

Vascular Plants of Williamson County
Pontederia cordata – PICKERELWEED [Pontederiaceae]

Pontederia cordata L. (if recognized, var. *cordata*), PICKERELWEED. Aquatic perennial herb, clonal, rhizomatous, fibrous-rooted, rosetted, several-stemmed at base, with spreading to ascending branches from base and erect inflorescence, in range < 70 mm tall; shoots with only basal leaves when plants submersed (narrow basal leaves, not observed) or emergent (land basal leaves) and 1 cauline leaf on flowering shoot arising directly from growing tip of submersed rhizome, glabrous; rhizome horizontal, firm, 15+ mm diameter, white, with short internodes; adventitious roots numerous arising mostly on lower side of rhizome and growing through petiole bases. **Stems:** having no aerial stems. **Leaves:** alternate distichous, simple, petiolate, with ligulelike structure; petiole to 350 mm long, tissue spongy with air canals (aerenchyma), sheathing rhizome and previous leaf, sheathing portion to 65 mm long, spongy, ligule often adherent to adjacent petiole, membranous, triangular, to 55 mm long, petiole ca. 60 mm above ligule widely channeled to hemicylindric, from about midpoint cylindric, axis green; blade arrow-shaped to inverted heart-shaped or triangular, in range 100–120 × 50–75 mm, cordate with well-developed semicircular basal lobes or subcordate to truncate at base, entire, obtuse at tip often minutely notched and purple at apex, with arcing parallel veins and midrib somewhat raised on lower surface, surfaces same color green (concolor). **Inflorescence:** spikelike panicle of many 2–5+flowered cymes, roughly cylindric in outline with open flower 20–25 mm across, 100+-flowered, cymes helically alternate, each cyme highly condensed, each plant with 1 type of flower (a population may have 3 types, tristylous), bracteate only at base of inflorescence (spathe), flowering portion shaggy glandular-hairy and somewhat viscid, the hairs to 1.2 mm long; bract subtending peduncle (spathe) appressed, essentially open, to 40 mm long, green, notched at tip with short subterminal point, margins folded over and somewhat veiny (veins not raised), having a membranous triangle of tissue to 1 mm long above node (closed portion); peduncle an anthesis to 45 × 4 mm, green, glabrous, with a fine groove on upper and lower side; rachis strongly ridged, 1 ridge descending from each cyme, with scattered glandular hairs; cyme subsessile; pedicel < 0.5 mm long, green with purplish specks. **Flower:** bisexual, ± radial, 12–14 mm across; **perianth** 6-lobed, 11–12 mm long, after blooming tightly coiled; tube strongly 6-lobed, 2.5 mm long, expanded and thick surrounding ovary, orangish red, with glandular hairs on lower side; throat conspicuously 6-lobed (weakly fused), 6.5 mm long, pale violet, with glandular hairs; lobes of 2 whorls, violet, glandular on outer (lower) surface and glabrous on inner (upper) surface, of outer whorl narrowly obovate, ± 6 × 2 mm, of inner whorl 7 × 3.5 mm, having fewer glandular hairs than outer whorl, lower 2 lobes obovate, upper “petal” ovate rounded at tip and at base of lobe having a conspicuous, glossy patch with 2-lobed yellowish green blotch surrounded by white, ca. 1.8 × 2.5 mm; **stamens** 6, attached to top of corolla tube, dimorphic (upper or distal set and lower or proximal set); filaments of lower set attached to top of corolla tube, arching upward, ± 3.5 mm long, of upper set attached at different levels of corolla throat, < 1 mm long, light violet, glandular hairy and somewhat viscid; anthers versatile, dithecal, 0.6–0.7 mm long, in bud greenish aging purple, longitudinally dehiscent; pollen light yellow; **nectary disc** beneath ovary, ± 0.8 mm long, pale green, nectar-producing; **pistil** 1; ovary superior, narrowly ovoid 3-lobed, 1.5–2 × 0.8 mm, pale green with rose dots, 3-chambered but only 1 chamber with 1 ovule;

style exserted ca. 6 mm above anthers, 3-lobed at base. **Fruit:** utricelike (anthocarp), 1-seeded, surrounded by thick-walled perianth tube; tube somewhat irregular with 4–7 ridges, 6–8 × 4.5–7.5 mm, before drying green and fleshy, easily separate from pericarp, the lengthwise ridges to 3 mm wide and 1.5 mm thick, with to 7 unequal, often blunt teeth (dentate); perianth throat and lobes persistent at top of fruit, coiled and brown. **Seed:** plump D-shaped, ca. 4 × 2.5 × 2.5 mm, brown.

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