Herbs annual or perennial, aquatic, floating or rooting in substrate. Roots fibrous. Vegetative stems short or creeping, thick. Leaves rosulate or distributed along stem, distichous; petiole mostly distinct, sometimes inflated; leaf sheath usually present; leaf blade emersed or submersed, broadly ovate, lanceolate, or broadly linear, sometimes completely reduced, stomata paracytic. Flowering stems erect, solid, terminating in a leaf, spathe, and inflorescence. Inflorescences paniculate, racemose, spicate, umbellate, or 1-flowered, subtended by a spathe-like or tubular leaf sheath; bracts minute or absent. Flowers bisexual, mostly actinomorphic, sometimes zygomorphic. Perianth segments 6, in 2 whorls, petaloid, free or basally connate into a tube. Stamens usually 6 in 2 whorls, rarely 3 or 1, inserted on perianth, often unequal or dissimilar; filaments slender, free; anthers 2-loculed, introrse, dehiscing by longitudinal slits or rarely by pores; pollen grains 2- or 3-nucleate, colpi 1 or 2(3), distal or subequatorial. Ovary superior, 3-loculed and placentation axile or 1-loculed and placentation parietal; ovules numerous per locule or 1 and pendulous, anatropous. Style 1; stigma capitate or minutely 3-lobed. Fruit a 3-valved capsule or indehiscent. Seeds small, longitudinally ribbed or smooth; endosperm copious, mealy; embryo central in seed, straight, terete.

Six genera and ca. 40 species: widespread in tropical and subtropical regions; two genera (one introduced) and five species (one introduced) in China.


1a. Flowers distinctly pedicellate; perianth actinomorphic, segments free nearly to base, all essentially uniform in color; stamens 6, 1 usually longer than others; petiole not inflated .......................................................... 1. Monochoria

1b. Flowers sessile; perianth zygomorphic, segments basally united into a tube, apical lobe with a discolorous blotch; stamens 6, 3 much longer than others; petiole inflated ................................................................. 2. Eichhornia


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, curvinerved. 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 ribbed or smooth; endosperm copious, mealy; embryo central in seed, straight, terete.

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

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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 to alternate and cauline. Radial 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 paniculate, 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: filaments 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 livestock.


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. Radial 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].


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].


鸭舌草  ya she cao

Pontederia vaginalis N. L. Burman, Fl. Indica 80. 1768; Bootia mairei H. Léveillé; Monochoria linearis (Hassk) Miquel; M. ovata Kunth; M. vaginalis var. pauciflora (Blume) Merrill; M. vaginalis var. plantaginea (Roxburgh) Solms; P. linearis Hassk.; 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.

2. EICHHORNIA Kunth, Eichhornea, 3. 1842, nom. cons.

风眼蓝属  feng yan lan shu

Piaropus Rafinesque, nom. rej.

Herbs annual or perennial, aquatic, floating or creeping, rooting from nodes. Leaves rosulate or alternate; petiole long, rarely flattened; leaf blade cordate, broadly ovate-rhomboid, or linear-lanceolate. Inflorescences terminal, erect during anthesis but then reflexed, pedunculate, spiciform or paniculate, 2–to many flowered. Flowers zygomorphic or subactinomorphic. Stamens 6, inserted on proximal part of perianth, often 3 longer and 3 shorter; filaments filiform, hairy; anthers dorsifixed, oblong. Ovary sessile, 3-
loculed; ovules numerous per locule. Style filiform, curved; stigma slightly dilated or very shortly 3- or 6-lobed. Capsule ovoid, oblong, or linear-fusiform, included in marcescent perianth tube; pericarp membranous. Seeds numerous, longitudinally winged, cross striate.

Seven species: mainly in tropical America, one species in tropical Africa; one species (introduced) in China.


风眼蓝  feng yan lan


Herbs floating, 0.3–2 m. Roots many, long, fibrous. Stems very short; stolons greenish or purplish, long, apically producing new plants. Leaves radical, rosulate; petiole yellowish green to greenish, 10–40 cm, spongy, usually very much swollen at or below middle; leaf blade orbicular, broadly ovate, or rhomboidal, 4.5–14.5 × 5–14 cm, leathery, glabrous, densely veined, base shallowly cordate, rounded, or broadly cuneate. Inflorescences bracteate, spirally 7–15-flowered; peduncle 35–45 cm. Perianth 6-parted, segments purplish blue, petaloid, ovate to elliptic, upper one larger with yellow blotch at center adaxially, others subequal but lower one narrower. Stamens 6, 3 long and 3 short; filaments curved, glandular hairy. Pistil heterostylous; stigma glandular hairy. Capsule ovoid. Fl. Jul–Oct, fr. Aug–Nov.

Naturalized, growing gregariously in pools, ditches, and rice fields; 200–500 m. Anhui, Fujian, Guangdong, Guangxi, Guizhou, Hainan, Hebei, Henan, Hunan, Jiangsu, Jiangxi, S Shandong, Shanxi, Sichuan, Taiwan, Yunnan, Zhejiang [native to Brazil; widely introduced and naturalized in tropics and subtropics].

The entire plant is used for fattening livestock, and as green manure. The young leaves and petioles are sometimes used as a vegetable.