

Vascular Plants of Williamson County
Silphium albiflorum – WHITE ROSINWEED [Asteraceae]

Silphium albiflorum A. Gray, WHITE ROSINWEED. Perennial herb, rosetted, 1–several-stemmed at base, ascending, 30–75 cm tall; monoecious; shoots with basal leaves and cauline leaves, leaves pinnately lobed with deep sinuses, tough and leathery, basal leaves present at flowering, cauline leaves on zigzagged stem, hispid and scabrous, hairs with enlarged, persistent bases; with resin ducts, aromatic when crushed. **Stems:** ca. 13-ridged, to 8 mm across, usually with 7 ridges descending from each leaf, tough, light yellowish green, internodes to 65 mm long with the longest at midplant; having resin canals. **Leaves:** helically alternate, 1–2-pinnately divided with principal sinuses nearly to midrib, not planed, petiolate, without stipules; petiole with broad, half-sheathing base, to 110 mm long, ridged on lower side, ± woolly-tomentose; blade in outline deltate to elliptic or ovate-elliptic, 80–280 mm long, lobing never symmetric and principal lateral lobes usually not paired (if paired, unequal); lobes to 220 × 40 mm, asymmetric at base, often with sublobes, inversely triangular above the sublobes, usually with 1–2 sublobes 5–100 mm long per edge mostly above midpoint, lobes and sublobes acute at tip, minor lobes and teeth triangular to ± deltate and widely spaced, trailing side of lateral lobe broader, with toothlike bumps (enlarged hair bases) on margins, pinnately veined with principal veins conspicuous and raised on both surfaces and a vein ending in each lobe, sublobe, or tooth, surfaces with thick cuticle. **Inflorescence:** heads, terminal and axillary, 1–several in cymelike array, head radiate, 50–60 mm across, of 14–23+ pistillate ray flowers in several series and 100+ functionally staminate flowers, bracteate; bract on stem subtending upper array leaflike, linear, to 80 × 8 mm, with sheathing petiole; stalk of array to 100 mm long, not ridged; bracts at tip of stalk subtending head subsessile, acuminate-ovate, 15–20 mm long, stiff; **involucre** bell-shaped, ca. 20 × 20 mm, of 23–36 phyllaries in 2(–3) series, outer 7–8 phyllaries ovate, to 21 mm long, tough, green, with ascending to spreading, acuminate, inrolled tips, with scattered short hairs, short-ciliate on margins above midpoint, in range inner phyllaries mostly in 1 series, narrowly obovate to elliptic, 13–15 × 6–7 mm, ± flat, white and greenish with dark tip, short-ciliate on margins, acute at tip; receptacle low-convex, with bractlet (palea) subtending each flower, the outermost 4 paleae ± oblong to oblanceolate-oblong, 12–13 × 3.4–6 mm, whitish with darker fine parallel veins, short-ciliate on margins, acute upper portion short-hairy on both surfaces, next series subtending ray flowers obtuse at tip, 12–13 × 3–3.5 mm, abscising with fruits, paleae cupping staminate flowers 12–13 × 3–3.5 mm decreasing inward to cupped-linear and 14–15 × 1.7 mm, membranous white, tip of the innermost paleae ovate, persistent. **Ray flower:** bilateral, 6–7.5 mm across (= ovary), corolla widely spreading from involucre; **calyx (pappus)** weakly defined, here treated as rimlike between ovary wings with hairs to 0.8 mm long; **corolla** minutely 2–3-toothed; tube compressed front-to-back, 4 × 1.5 mm narrower at base than top, white, sparsely short-hairy; limb elliptic and often 2-keeled, 10–30 × < 4–6.5 mm, white; **stamens** absent; **pistil** 1; ovary inferior, chamber circular in outline ca. 5 mm flattened front-to-back, white, with pale green acute shoulders and wing 1 mm wide, ca. 17 × 7.5 mm, short-ciliate and jagged on wing, surfaces short-hispid and short-strigose with upward-pointing hairs; **nectary disc** surrounding base of style, 0.3 mm long, cream-colored; style exerted, ca. 8 mm long, 2-branched, stalk 1 mm long, the

branched hemicylindric, stigmas not club-shaped. **Disc flower:** radial, 1 mm across; **calyx (pappus)** apparently absent ; **corolla** 5-lobed, \pm cylindric gradually expanded upward, 7.8–8.7 \times 0.6–1 mm, white; lobes blunt-triangular and fleshy, ca. 1 mm long, upper (inner) surface papillate; **stamens** fused to top of corolla tube; filaments channeled, 3 mm long, white, glabrous; anthers fused into cylinder surrounding style, basifixed, dithecal, 5 mm long, purple-red and white, with appendage short and truncate to minutely toothed, longitudinally dehiscent; pollen white; **pistil** 1, sterile; ovary inferior, with base fused to palea, 3–4-ribbed, \pm flattened and lacking rib next to palea, ca. 11 \times 1 mm, short-hairy often dense above midpoint and with short hairs along ribs; **nectary disc** surrounding base of style, 0.3 mm long, cream-colored; style exerted, 10–13 mm long, unbranched, exerted portion slender and narrowly club-shaped above, off-white to cream-colored aging beige, papillate. **Fruits:** cypselae (achenes), strongly flattened roundish portion bearing seed and 2-pointed wings for upper portion, in range 13–15 \times 8–9 mm, brown, wings stiff and papery,

A. C. Gibson