## Vascular Plants of Williamson County Phytolacca americana – POKEWEED [Phytolaccaceae)

**Phytolacca americana** L. [closest to var. rigida (Small) Caulkins & G. K. Rogers], POKEWEED. Perennial herb, several-stemmed at base, not rosetted, with ascending branches, in range to 180 cm tall; shoots with only cauline leaves, foliage easily wilted when water stressed, with leafy axillary shoot from most nodes, glabrous. **Stems:** with poorly defined broad ridges and furrows, thick-stemmed and often 25+ mm diameter (lower stems), with a pair of winglike ledges extending from each leaf base, glaucous; central tissue ("pith") white, becoming largely hollow by forming horizontal diaphragms, ca. 10 diaphragms per 20 mm of internodes. Leaves: helically alternate (opposite in flowering canopy), simple, petiolate, without stipules; petiole broadly concave with narrow, winglike edges, 20–60 mm long; blade ovate to elliptic, < 90–300 × 40–150 mm, conspicuously asymmetric at base with unmatched tapered tissues, entire but cells somewhat enlarged, obtuse to rounded with short point at tip, pinnately veined with midrib sunken on upper surface and principal veins raised on lower surface. Inflorescence: racemelike, opposite cauline leaf, 40+-flowered, at the basal nodes each branch = cyme with 2–4 flowers, the oldest flower of cyme terminal, 1–2 later flowers on short branchlets but buds mostly aborting, and with a stalked flower at the inflorescence base between bract and principal stalk of flowers also aborting, bracteate, glabrous; bract subtending peduncle absent; peduncle 5-ridged and somewhat flattish on upper side, ± straight and ascending, at anthesis 70+ mm long increasing in fruit; rachis having unequally spaced flowers, ridged, ridges sometimes winglike passing a bract; bract subtending cyme or pedicel along rachis ± awl-shaped with swelling at bottom of midvein, to  $5 \times 1.2$  mm, green with membranous margins, 1-veined; cyme axis at anthesis to 3 mm long, greenish, mostly having a pair of subopposite bractlets, bractlets along cyme awl-shaped, ± 2 mm long, green-striped; pedicel at anthesis to 4 mm long increasing in fruit, white aging green. Flower: bisexual, radial, 5–6 mm across; sepals 5, helically alternate,  $\pm$  rounded to broadly ovate, 3.5–4  $\times$ 2.5–3 mm, outer sepals strongly cupped and green with wide white margins, inner 3 sepals ± white with faint green center; **stamens** 9–10 in whorl (2 opposite each sepal), free; filaments < 1 mm long, white; anthers medifixed turned toward center, dithecal, 1 mm long, white, longitudinally dehiscent; pollen white; **nectary disc** at base of ovary, 2.2 mm across, producing thin nectar at bases of filaments; **pistil** 1; ovary superior, 9–10-lobed, wheel-like with distinct chambers, 2.2 mm across, dark green and white-spotted (crystal aggregates within tissues), each chamber with 1 ovule; styles ascending later suberect, 0.6–0.7 mm long, colorless, stigmatic and papillate on inner side. Fruit: berry, to 10lobed (10-chambered), each developed chamber 1-seeded, oblate,  $4-4.5 \times 6.5-8$  mm, glossy deep purple, pulp juicy and purple-red, on upper side with 10 short, erect styles in a ring around depressed center; calyx of 5 overlapping, cupped sepals appressed to lower side of berry, green with membranous margins; stalks of fruits mostly ⊥ rachis, 6–12 mm long, unbranched or lower axes to 2 lateral branches with bract at base of axis and 1-2 bractlets near midpoint of axis, axis aging fuchsia. Seed: disc-shaped, ca.  $3.5 \times 3 \times 1.5$ mm. black with white hilum.

A. C. Gibson