

## Vascular Plants of Williamson County

*Symphotrichum divaricatum* – BLACKWEED, SLIM ASTER, WIREWEED, ANNUAL  
SALTMARSH ASTER [Asteraceae]

*Symphotrichum divaricatum* (Nutt.) G. L. Nesom, BLACKWEED, SLIM ASTER, WIREWEED, ANNUAL SALTMARSH ASTER. Annual to short-lived perennial herb, taprooted, generally not rosetted (basal leaves in summer short-lived), 1–several-stemmed from base, typically with spreading to ascending branches, in range mostly < 60 cm tall (especially dwarfed when growing as a weed among turfgrasses); shoot with several basal leaves and small, narrow cauline leaves, ± glabrous throughout. **Stems:** ± cylindrical in ×-section, to 3 mm diameter, with 3 grooves descending from each leaf, somewhat wiry, green or aging rose, often glabrate with a patch of short hairs on internodes especially on the lower internode.

**Leaves:** helically alternate, simple, subsessile to sessile, attached nearly halfway around stem but not clasping, grading into bracts of inflorescence, without stipules; petiole < 1.5 mm long, with 3 parallel whitish veins; blade narrowly linear or elliptic-linear to oblanceolate-linear or lanceolate-linear, in range < 10– < 60 × 1–3.5 mm, the largest along the principal axis, gradually tapered at base, minutely toothed to entire on margins, acute with short point at tip, the point to 0.3 mm long and colorless or purple at base, mostly 1-veined at base. **Inflorescence:** heads, in terminal and axillary, open, poorly defined arrays (heads appearing terminal and solitary in canopy), head radiate, 8–20 mm across, typically with 14–21 ray flowers and 18–50 disc flowers, bracteate; peduncle ascending, slender, to 40 mm long, grooved like stem from decurrent bract bases, with 4+ bracts along axis and several approaching involucre, the bracts leaflike, sessile, lanceolate-linear to linear, minutely toothed or with minute hairs on margins, acuminate with short point at tip and tip often purple; **involucre** narrowly bell-shaped, at midpoint 2–3 mm wide but flaring at tips of inner phyllaries, phyllaries 20–25 in 3–4(–5) series, unequal, 3–5.5 mm long, 1-veined, outer phyllaries awl-shaped with membranous margins to midpoint and green center, middle and inner phyllaries > outer phyllaries, pale green most of midvein length, green on both sides of midvein, entire and membranous on margins, often reddish to purplish at tip; receptacle at anthesis ± flat and ± 1 mm diameter or convex to hemispheric in fruit, without bractlets (paleae), with each ray flower subtended by a phyllary and disc flowers having a short crown of teeth surrounding each ovary. **Ray flower:** pistillate, bilateral, 0.8–1.4 mm across; **calyx (pappus)** of < 30 capillary bristles in 1 whorl, bristles unequal, at anthesis 2–3 mm long, white; **corolla** unlobed to minutely 2-toothed or 3-toothed; tube cylindrical, ± 2–2.5 mm long, white or pale green, sparsely short-hairy above midpoint; limb spreading, linear, to oblanceolate-linear, 4.5–8.5 × 0.8–1.4 mm, light purplish pink, obtuse or with minute teeth, coiling 3–5× under at tip; **stamens** absent; **pistil** 1; ovary inferior, narrowly obovoid to top-shaped, ± 0.7 mm long, whitish, inconspicuously 5-ribbed, short-strigose with upward-pointing hairs, 1-chambered with 1 ovule; style exerted (spreading around disc flowers), ca. 3 mm long, 2-branched, the branches divergent, linear to slightly tapered, ± 0.7 mm long, yellowish to greenish yellow, rounded at tip, minutely papillate-hairy. **Disc flower:** bisexual, radial, ca. 0.5 mm across, in hemispheric display; **calyx (pappus)** of < 30 capillary bristles in 1 whorl, bristles subequal, at anthesis 2–3 mm long, white; **corolla** 5-lobed, narrowly funnel-shaped, 4–4.5 mm long, glabrous; tube + throat cylindrical, pale yellow to midpoint to light yellow at orifice; lobes suberect, acute, ± 0.5

mm long, light yellow; **stamens** 5, fused to corolla at base of throat; filaments  $\pm 0.3$  mm long; anthers fused into cylinder surrounding style, fully exerted, basifixed, dithecal, ca. 1.7 mm long, light yellow, appendaged at tip, the appendages narrowly acute,  $\pm 0.3$  mm long, longitudinally dehiscent; pollen light yellow; **pistil** 1; ovary inferior, narrowly obovoid to top-shaped, 0.7–0.9 mm long, whitish, inconspicuously 5-ribbed, short-strigose with upward-pointing hairs, 1-chambered with 1 ovule; style exerted 0.5–0.7 mm above anther appendages, **nectary** swelling forming a small ring around base of style, the branches exerted entire length, ca. 1 mm long, light yellow, flat on inner faces, narrowly acute above midpoint, stigmatic and conspicuously papillate-hairy. **Fruits:** cypselae, in spheric display 11–12 mm across, monomorphic, narrowly oblanceoloid,  $1.3\text{--}2.4 \times 0.3\text{--}0.4$  mm, red-purple to brown, 4–6-ribbed with ribs straw-colored, having short ascending hairs on faces; pappus spreading, 2.5–3 mm long, whitish; phyllaries strongly reflexed; receptacle flattish to somewhat domed, with a short crown of teeth surrounding each shallow pit containing attachment to ovary.

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