

Vascular Plants of Williamson County

Asclepias verticillata – WHORLED MILKWEED, HORSETAIL MILKWEED
[Apocynaceae/Asclepiadaceae]

Asclepias verticillata L., WHORLED MILKWEED, HORSETAIL MILKWEED. Perennial herb, not rosetted, 1–several-stemmed at base, principal shoots mostly not branched, ascending, in range to 55 cm tall; shoots with only cauline leaves, foliage glabrate; latex milky white. **Stems:** cylindric, to 2.5 mm diameter, tough, green, with a narrow line of puberulent hairs descending from node only 1 internode to axil of each leaf. **Leaves:** whorled with 3–4 leaves (at least to midplant) and opposite decussate (above midplant), simple and sessile, without stipules; blade linear, in range $< 50\text{--}80 \times 1.6\text{--}3.5$ mm, long-tapered at base, entire and canopy leaves sometimes inrolled to lower side (revolute), acuminate at tip, 1-veined with midrib sunken on upper surface and conspicuously raised on lower surface, sparsely puberulent with hairs mostly arched downward. **Inflorescence:** cyme, lateral (not axillary), in range typically 1 per node in upper canopy, to 11-flowered, $<$ leaves, bracteate; peduncle widely spreading from stem attached at node, cylindric, to 10 mm long, having a broad line of puberulent heaves arched upward on upper side; **involucre** of 7–8 bractlets subtending pedicels, linear, $1.5\text{--}2.4 \times 0.2\text{--}0.3$ mm, green, short-hairy on lower surface and margins; pedicel spreading to ascending, cylindric, at anthesis ± 8 mm long, green, short-hairy with fewer hairs on lower side, among hairs around bases having colorless projects to 0.3 mm long. **Flower:** bisexual, radial, ca. 5 mm across (reflexed corolla lobes), ca. 7 mm long; **calyx** deeply 5-lobed, ca. 2 mm long; lobes at anthesis spreading, triangular, $\pm 1.7 \times 0.7$ mm increasing in fruit, green with narrow colorless margins, upper surface glabrous, lower surface with some short hairs; **corolla** deeply 5-lobed, strongly reflexed with lobes curved outward, with corona and horns; tube 0.3–0.4 mm, continuous with filament column above, exposed surface papillate; lobes reflexed at anthesis, elliptic to obovate, ca. $4.3 \times 2.1\text{--}2.3$ mm, light green with white margins, parallel-veined with 5 veins at base, glabrous; **stamens** 5, fused into staminal column with filaments surrounding but free from lower pistils and anthers fused to the enlarged stigmatic head (stigma + anthers = gynostegium), with a whorl of elaborate appendages (corona) below anthers, hoods with horns; filament column flanged at base, ca. 1.5 mm long, 5-ribbed, green with glossy, dark green ribs, fused to and continuous with corolla tube; corona of 5 hoods, the 5 hoods of corona alternate with corolla lobes, deeply cup-shaped, 1.1–1.2 mm wide, with diagonal fold and also open on inner side, ca. 1.5 mm long on outer side and 1.7 mm long on inner side, pure white, with basal part touching corolla tube, filled with nectar, the 5 horns sickle-shaped curved toward center and compressed side-to-side, ca. 3 mm long, with tip nearly touching top of stigma; anthers dithecal, ca. 1.5 mm long, dehiscent along slit, flat and fused to sides stigma except for a horny, projecting, lateral wing and a terminal appendage; slit of each anther 1.2 mm long with parallel lateral wings, with gland (corpusculum) joining the pollinia positioned at top of slit; terminal appendages jagged, white; pollen united into pollinia, each pollinium flattened and narrowly teardrop-shaped, ± 1.2 mm long, orange, 2 pollinia from adjacent anthers united by reddish translator arms to a crimson gland (corpusculum); **pistils** 2, together appearing 2-stemmed and chalice-shaped, 3 mm long; ovaries superior, barely fused at base or free and united by receptacle, hemiovoid flattened on common side, $0.8 \times 0.35\text{--}0.4$ mm, light green, 1-chambered with many ovules attached on inner side; styles 2, straight, light green, fused at stigma; stigma capitate

(includes some stylar tissue), on top 5-lobed with rim, white. **Fruit:** follicle (typically only 1 ovary matures), dehiscent, 100+-seeded, \pm suberect, acuminate-lanceoloid, 63–105 \times 7–10 mm, finely striped, glabrous, not bulging from seeds, filled with long silky hairs above midpoint. **Seed:** with fine and silky white hairs attached to truncate tip, winged-ovate, ca. 6 \times 4–4.5 mm, seed body ovate, ca. 4 \times 2–2.5 mm, brown, with convex side and concave side, wing papery, 0.8–1 mm wide around seed body, brown, entire (jagged), hairs attached to tip, 100+, the hairs spreading, < 20–32 mm long.

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