

1. MONOCHORIA C. Presl, Reliq. Haenk. 1: 127. 1827.

雨久花属 yu jiu hua shu

Gomphima Rafinesque.

Herbs paludose or aquatic, perennial or under unfavorable conditions annual. Stems erect or creeping. Leaves radical from vegetative stem, solitary from flowering stems, curvined. Inflorescences racemose or subumbelliform, enveloped in broad leaf sheaths when young; peduncle bracteate at base; bract large. Flowers subsessile or shortly pedicellate; perianth segments free nearly to base, spreading during anthesis and afterward spirally contorted, inner segments wider than outer. Stamens 6, inserted at base of perianth, dimorphic: 1 with filament long, laterally with an erect, oblique tooth, anther basifixed, blue, large; other 5 subequal, anthers basifixed, yellow, small. Ovary 3-loculed; ovules numerous per locule. Style filiform; stigma subentire or minutely 3-lobed. Capsule loculicidal, 3-valved. Seeds small, longitudinally winged, transversely striate.

Eight species: tropical and subtropical Africa, Asia, and Australia; four species in China.

- 1a. Flowering stems usually 12–35 cm; inflorescences reflexed after anthesis 4. *M. vaginalis*
- 1b. Flowering stems usually 30–200 cm; inflorescences remaining erect after anthesis.
 - 2a. Leaf blade broadly cordate to ovate-cordate, 4–10 cm, basal lobes rounded 1. *M. korsakowii*
 - 2b. Leaf blade sagittate or hastate to triangular-ovate, 5–35 cm.
 - 3a. Peduncle distinctly shorter than associated leaf petiole 2. *M. hastata*
 - 3b. Peduncle longer than associated leaf petiole 3. *M. elata*

1. *Monochoria korsakowii* Regel & Maack in Regel, Mém. Acad. Imp. Sci. Saint Pétersbourg, sér. 7, 4(4): 155. 1861.

雨久花 yu jiu hua

Monochoria vaginalis (N. L. Burman) C. Presl ex Kunth var. *korsakowii* (Regel & Maack) Solms.

Herbs aquatic, glabrous. Vegetative stems stout. Leaves radical or alternate and cauline. Radical leaves to 30 cm; leaf blade broadly cordate to ovate-cordate, 4–10 × 3–8 cm, densely veined, base cordate with basal lobes rounded, margin entire, apex acute to acuminate. Flowering stems erect, 30–70 cm, base sometimes purplish red. Inflorescences remaining erect after anthesis, racemose to panicle, 10–20-flowered or more. Pedicels 5–10 mm. Perianth segments blue, elliptic, 1.2–2 cm, apex obtuse. Larger stamen: filament appendaged; anther 4–5.2 mm. Smaller stamens: filament filiform; anthers 2.5–3.5 mm. Capsule narrowly ovoid, 1–1.8 cm. Seeds 1.1–1.4 mm; wings 8–10. Fl. Jul–Aug, fr. Sep–Oct.

Pools, rice fields, banks of lakes. Anhui, Hebei, Heilongjiang, Henan, Hubei, Jiangsu, Jilin, Liaoning, Nei Mongol, Shaanxi, Shandong, Shanxi [Indonesia, Japan, Korea, Pakistan, Russia (Siberia), Vietnam].

The entire plant is frequently used as feed for poultry and live-stock.

2. *Monochoria hastata* (Linnaeus) Solms in A. de Candolle & C. de Candolle, Monogr. Phan. 4: 523. 1883.

箭叶雨久花 jian ye yu jiu hua

Pontederia hastata Linnaeus, Sp. Pl. 1: 288. 1753; *Monochoria dilatata* (Buchanan-Hamilton) Kunth; *M. hastifolia* C. Presl, nom. illeg. (included *P. hastata*); *M. sagittata* (Roxburgh) Kunth; *P. dilatata* Buchanan-Hamilton; *P. sagittata* Roxburgh.

Herbs perennial, aquatic. Vegetative stems often long and robust. Radical leaves with sheath broadened at base; petiole 30–90 cm; leaf blade triangular or triangular-ovate, 5–15(–25) × 3–15 cm, base sagittate to hastate, apex acute to acuminate.

