

Vascular Plants of Williamson County

Phyllanthus polygonoides – KNOTWEED LEAF-FLOWER [Euphorbiaceae]

Phyllanthus polygonoides Spreng., KNOTWEED LEAF-FLOWER. Perennial herb (\pm suffrutescent), winter-deciduous, taprooted, not rosetted, many-stemmed at base, clump-forming from woody stems just above the ground, ascending, in range 10–30(–50) cm tall; \pm monoecious (occasionally plants are only staminate or pistillate); shoots with only cauline leaves on slender stems, leaves ascending and loosely appressed, so leaves \pm overlapping, glabrous, foliage somewhat glaucous (especially lower surface of blades); sap somewhat milky, not copious. **Stems:** of young shoots cylindrical, < 1 mm diameter, later with projecting old leaf bases flanked by persistent, dried pairs of stipules; aboveground woody stems ca. 1.5 mm diameter, bark purplish; belowground stems < 4 mm diameter. **Leaves:** helically alternate, simple, petiolate, with stipules; stipules 2, attached on projecting leaf base at base of petiole, each suberect to appressed, acuminate with a clasping basal lobe, 1–2 mm long, white drying purplish red and light brown, clasping lobe rounded on outer margin; petiole cylindrical, < 1 mm long, yellowish green, with a constriction around base (abscission zone); blade oblanceolate to oblong, $1.5\text{--}11 \times 2\text{--}3$ mm, \pm rounded to obtuse at base, entire, acute with short point at tip, pinnately veined with midrib raised slightly on lower surface, lower surface lighter in color (bi-colored). **Inflorescence:** cyme, axillary, of (0)1 pistillate flower and (0)1–4 smaller staminate flowers, glabrous; bractlet subtending pedicel lanceolate to narrowly lanceolate, < 0.5 mm long, white; pedicel at anthesis 2–2.5 mm long, of pistillate flower thicker and increasing in length and curved in fruit. **Staminate flower:** radial, ca. 2 mm across; **perianth (calyx)** 6-lobed, yellow-green; tube cup-shaped, ± 0.25 mm long; lobes scarcely overlapped at base, ascending to spreading, \pm elliptic, $1\text{--}1.3 \times 0.5\text{--}0.7$ mm, central green portion raised and with narrow white margins, lobes scarcely overlapped at base; **nectaries** 6, in whorl outside stamens, \pm circular to oval and pouchlike, ca. 0.3 mm, yellow, nectar-producing; **stamens** 3, fused into columnar, 0.6–0.7 mm long, greenish, 3-branched above midpoint; anthers dorsifixed, dithecal, 0.4 mm long, yellow, longitudinally dehiscent; pollen yellow; **pistil** absent. **Pistillate flower:** radial, ca. 3 mm across; **perianth (calyx)** 6-lobed, yellow-green; tube cup-shaped, ± 0.4 mm long; lobes scarcely overlapped at base, ascending to spreading, ovate, $1.5\text{--}1.8 \times 1$ mm increasing $2\times$ and tightly appressed in fruit, central green portion raised and with narrow white margins, lobes strongly overlapped at base; **nectaries** 6, in whorl, \pm circular to oval and pouchlike, ca. 0.3 mm, yellow, nectar-producing; **stamens** absent; **pistil** 1; ovary superior, oblate, 6-lobed, at anthesis 0.7×0.9 mm, green, 3 grooves deeper, glabrous, 3-chambered, each chamber with 2 ovules; style in slight depression at top, 3-forked with stout base, branches spreading, 0.35–0.4 mm long, greenish; stigmas 2, divergent at tip of branches, short. **Fruit:** capsule, schizocarpic splitting from base upward into units, 6-lobed (grooves not pronounced), 3-chambered, ca. 1.8×3 mm, valves with purplish venation before drying, with persistent style in depression at top; perianth lobes tightly appressed to capsule, with purplish, pinnate venation. **Seed:** wedge-shaped, 3-sided, and D-shaped, 1.2 mm long, dark brown, sides flat and back rounded with elaborate surface texture; hilum linear along narrow (inner) edge.

A. C. Gibson