

Vascular Plants of Williamson County
Ambrosia psilostachya – WESTERN RAGWEED [Asteraceae]

Ambrosia psilostachya DC., WESTERN RAGWEED. Perennial herb, clonal, taprooted and fibrous-rooted from shallow, belowground horizontal axis, not rosetted, 1–several-stemmed at base, with ascending branches forming canopy, in range 30–80 cm tall; monoecious; shoots with only cauline toothed and dissected leaves, foliage with short-hirsute hairs having enlarged basal cells and colorless sessile glandular hairs, aromatic when crushed. **Stems:** low-ridged, to 6 mm diameter, tough becoming woody at base at flowering, pale green to greenish aging striped and woody stem light brown periderm, internodes to 41 mm long, short-strigose to strigose with upward-pointing hairs appressed from enlarged basal cells. **Leaves:** opposite (lower stem) changing to subopposite but mostly helically alternate in most of canopy, pinnately 1–3-dissected, sessile (petiolate by some authors), without stipules; blade in range mostly ovate to lanceolate or linear-narrowly lanceolate (deltate), < 20–80+ × 5–30+ mm, in range with 0–10 primary lobes and teeth, primary lobes below midblade subopposite, mostly acuminate-lanceolate and to 20 mm long, terminal lobe narrowly triangular to narrowly lanceolate, pinnately veined with midrib ± raised and minor veins sunken and principal veins conspicuously raised, upper surface short-hairy along veins and with scattered, sunken, sessile glandular hairs, lower surface often ragged with sunken glandular hairs. **Staminate inflorescence:** heads clustered on lateral branchlets, racemelike panicles axillary (appearing terminal) at top of canopy, having 50+ branchlets, rachis suberect, to 100 × 5–8 mm, having 7–11 helically alternate branchlets per 10 mm, each branchlet generally with only 1 involucre facing downward concealing 5–10+ staminate flowers of different ages, short-hirsute with enlarged basal cells and inconspicuous glandular hairs; bract subtending inflorescence leaflike but somewhat shorter with less conspicuous teeth; axis 5–10 mm below the lowest branchlet, on large inflorescence the lowest branchlet sometimes with several clusters of heads (compound), axis flexible, 0.5 mm diameter, greenish, with upward-pointing short-hirsute hairs and scattered minute glandular hairs; peduncle of branchlet spreading, 1–1.5 mm long, greenish, pubescent; **involucre** (bract) facing and cupped downward appearing obliquely cup-shaped (triangular in sideview), 2–2.5 mm long, green, notched on opposite ends, outer on top (abaxial surface) bumpy from bases of short-hirsute hairs, with minute glandular hairs. **Staminate flower:** functionally staminate, radial, < 1 mm across, ca. 1.5 mm long top-shaped in bud; **calyx** absent; **corolla** 5-lobed, colorless, in bud with scattered glandular hairs and resinous on outer surface; tube + throat funnel-shaped, inconspicuously 5-veined to sinuses; lobes deltate, 0.25–0.3 mm; **stamens** 5, attached to top of corolla tube; filaments 0.3 mm long, colorless; anthers free, basifixed, dithecal, ca. 0.8 mm long including fine, slender tip, light yellow, longitudinally dehiscent; pollen light yellow; **pistil** 1, sterile; ovary inferior, narrowly funnel-shaped, 0.5 mm long, pale green, lacking ovule; style erect, club-shaped, ca. 0.7 × 0.15 mm, translucent, truncate with erect papillae at top. **Pistillate inflorescence:** below racemelike array (staminate inflorescence), 1 1-flowered head on a highly reduced, determinate lateral shoot, shoot subtending by a leaflike bract with only 1–3 lobes below midblade; bracts bracketing pistillate head 2, unequal and appearing opposite, ± awl-shaped folded upward from midvein and with or without 1–2 diminutive lobes near base, 4–6 mm long, green, having a raised midvein on lower surface,

short-hairy and with minute glandular hairs, directly subtending pistillate head bract flat-ovate, < 1 mm long, green; **involucre** somewhat spindle-shaped, $\pm 1.5 \times 0.7$ –1 mm, whitish, short-hairy and with scattered glandular hairs above midpoint, at the widest having a ringlike series of to 6 hard knobs (incipient burs), narrowed and necklike at top.

Pistillate flower: **perianth** absent; **stamens** absent; **pistil** 1, 1.5–2 mm long; ovary inferior (appearing superior), fully hidden within involucre, obovoid, ca. 0.8×0.4 mm, whitish minutely dotted reddish at top, glabrous, 1-chambered with 1 ovule; styles 2-branched within involucre with branches exerted from necklike top of involucre, stigmatic branches initially suberect becoming arching at anthesis, pale green, finely grooved on lower side. **Fruit:** cypselae, 1 surrounded and hidden by a burlike involucre (cypsela tight inside); bur top-shaped and not spinescent, 2 – 3×1.5 – 2.2 mm, blackish or with brownish patches, top convex with a narrow tuft of tissue at tip, having a ring typically of 4–6 hard, blunt-tipped, knoblike projections (burs) around convex top, often with weakly defined ribs descending from burs, short-hairy with scattered, minute, resin-producing glandular hairs; cypsela fitted tightly within involucre, obovoid, $\pm 2 \times 1.3$ mm, purplish to purplish brown.

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