

Vascular Plants of Williamson County
Smallanthus uvedalius – HAIRY LEAFCUP [Asteraceae]

Smallanthus uvedalius (L.) Mackenz. ex Small, HAIRY LEAFCUP. Perennial herb, rhizomatous, thick fibrous-rooted, not-rosetted, several-stemmed at base from rhizome, shoots initially unbranched and erect, in canopy forming a pair of ascending flowering lateral branches downward at successive nodes, in range to 300 cm tall; monoecious; shoots with only very large cauline leaves (especially large 50 cm from ground) and easily wilted, initially velveteen, on emerging shoots “villous” with watery hairs aging collapsed and jointed, also with abundant, subsessile glandular hairs having colorless head on lower surface of leaves; rhizome shallow, horizontal, thick and bulky, with thick, nearly vertical adventitious roots with fleshy core. **Stems:** 6-ridged, to 15 mm diameter, with 3 broad ridges descending from each leaf (6 per node), tough, green with jointed hairs especially in furrows; nodes solid and internodes hollow. **Leaves:** opposite decussate, pinnately 3-lobed or 5-lobed and sublobes to coarsely pinnately toothed, petiolate with pair fused across node, having stipulelike lobes; stipulelike lobes along edges at base of petiole and \perp to petiole, initially earlike and semicircular when 2×3 mm increasing $2\times$ and becoming broadly ovate wing rounded at tip, green, with soft, nonglandular hairs on upper surface and nonglandular and subsessile glandular hairs on lower surface; petiole channeled, in range to 30 mm long indistinct from long-tapered blade (alternatively interpreted as 100+ mm long), tough, thick, and fleshy, above flared base channel V-shaped and often purple-red, with jointed hairs but less so in channel; blade ovate to broadly ovate in outline, in range 200–450+ \times 170–450 mm (depending also on defining blade at base), lobes in 1–2 pairs but not strictly equal, of lower pair lobes triangular-ovate to triangular and ± 40 mm long, principal lobes defined by a broad, U-shaped sinus and with sublobes shallow and roundish, long-tapered at base as leafy wings with wavy margins, above level of wings venation conspicuously 3-forked then pinnately veined with principal veins \pm raised but minor veins slightly sunken on upper surface and most veins raised on lower surface, upper surface “villous” (aging as jointed hairs), lower surface with less dense nonglandular hairs and having abundant subsessile glandular hairs (30+/ mm^2). **Inflorescence:** heads, terminal of principal shoot and then paired lateral shoots, (1–)2–5 in relatively tight cymelike array with leafy involucre, head radiate, 22–45+ mm across, in range of 7–9 pistillate ray flowers and 18–30+ functionally staminate disc flowers, bracteate, soft-hairy; axes conspicuously soft-hairy hiding short-stalked glandular hairs; lower stalk of axis ascending, to 120 mm long; bract subtending cymelike array and each peduncle of head acute-narrowly ovate, the lowest bract ascending, leaflike, to 30 \times 10 mm, $>$ axis, half-sheathing (sessile) with purple-red margins on “sheath,” entire or with a couple short teeth and ciliate on margins, ± 3 -veined at base with principal veins somewhat sunken on upper surface and raised on lower surface, lower surface short soft-hairy and with stalked glandular hairs on lower surface, bracts decreasing upward, bract subtending peduncle of head acute-ovate, 14–16 mm long and \gg peduncle overlapping involucre, not keeled but often with midvein somewhat raised, some hairs reddish purple; peduncle widely spreading, cylindric, mostly 4–5 mm long, densely soft-hairy with hairs to 1.3 mm long and glandular hairs with reddish heads; **involucre** basketlike with leafy, ascending phyllaries, 17–20 mm across, phyllaries in 2–4 series, outer phyllaries 4–7 in 1–2 series,

