

Vascular Plants of Williamson County

Ludwigia peploides subsp. *peploides* – WATER PRIMROSE, YELLOW WATER WEED
[Onagraceae]

Ludwigia peploides (Kunth) P. H. Raven subsp. *peploides* (incl. *L. peploides* subsp. *glabrescens*), WATER PRIMROSE, YELLOW WATER WEED. Aquatic perennial herb, clonal in shallow water, fibrous-rooted, aquatic phase branches floating on water to creeping and ascending on shoreline, < 40 cm tall; shoots to 300 cm long, with cauline leaves, sparsely pubescent to glabrate, not glutinous on young growth; adventitious roots nodal. **Stems:** ± cylindrical, to 6 mm diameter, glossy pale yellowish green, internodes to 35 mm long, often short-pilose, forming a thin woody cylinder; the submerged stems light green tinged pink or rose, with large air cavities (aerenchyma) in cortex. **Leaves:** helically alternate, simple, petiolate, with stipules; stipules 2, attached to base of petiole on raised base, broadly ovate, < 1 mm long, truncate at base, fleshy below midpoint and secreting liquid on new growth, green and orangish below and reddish above midpoint; petiole hemicylindric, to 20 mm long and indistinct from leaf base (leaf to 100 mm long), lower margins sometimes colorless and minutely serrate; blade appearing lanceolate or oblanceolate (obovate) to elliptic or oblong-elliptic, < 25–80 × < 10–25 mm, long-tapered at base, entire and short-ciliate on margins, blunt-acute to obtuse at tip having a small glandular point on the lower surface, conspicuously pinnately veined with midrib raised on both surfaces, surfaces glabrous or with scattered short hairs on the lower surface aging glabrescent.

Inflorescence: flowers solitary and axillary (leafy raceme), essentially glabrous to sparsely short-pilose; pedicel ascending to erect, to 20 × 1.2 mm and spreading in fruit, with 2 subopposite bracteoles at base of ovary, bracteoles initially inverted heart-shaped often with slender tip, ca. 1 × 1 mm, green, aging appressed, cupped, truncate, and purplish red from midpoint, mostly lacking hairs, persistent in fruit. **Flower:** bisexual, radial, 18–26 mm across; hypanthium absent, **nectary** at the base of each stamen, arc-shaped mound bracketing filament on inside and adjacent to other filaments, arc ca. 1.5 × 1.7 mm, pale yellow-orange, densely short-villous (hairs curled toward centerline of mound); **sepals** (4–)5, spreading, acute-triangular, ca. 8–9 × 3–3.5 mm, glossy green often with narrowly crimson margins, 5-veined at base, glabrous or with several short-pilose hairs on lower surface, persistent; **petals** (4–)5, obovate, 14–20 × 7–9 mm, bright yellow (orange-yellow in bud), rounded at top, glabrous or with several short-pilose hairs on lower surface, pinnately veined with fine veins and veins slightly raised on lower surface, easily dislodged; **stamens** (8)10 in 2 whorls, free, unequal within a flower, outer whorl arising touching petals, inner stamens arising between nectaries and 1+ mm > outer stamens; filaments 3.3–3.5 mm long (outer stamens) and 4.2–4.5 mm long (inner stamens), light yellow-orange; anthers exserted, dorsifixed, dithecal, 1.5–2 mm long, anthers of outer stamens < inner stamens, cream-colored, longitudinally and outwardly dehiscent; pollen cream-colored, permanently united in tetrads, sticky and held in a mass by minute threads (viscin threads); **pistil** 1; ovary inferior, straight, weakly 5-angled approaching top, to 13 × 1.5 mm, green or blushed reddish, glabrous, (4–)5-chambered, each chamber packed with a single stack of many ovules; style much thicker than filaments, 6–7 mm long, cylindrical portion 0.6 mm diameter and flared approaching stigma, light yellow-orange; stigma capitate, low (4–)5-lobed with rim around, ca. 0.7–0.8 × 1.5–1.6 mm, light yellow, wet,

exserted just above anthers of inner stamens. **Fruit:** capsule, \pm indehiscent, many-seeded, \pm cylindric, $25\text{--}35 \times 3.5\text{--}4$ mm, straight to somewhat curved, top truncate with (4–)5 U-shaped to crescent-shaped hairy ridges (= persistent nectary), hard with seeds embedded in fruit wall, glabrescent; sepals persistent, ascending to spreading, ovate, to 10.5×4 mm, 5-veined; style abscised. **Seed:** rhomboid-polyhedron, $1.5\text{--}1.9 \times$ ca. 1.5 mm, tan, with mostly flat rectangular faces but roundish ends where seeds touched.

A. C. Gibson