1.5 cm wide. Bracts absent. Flower solitary. Tepals yellow, sometimes turning dark red or pale red when dry, oblong to elliptic-rhomboidal, 2.5–3.5 × 0.4–2 cm; outer ones abaxially tinged with greenish red to greenish purple. Stamens equal; filaments slightly dilated at middle and gradually narrowed at both ends, glabrous. Style very short. Capsule subglobose, 1.8–2.2 × 1.2–1.5 cm. Fl. and fr. Mar–May. 2n = 24.

Grassy or gravelly slopes, semideserts; 400–1400 m. Xinjiang [Kazakhstan].


天山郁金香 天山郁金香

Bulb ovoid, 1.5–2 cm in diam.; tunic blackish brown, thinly leathery, appressed hairy inside distally. Stem 10–15 cm, glabrous. Leaves 3, ± crowded, spreading and slightly recurved apically, linear or linear-lanceolate, usually overtopping flower, 5–10 mm wide, margin usually crisped. Bracts absent. Flower solitary. Tepals yellow, suboblong, 1.5–2.5 × 0.5–1.5 cm; inner ones sometimes tinged with red. Stamens 1.2–1.7 cm, equal; filaments glabrous, abruptly dilated from middle to apex. Style very short. Fl. May–Jun.

Steppes; 1000–1800 m. NW Xinjiang [Kazakhstan].


四叶郁金香 四叶郁金香

Bulb ovoid, 1.5–2 cm in diam.; tunic blackish brown, thinly leathery, appressed hairy inside distally. Stem 10–15 cm, glabrous. Leaves 3, ± crowded, spreading and slightly recurved apically, linear or linear-lanceolate, usually overtopping flower, 5–10 mm wide, margin usually crisped. Bracts absent. Flower solitary. Tepals yellow, suboblong, 1.5–2.5 × 0.5–1.5 cm; inner ones sometimes tinged with red. Stamens 1.2–1.7 cm, equal; filaments glabrous, abruptly dilated from middle to apex. Style very short. Fl. May–Jun.

Gravelly places, dry slopes. NW Xinjiang [Kazakhstan, Kyrgyzstan].

7. **Tulipa altaica** Pallas ex Sprengel, Syst. Veg. 2: 63. 1825.

阿尔泰郁金香 阿尔泰郁金香

Bulb ovoid, slightly elongate apically, 2–3.5 cm in diam.; tunic brown, papery, appressed hairy inside or glabrous at middle. Stem 10–30(–35) cm, distally pubescent. Leaves usually 3 or 4, grayish green, ovate to lanceolate, varying in size, not overtopping flower, 0.6–3(–5) cm wide, glabrous or ± pubescent, margin sometimes crisped. Flower solitary. Tepals yellow,
abaxially tinged with greenish purple-red or pink, oblong to oblong-rhomboidal, 2–3.5 × 0.5–2 cm. Stamens glabrous, attenuate from base. Style very short. Capsule broadly ellipsoid, 2.5–4 × 1.5–2 cm. Fl. May, fr. Jun–Jul. 2n = 24.

Thickets, sunny slopes; 1300–2600 m. NW Xinjiang [Kazakstan, Russia (W Siberia)].

新疆郁金香 xin jiang yu jin xiang

Bulb ovoid, elongate apically, 1–1.5(–2.2) cm in diam.; tunic papery, densely appressed hairy inside except at middle. Stem simple or rarely branched, (6–)9–15 cm, glabrous or occasionally minutely pubescent distally. Leaves 3, crowded, narrowly ovate-oblong to linear, 4–6 × 0.2–1.6 cm, sometimes apically recurved or cirrose, distal one much smaller than others. Flower solitary. Tepals yellow, dark red, or reddish yellow, oblong to oblong-lanceolate, 1.5–3 cm × 4–10 mm; outer ones abaxially tinged with purple, dark purple, or yellowish green; inner ones streaked with dark color. Stamens equal, 7–10 mm; filaments glabrous, gradually dilated from base. Style 1.5–2 mm. Fl. Apr–May.

- Gravelly and sandy places; 1000–1300 m. Xinjiang [N Tian Shan].