ovate to obovate strongly cupped to midblade, 10–14 × 5.3–8.5 mm, green or tinged purple-red below midpoint, parallel-veined from wide base, conspicuously ciliate on margins, blunt acute with 3 veins converging at tip, upper surface mostly glabrous, outer (lower) surface with nonglandular and glandular hairs, some of the nonglandular hairs reddish purple; inner series phyllaries = number of ray flowers in 2 series, subtending ray ovaries and appearing whorled, boat-shaped strongly cupped around and fully concealing ovary, 7–10.5 mm long, rounded to somewhat keeled on back, acute-ovate above midblade and ascending with raised midvein on lower side, lower surface short soft-hairy and with stalked glandular hairs, inner surface without hairs; receptacle convex, glabrous, with conspicuous bractlet (paleae) subtending each disc flower, bractlet acute-elliptic to acute-oblongate or narrowly obovate, 7–10 × 1.7–2.5 mm, finely parallel-veined and whitish often aging green where exposed above midblade, short-ciliate on margins including hairs with glandular heads, outer (lower) surface with many glandular hairs and also some nonglandular hairs above midpoint, with midvein raised on lower surface and having 3 veins converging at tip. **Ray flower:** bilateral, 2–6.5 mm across; **calyx (pappus)** absent; **corolla** 3-lobed; tube cylindric 1.8–3 × 0.65–0.7 mm, whitish aging yellowish or where exposed light yellow, thickened to midpoint, having a basal collar of short-villous hairs, above with subsessile glandular hairs; limb strap-shaped to obovate, in range 6–15 × 4–6.5 mm, light yellow, (7)9-veined at base with at least 5 veins raised on lower surface to sinuses and lobes and with subsessile glandular hairs often with orangish heads; lobes dimorphic, central lobe deltate and lateral lobes semicircular, 0.4–0.5 mm long and wider; **stamens** absent; **pistil** 1; ovary inferior, obovoid to ovoid, 2.5–3.2 × 1.5–2 mm, white or pale green sometimes aging crimson at top, glabrous, faintly veined (weak ribs), 1-chambered with 1 ovule, ovary wall thick; **nectary disc** absent; style exerted, 5–8 mm long, white at base to pale green or light yellow above midpoint (aging orangish), 2-branched, the stigmatic branches fully exerted, spreading, 1.2–1.8 mm long, not obviously papillate. **Disc flower:** radial, < 1–1.5 mm across; **calyx (pappus)** absent; **corolla** 5-lobed, 5–7 mm long; tube cylindric, 1.5–2.5 × 0.45–0.55 mm, initially white aging pale yellow, with some subsessile glandular hairs, expanded around nectary disc; throat narrowly bell-shaped to cylindric, 3–4.5 × 0.9–1.5 mm, pale yellow with 5 darker veins to sinuses, with scattered subsessile glandular hairs (in bud aligned over anther sacs); lobes suberect, triangular, 0.3–0.5 mm long, light yellow to yellow-orange; **stamens** 5, attached at top of corolla tube; filaments compressed front-to-back, 1.5–2 mm long, pale yellow aging yellow-orange; anthers weakly fused into cylinder surrounding style (later often splitting apart), basifixed, dithecal, 2.5 mm long including ovate appendage leaning inward and cupped upward, sacs purple-red and appendages colorless, longitudinally dehiscent; pollen yellow-orange; **pistil** 1, sterile; ovary inferior, narrowly club-shaped to nearly cylindric, 0.8–1.5 × 0.6–0.8 mm, white, with glandular hairs approaching tip, 1-chambered without ovule; **nectary disc** surrounding base of style on top of ovary, ca. 0.35 mm long, whitish; style often exerted to 1.5 mm, white at base to light yellow above, 2-branches, the branches < 0.5 mm long. **Fruits:** cypsela (achenes) of only ray flowers, cupped by but not fused to inner phyllary, lacking pappus, with persistent corolla tube; cypseloid somewhat compressed side-to-side, 5–6.5 × 4–5.5 × 3.2–4 mm, brown to dark brown (not striped), finely textured = minute cells in rows, lacking ribs, glabrous; at top of cypseloid

columnar remnant of corolla tube concealing nectary disc and lower style, ca. 1.3×0.7 mm, with nonglandular short hairs at base and covered with short-stalked glandular hairs.
A. C. Gibson