Flowering stems erect or obliquely so, 50–90 cm; leaf petiole 7–10 cm. Inflorescences erect or suberect, remaining so after anthesis, subumbellate to shortly racemose, 10–40-flowered; peduncle distinctly shorter than associated leaf petiole. Pedicels 1–3 cm. Perianth segments bluish with green median vein and reddish blotch, ovate, 1–1.6 cm. Larger stamen: anther 5.3–6.5 mm. Smaller stamens: filaments filiform; anthers 3–4 mm. Style densely and shortly spreading hairy at apex. Capsule oblong, ca. 1 cm. Seeds brown, oblong; wings ca. 10. Fl. Aug, fr. Mar.

Pools, rice fields, ditches; 100–700 m. Guangdong, Guizhou, Hainan, Yunnan [Bhutan, Cambodia, India, Indonesia, Malaysia, Myanmar, Nepal, Sri Lanka, Vietnam].

3. *Monochoria elata* Ridley, J. Straits Branch Roy. Asiat. Soc. 79: 99. 1918.

高葶雨久花 gao ting yu jiu hua

Monochoria valida Wang & Nagamasu.

Herbs perennial, aquatic. Vegetative stems rhizomatous. Radical leaves with sheath broadened at base; petiole 0.4–1.7 m; leaf blade 10–35 × 1–15 cm, base sagittate to hastate with basal lobes to 11 cm, apex acuminate. Flowering stems erect, to 2 m; leaf petiole 4–18 cm; spathe ca. 4.5 cm. Inflorescences remaining erect after anthesis, racemose, 20–110-flowered; peduncle longer than associated leaf petiole. Pedicels to 3 cm. Perianth segments purplish blue, ca. 1.6 cm. Larger stamen: anther 6–10 mm. Smaller stamens: filaments filiform; anthers 3.5–6 mm. Style subequaling longest stamen. Capsule oblong, ca. 1.2 cm. Seeds brown, ovoid, 0.7–0.8 mm; wings ca. 10. Fl. Aug, fr. Mar.

Pools, rice fields, ditches. S China [Malaysia, Myanmar, Thailand].

4. *Monochoria vaginalis* (N. L. Burman) C. Presl ex Kunth, Enum. Pl. 4: 134. 1843.

鸭舌草 ya she cao

Pontederia vaginalis N. L. Burman, Fl. Indica 80. 1768; *Boottia mairei* H. Léveillé; *Monochoria linearis* (Hasskarl) Miquel; *M. ovata* Kunth; *M. vaginalis* var. *pauciflora* (Blume) Merrill; *M. vaginalis* var. *plantaginea* (Roxburgh) Solms; *P. linearis* Hasskarl; *P. ovata* Hooker & Arnott (1837), not Linnaeus (1753); *P. pauciflora* Blume; *P. plantaginea* Roxburgh.

Herbs aquatic. Stems erect or obliquely so. Radical leaves with broad sheath; petiole 3–50 cm; leaf blade narrowly cordate, broadly or narrowly ovate, or lanceolate, 2–21 × 0.8–10 cm, apex acute to acuminate. Flowering stems 12–35 cm. Inflorescences soon reflexed after anthesis, 3–8(–12)-flowered; peduncle 1–3 cm, base bracteate; bract lanceolate. Flowers pedicellate. Perianth segments purplish, ovate-lanceolate to oblong, 0.8–1.5 cm. Larger stamen: filament appendaged; anther 1.8–4 mm. Smaller stamens: filaments filiform; anthers 1.5–3 mm. Capsule ovoid to ellipsoid, 0.7–1 cm. Seeds ellipsoid, ca. 1 mm; wings 8–12. Fl. Aug–Sep, fr. Sep–Oct.

Rice fields, ditches, ponds, swamps; near sea level to 1500 m. Throughout China [Bhutan, Cambodia, India, Indonesia, Japan, Korea, Laos, Malaysia, Myanmar, Nepal, Pakistan, Philippines, Russia (Siberia), Sri Lanka, Thailand, Vietnam; Africa, Australia].

The stems and leaves are used as a vegetable.

