2. NYMPHAEA L. Water-lily

Leaf-blades floating, circular with a sinus, rarely sagittate, long-petioled; flowers large, on long flexible peduncles; sepals 4, green; petals and stamens many, inserted on sides of ovary, outer ones white or pink and obviously petals, inner ones obviously stamens; a zone of intergrades between petals and stamens, the outer of which are more petallike, the inner of which are more stamenlike; carpels many, united, ovary subglobose, many-loculed; radiating stigmas many.

1. Nymphaea odorata Aiton

Water-lily, White-pond-lily

Flowers white, fragrant; leaves rotund, with a narrow sinus; sepals green; petals and stamens numerous, inserted on sides of ovary.

REFERENCE: Riddell 1834:117 (standing pools).

HERBARIUM RECORDS: 21 May 1986—OSU, Mirror Lake, Blanco; 6 Jul & 10 Aug 1992—Pickerington Ponds, wetland wildlife area, just S of Wright Rd., & E of Bowen Rd., Madison Twp., Lowden 4981 & 5019.

NOTE: Sullivant 1840:7 and Selby & Craig 1890:7 reported on plants collected in adjacent counties.

CABOMBACEAE, Water-Shield Family

Aquatic herbs; plants with long, slender, leafy, distally floating stems in addition to the rhizomes, with or without floating leaf-blades, often some or all of the leaves submersed and dissected; flowers perfect, regular, hypogynous; sepals and petals 3 each, petaloid, free and distinct; stamens 3-18; carpels distinct; ovules and seeds 2 or 3.

1. BRASENIA Schreb. Water-shield

Stems elongate, branching; leaves peltate, blades elliptic, to 10 cm long, floating; flowers axillary, long-peduncled; sepals usually 3; petals dull-purple, usually 3, 1-1.5 cm long, separate; stamens several to many; 1-2-seeded carpels 4 or more, separate, clavate and indehiscent in fruit.

1. Brasenia schreberi J.F.Gmel.

Water-shield

Hornwort, Coontail

Submerged parts covered with mucilaginous jelly; leaves long-petioled, floating; blades peltate, elliptic and entire; flowers dull purple, stamens 12-18.

HERBARIUM RECORDS: 1840-Cols., Sullivant; 31 May 1922-Baumgardner's Lake, J. H. Schaffner.

CERATOPHYLLACEAE, Hornwort Family

1. CERATOPHYLLUM L. Hornwort, Coontail

Submersed aquatics; stems elongate, branched; leaves whorled, sessile, dichotomously dissected into filiform, often toothed, divisions; monoecious; flowers minute, hypogynous, monosporangiate, solitary in axils; calyx (or calyxlike involucre) cut into 8-14 divisions; corolla none; stamens 10-20; carpel l, style slender; ovule l; fruit indehiscent.

a Leaves forked mostly 1-2 times; fruit ovoid, with 1 terminal spine and 2 lateral spines near base. 1. C. demersum

a' Leaves forked mostly 2-4 times; fruit slightly flattened with several lateral spines; apparently rare. 2. C. echinatum

1. Ceratophyllum demersum L.

Plants submersed; leaves forked 1-2 times, segments conspicuously serrate on one side; fruit with 1 terminal and 2 basal spines.

REFERENCES: Riddell 1834:120 (standing pools); Craig 1890:103 (abundant in the lake); Kellerman & Werner 1893:226 (this plant was not seen ... Mr. Craig said the plant he referred to as this species was something else).

HERBARIUM RECORDS: [ca. 1834]—Cols., Lapham (CINC); 1839—Olentangy [R.], J. Paddock Collection (ILL); 22 Sep 1985—Highbanks Metro Park (Delaware Co.). Olentangy R., Witsberger 856 (OWU); 13 Oct 1991—W bank of the Olentangy R., swampy area just N of Lane Ave. bridge & S of the Fawcett Center for Tomorrow, Clinton Twp., Lowden 4882; 6 Jul 1992—Pickerington Ponds, wetland wildlife area, just S of Wright Rd. & E of Bowen Rd., Madison Twp., Lowden 4983; 14 Sep 1992—Pickerington Ponds, just S of Wright Rd., Madison Twp., Lowden 5036.