垂蕾郁金香 chui lei yu jin xiang

Bulb ovoid, slightly elongate apically, 1–1.5 cm in diam.; tunic brown, papery, ± appressed hairy inside, sometimes glabrous toward base. Stem 10–25 cm, glabrous. Leaves 2 or 3, spaced, linear-lanceolate or lanceolate, scarcely or slightly overtopping flower, 0.4–2 cm wide. Flower solitary, nodding in bud or when withered. Tepals white, yellow at base, oblong to lanceolate, 1.5–3 cm × 4–10 mm; outer ones abaxially tinged with purplish green or pale green; inner ones longitudinally streaked with purplish green or pale green at center, clawed and hairy at base. Inner stamens slightly longer than outer ones; filaments dilated proximally, hairy at base. Style ca. 1 mm. Capsule subglobose, ca. 1.5 cm in diam. Fl. and fr. Apr–Jun. 2n = 24.

Grassy slopes, Artemisia deserts. N and W Xinjiang [Afghanistan, Kazakstan, Pakistan, Russia, Turkmenistan, Uzbekistan; NE Africa (Egypt), SW Asia, SE Europe].


毛蕊郁金香 mao rui yu jin xiang


Bulb ovoid, 1–1.2(–1.5) cm in diam.; tunic papery, ± appressed hairy inside distally, rarely glabrous. Stem 10–15 cm, glabrous. Leaves 2, spaced, linear, 0.5–1.5 cm wide. Flower solitary. Tepals milky white or pale yellow, lanceolate to oblong-ovate, 2–2.2 cm × 5–10 mm; outer ones abaxially tinged with purplish green; inner ones abaxially longitudinally streaked with purplish green at center, clawed and hairy at base. Inner stamens slightly longer than outer ones; filaments wholly hairy, rarely so only at base. Style ca. 2 mm. Fl. Apr. 2n = 24, 48.

- Sunny slopes; 1800–3200 m. W Xinjiang [Kazakstan, Kyrgyzstan, Tajikistan, Uzbekistan].


异叶郁金香 yi ye yu jin xiang


Bulb ovoid, slightly elongate apically, 1–1.4 cm in diam.; tunic brown or blackish brown, papery, glabrous inside. Stem 9–15 cm, glabrous. Leaves 2, opposite, linear or linear-lanceolate, not overtopping flower, 4.5–5.5 cm × 2–4 mm, glabrous. Bracts absent. Flower solitary. Tepals yellow, lanceolate, 2–3 cm × 4–8 mm; outer ones abaxially tinged with purplish green; inner ones abaxially broadly streaked with purplish green at center. Stamens equal; filaments glabrous. Style 4–6 mm. Capsule narrowly ellipsoid, 2.5–3 cm × 6–8 mm, apex long beaked. Fl. Jun, fr. Jul.

- Gravelly slopes, sunny places; 2100–3100 m. Xinjiang [Kazakstan, Kyrgyzstan].


单花郁金香 dan hua yu jin xiang


Bulb ovoid, 1–2 cm in diam.; tunic blackish brown, papery, appressed hairy inside distally. Stem 10–20 cm, glabrous. Leaves 2(0–3), much spaced or ± crowded, narrowly linear-lanceolate or linear, not or slightly overtopping flower, 0.2–1.5

cm wide, glabrous. Flower solitary. Tepals yellow; outer ones abaxially tinged with purplish green or dark violet, ob lanceolate to obovate or lanceolate to oblong, 1.5–3 cm × 4–8 mm; inner tepals abaxially longitudinally streaked with purplish green at center, wider than outer ones, clawed at base. Inner stamens slightly longer than outer ones; filaments dilated proximally, gradually attenuate toward apex, glabrous. Style ca. 4 mm. Fl. May–Jun. 2n = 24.

Thickets, sunny gravelly slopes; 1200–2400 m. Nei Mongol, Xinjiang [Kazakhstan, Mongolia, Russia].

Reports of Tulipa heteropetala Ledebour from China (e.g., in FRPS) are based on misidentified plants of T. uniflora.