

## 1. SPIRODELA Schleiden, Linnaea 13: 391. 1839.

紫萍属 *zi ping shu*

Fronds free floating, 1–10 individuals coherent together, shiny green on upper surface, usually red on lower surface, outline usually asymmetric, flat on upper surface, rarely slightly gibbous on lower surface; 2 lateral pouches for reproducing daughter fronds and flowers present at base, bases of pouches surrounded by a small membranous scale covering bases of roots; veins 7–16(–21), splitting from node toward apex, sometimes visible on upper surface. Pigment cells present (visible in dried fronds as brown dots). Roots (5–)7–21, surrounded by a tubular sheath at base, enclosed by a rounded to pointed cap at apex. Daughter fronds connected to mother frond by a thin white stipe. Flower surrounded by a small, utricular, membranous scale with a narrow opening at apex; stamens 2, 4-locular. Seeds 1–3, ribbed longitudinally.

Two species: one species worldwide, the other restricted to Central and South America; one species in China.

**1. *Spirodela polyrhiza*** (Linnaeus) Schleiden, Linnaea 13: 392. 1839.

紫萍 *zi ping*

*Lemna polyrhiza* Linnaeus, Sp. Pl. 2: 970. 1753.

Fronds obovate to orbicular, 3–10 mm, 1–1.5 × as long as wide, flat, rarely gibbous, sometimes with indistinct papillae on upper surface along veins. Roots (5–)7–21, 1(or 2) perforating scale, 0.5–3 cm. Turions sometimes present, without roots, brownish to olive, orbicular to reniform, 1–2 mm. Ovary with 1 or 2 ovules. Fruit laterally winged toward apex. Seed with 12–20 ribs. Fl. (very rare) Jun–Sep.  $2n = 30, 32, 38, 40^*, 50, 80$ .

Ponds, lakesides, rice fields, pools, ditches; not seen in regions with cool summers; sea level to 2900 m. Anhui, Fujian, Guangdong, Guangxi, Guizhou, Hebei, Heilongjiang, Henan, Hubei, Hunan,

Jiangsu, Jiangxi, Jilin, Liaoning, Qinghai, Shaanxi, Shandong, Shanxi, Sichuan, Taiwan, Yunnan, Zhejiang [worldwide].

A variety, *Spirodela polyrhiza* var. *masonii* Daubs was proposed for the ecotype, which has gibbous fronds. This variety, however, occurs only rarely throughout the whole distribution range, so the use of this name is not systematically necessary.

*Spirodela polyrhiza* is used as a Chinese medicinal herb for diuretic effect, for reducing swelling, and for reducing perspiration.