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2. †Ceratophyllum echinatum A.Gray

Hornwort, Coontail, Prickly Hornwort

Plants submersed; leaves forked 2-4 times, segments appearing entire; fruits with several lateral spines. REFERENCES: Riddell 1834:120 (*Ceratophyllum submersum*, standing pools); Riddell 1835:45 (*Ceratophyllum submersum* L., Worthington, standing pools); Sullivant 1840:22; Selby & Craig 1890:15 (*Ceratophyllum demersum* L. var. echinatum A.Gray); Stuckey & Roberts 1977:34. HERBARIUM RECORD: 4 Jun 1931—Westerville, 2 mi. SW, *Hicks*.

RANUNCULACEAE, Buttercup Family

Usually herbs; leaves usually alternate, often all basal, often compound or deeply divided; flowers hypogynous, bisporangiate or rarely monosporangiate; perianth regular or rarely zygomorphic; sepals present, separate, sometimes petaloid, sometimes early deciduous; petals absent or present and separate; staminodia sometimes present; stamens many or rarely few; carpels many to few, separate, fruit then an aggregate of achenes, follicles, or berries; or carpels rarely united, fruit then a capsule; or carpel 1, fruit then a berry or a follicle.

Garden ornamentals not described here include †*Aconitum noveboracense* A.Gray (New York Monkshood), *Eranthis hyemalis* (L.) Salisb. (Winter Aconite), *Nigella damascena* L. (Love-in-a-mist), and the genus *Paeonia* L. (Peony).

- a Perianth zygomorphic.
 - b Upper sepal spurred, upper petals with spurs extending into spur of sepal. 5. DELPHINIUM
 - b' Upper sepal hooded or saccate, 2 small long-clawed petals under the hood. ACONITUM L.
- a' Perianth regular.

c Petals spurred. 10. AQUILEGIA

- c' Petals absent, or present and not spurred.
 - d Leaves simple, not lobed; flowers yellow.
 - e Petals none, sepals petal-like; leaf-blades reniform; fruit an aggregate of few to several follicles. 1. CALTHA
 - e' Petals and sepals present, petals with a nectar pit or scale on upper surface near base; leaf-blades narrow or cordate-ovate; fruit an aggregate of achenes. 9. RANUNCULUS
 - d' At least some leaves lobed or compound; flowers yellow or not yellow.
 - f Leaves all basal, simple, 3-lobed; a calyxlike involucre immediately beneath flower; carpels sessile or nearly so. 7. HEPATICA
 - f' Cauline leaves present, alternate, opposite, or whorled.
 - g Climbing vines; leaves opposite; sepals usually 4, petals small or none. 8. CLEMATIS
 - g' Not vines.
 - h Leaves of stem opposite or whorled, subtending the peduncle or peduncles.
 - i Carpels pubescent; leaves palmately divided. 6. ANEMONE
 - i' Carpels glabrous; basal leaves ternately decompound, stem-leaves simple to decompound.
 12. ANEMONELLA
 - h' Leaves of stem alternate, or only 1 present.
 - j Petals and sepals present; petals yellow or rarely white, each with a nectariferous pit or scale on upper surface near base; staminodes absent; carpels becoming achenes.
 9. RANUNCULUS
 - j' Sepals present; petals neither yellow nor with a nectariferous pit or scale; <u>or</u> petals absent; sometimes small structures (here called staminodes, sometimes called petals) present between sepals and stamens, these sometimes nectariferous.
 - k Leaves decompound.
 - Flowers small, in racemes or panicles.
 - m Flowers in short racemes; petals white; carpel single; fruit a berry. 4. ACTAEA
 - m' Flowers in elongate racemes or in large panicles; petals none.
 - n Flowers often monosporangiate, in large panicles; carpels several, becoming achenes. 13. THALICTRUM
 - n' Flowers bisporangiate, in simple or branched racemes; carpel usually 1, becoming a follicle; staminodes usually present. 3. CIMICIFUGA

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