

Vascular Plants of Williamson County

Myriophyllum heterophyllum – COMMON MILFOIL, TWO-LEAF MILFOIL, COONTAIL
[Haloragaceae]

Myriophyllum heterophyllum Michx., COMMON MILFOIL, TWO-LEAF MILFOIL, COONTAIL. Aquatic perennial herb, evergreen, fibrous-rooted, mostly submersed with fertile shoots at and elevated above water, branches widely spaced; monoecious or also with several bisexual flowers; shoots with only cauline leaves, on submersed vegetative shoots with deeply, feathery finely dissected (pectinate), flexible foliage, glabrous; adventitious roots nodal, on old, buried, horizontal stems often purplish and sometimes having green nodal roots along flowering shoot. **Stems:** cylindrical, 2 mm diameter, nongreen often pinkish, internodes 3–9 mm; internodes with long air canals. **Leaves:** mostly whorled of 5 (some whorls with 1–2 leaves irregularly attached), finely odd-1-pinnately dissected and sessile, with stipulelike projection on bases of leaves; stipulelike structures = a pair of ascending projections 0.4–0.5 mm long, with enlarged green base and a colorless point; blades in outline 15–25 × 10 mm, with fine, threadlike (cylindric) lobes evenly spaced and ascending from straight leaf axis, alternating along axis, 3–15 mm long, having a colorless, minute projection in axil of leaf lobe, often with inconspicuous, minute teeth on some lobe margins. **Inflorescence:** leafy spike, terminal and emergent, having successive whorls of pistillate flowers, commonly with several bisexual flowers and approaching tip staminate flowers, whorls with a single flower axillary to 5 leaflike bracts, glabrous; bracts in whorl elliptic to ovate or at the lowest node ± pinnately toothed, 5–10 × 2.5–3 mm, cupped downward and spreading-decumbent, conspicuously serrate, acute at tip, pinnately veined; bractlets 2 in opposite, lateral pair appressed at base of each flower, ovate somewhat cupped, 0.7–0.9 × 0.65–0.7 mm, translucent aging reddish, jagged-serrate. **Bisexual flower:** radial, 1 mm across; **sepals** 4, appressed, acute, 0.7–0.8 × 0.35 mm, colorless with red midstripe, persistent; **petals** obovate, 2 × 1.2–1.3 mm, colorless aging reddish; **stamens** 4, free, subsessile, cupped by petals; filaments < 0.3 mm long, colorless aging reddish; anthers basifixed, dithecal, ca. 1.5 mm long, pale yellow, disintegrating; pollen pale yellow; **pistil** 1; ovary inferior, 4-lobed, 0.6 × 0.8 mm, green, 3-chambered, each chamber with 1 ovule; stigmas 4, arched outward, ca. 0.3 mm long, conspicuously papillate. **Staminate flower:** radial, < 1 mm across; **sepals** 4, appressed, acute, 0.7–0.8 × 0.35 mm, colorless with red midstripe, persistent; **petals** obovate, 2 × 1.2–1.3 mm, colorless, early abscised; **stamens** 4, free, subsessile, cupped by petals; filaments < 0.3 mm long, colorless aging reddish; anthers basifixed, dithecal, ca. 1.5 mm long, pale yellow, disintegrating; pollen pale yellow; **pistil** absent. **Pistillate flower:** radial, < 1 mm across; **sepals** 4, appressed, acute, 0.7–0.8 × 0.35 mm, colorless with red midstripe, persistent; **petals** obovate, 2 × 1.2–1.3 mm, colorless, early abscised; **stamens** absent; **pistil** 1; ovary inferior, 4-lobed, 0.6 × 0.8 mm, green, 3-chambered, each chamber with 1 ovule; stigmas 4, arched outward, ca. 0.3 mm long, conspicuously papillate. **Fruit:** schizocarp, breaking lengthwise into 4 1-seeded mericarps, intact 4-lobed and bell pepper-like (*Capsicum annuum*) and squarish, ca. 1.8 × 1.5 mm, often glossy red and with a whorl of 4 stout prongs (stigmas) curved outward at top, bumpy on outer surface with reddish projecting scars of petals 0.2 × 0.4 mm and ascending triangular sepals 0.4 mm long.

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