

MENYANTHACEAE BUCKBEAN FAMILY

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Perennial, rhizomatous, aquatic or bog plants. LEAVES simple or trifoliolate. INFLORESCENCES racemes, cymes, or umbels. FLOWERS perfect, regular; calyx deeply 5-parted; corolla rotate or funnellform, 5-lobed or parted; stamens 5, epipetalous; pistil 2-carpelled, the ovary 1-loculed, superior to partially inferior. FRUITS capsules, sometimes tardily dehiscent. SEEDS usually many, smooth or papillate. —5 genera, ca. 30 spp., both tropical and temperate regions.

1. Bog plants, not submerged; leaves trifoliolate; inflorescences racemes *Menyanthes*
- 1' Submerged aquatics, with leaves floating, with flowers floating or elevated; leaves simple; inflorescences umbels *Nymphoides*

Menyanthes L. Buckbean

Perennial semi-aquatic marsh or bog herbs with a creeping rootstock. LEAVES alternate, compound with 3 leaflets; petioles 5-20 cm long with enlarged sheathing bases; leaflets oval or oblong, entire, 2-8 cm long with acute to obtuse apices. INFLORESCENCES erect racemes ca. 10-20 cm long with elongated naked peduncles. FLOWERS on slender pedicels; calyx tube obconic, the lobes 3-5 mm long; corolla white, the tube about as long as the calyx, the lobes 5-8 mm long, the inner surfaces bearded with many thickened hairs; stamens erect, the filaments long, slender in one form, the other with short, stout filaments; pistil ovate, the stigmas 2, the style short if the filaments are elongate and long when anthers are nearly sessile. FRUIT ellipsoid, ca. 8-10 mm long. SEEDS glossy light brown, 2.5 mm long, slightly flattened. $2n = 54$. A monotypic genus of circumboreal distribution - rare in AZ. (Greek *menycin* = disclosing + *anthos* = a flower, with reference to the gradually expanding flowers in the raceme). Lindsay, A. A. 1938. *Amer. J. Bot.* 25:480-485.

Menyanthes trifoliata L. (three leaved, referring to leaflets). —Known only from Woolsey Lake and Lone Pine Lake, Apache co.; 2150-2300 m (7100-7500 ft); May; CA, CO and n.

Nymphoides Hill Floating Heart

Perennial, submersed rhizomatous herbs with thin petiole-like branches (stolons) bearing 1 to several nodes. LEAVES floating, suborbicular, 1 or 2 per node of stolon. INFLORESCENCE umbels at leaf bearing nodes. FLOWERS floating or elevated above the water; buds submerged; corolla rotate, deeply lobed, the lobes fringed and bearing a glandular appendage near the base; ovary ellipsoid, the apex tapering to the short style; stigma 2 lobed, persistent. FRUIT a tardily dehiscent, submerged, capsule. SEEDS smooth to papillate, the coat hard. —Ca. 20 spp. temperate and tropical regions. (*Nymphaea*-like).

Nymphoides peltatum (S.G.Gmel.) Britten & Rendle (peltate, referring to leaves). Yellow Floating Heart.—Rhizome stout, extensively creeping and branching; fertile stem (stolon) 2-3 mm in diameter. LEAVES 2 per node of stolon, usually unequal, coarsely undulate dentate, to ca. 15 cm in diameter. FLOWERS yellow, on pedicels 6 cm or more long; corolla 2-2.5 cm long. SEEDS flat, narrowly winged, ciliate on the margins. $2n = 54$.—Known from only 1 ranch

pond, n of Nogales, Santa Cruz co.; 1100 m (3600 ft); Sep-Oct; European plant, cultivated in e U.S. and occasionally becoming established in ponds, lakes and slow flowing streams. Apparently introduced in AZ when French frogs were introduced into the pond. This population may have been planted, and its inclusion is questionable.



Menyanthaceae Fig. 1. *Menyanthes trifoliata*. Reproduced from *An Illustrated Flora of the Northern United States and Canada* by N. L. Britton and A. Brown (1913). Habit $\times 0.65$.

