

## Vascular Plants of Williamson County

### *Symphotrichum sericeum* – WESTERN SILVERY ASTER [Asteraceae]

*Symphotrichum sericeum* (Venten.) G. L. Nesom, WESTERN SILVERY ASTER. Perennial herb, with cormlike caudex, fibrous-rooted, 1–5-stemmed at base, erect with ascending branches in canopy and shorter, spreading secondary branchlets, in range < 40 cm tall; gynomonoeicous; shoots with dimorphic leaves, the lowermost leaves much larger and withered at flowering, the typical cauline leaves many and evenly spaced on wiry stems, appearing gray covered by appressed, straight pilose hairs (“sericeous”) pointing upward, lacking glandular hairs; caudex shallow, woody, to 10 mm diameter, wood yellowish, with white buds and hidden by many adventitious roots. **Stems:** cylindrical, to 6 mm diameter, internode  $\leq$  leaf, often having a raised horizontal ledge beneath and half-encircling leaf on primary axis. **Leaves:** helically alternate, simple and petiolate (basal leaves) and sessile (cauline leaves), without stipules; blade of the lowermost leaves oblanceolate to narrowly lanceolate, in range 15–110  $\times$  4–8 mm, blade of cauline leaves lanceolate to elliptic or narrowly ovate, < 6–18  $\times$  2–5 mm, tapered at base (broadly attached), entire, acute with a fine whitish point (mucron) at tip, pinnately veined (concealed by pubescence) but only midrib visible and somewhat raised on lower surface, densely appressed-pilose.

**Inflorescence:** heads, solitary, terminal on branchlets, radiate, ca. 20 mm across, of 15–20 pistillate ray flowers and 2 $\times$  bisexual disc flowers, bracteate, green structures appressed-pilose; peduncle to 30 mm long, with the closest cauline leaves overlapping involucre; **involucre**  $\pm$  bell-shaped, 3–3.5 mm across, phyllaries in range ca. 21 in 4 series, 6–8 mm long, lower portion to midpoint appressed, rectangular and whitish, 3-veined from base, inner surface glabrous, upper portion spreading to ascending and leaflike, green, surfaces appressed-pilose, inner series fused to ovary bases of ray flowers, acute-oblong, and purplish at tip with whitish mucron; receptacle convex, lacking bractlets (paleae), with low purplish rim surrounding each ovary, with short hairs to 0.3 mm long. **Ray flower:** bilateral, ca. 2 mm across, in range 11–12 mm long; **calyx (pappus)** of ca. 50 capillary bristles fused only at base and mostly in 1 series (shorter, weakly formed bristles in outer series), in range 4–5 mm long, whitish, persistent; **corolla** minutely 3-toothed, in range 8–9 mm long, aging with limb coiled under; tube cylindrical, ca. 2  $\times$  0.35 mm, colorless, with scattered puberulent hairs; limb strap-shaped, 1.5–2 mm across, purple to light purple, without hairs; **stamens** absent; **nectary disc** surrounding base of style, 0.1 mm long, colorless; **pistil** 1; ovary inferior, ribbed columnar, 1.4  $\times$  0.4–0.45 mm, green, to 10-veined, glabrous (short hairs of receptacle at base), 1-chambered with 1 ovule; style 4 mm long, purple-red, bulbous at base, 2-branched from midpoint, the stigmatic branches exerted. **Disc flower:** radial, ca. 1 mm across (corolla throat); **calyx (pappus)** of ca. 50 capillary bristles fused only at base and mostly in 1 series (shorter, weakly formed bristles in outer series), in range 4–5 mm long, whitish, persistent; **corolla** 5-lobed, narrowly funnel-shaped, 5.5–7 mm long, glabrous; tube 5-ribbed, 1.5  $\times$  0.35 mm, colorless; throat to midpoint 5-ribbed, reddish, upper portion funnel-shaped, ca. 2.5  $\times$  0.9–1 mm across at orifice, light rose-purple, 5-veined to sinuses; lobes equal, triangular, 0.45–0.5 mm long, light rose-purple; **stamens** 5, attached at top of corolla tube; filaments 2–2.5 mm long, whitish; anthers fused into cylinder surrounding style, basifixed, dithecal, 2 mm long including exerted lanceolate appendages from midpoint, sac red and yellowish,

longitudinally dehiscent; pollen golden; **nectary disc** surrounding base of style, 0.1 mm long, colorless; **pistil** 1; ovary inferior, narrowly inversely conic,  $1.4 \times 0.4\text{--}0.45$  mm, colorless, faintly 10-veined, glabrous (short hairs of receptacle at base), 1-chambered with 1 ovule; style ca. 7 mm long, bulbous at base  $0.35 \times 0.25$  mm and whitish, above base mostly purple-red, 2-branched, the stigmatic branches fully exerted, ascending later spreading, ca. 0.8 mm long, papillate. **Fruits:** cypselae (achene), monomorphic, 4-sided, columnar 10-ribbed, in ca.  $1.8 \times 0.4\text{--}0.5$  mm, brown, glabrous; pappus bristles fused only at base, ascending, 6–7 mm long, straw-colored.

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