

Vascular Plants of Williamson County

Tradescantia subacaulis – STEMLESS SPIDERWORT [Commelinaceae]

Tradescantia subacaulis Bush, STEMLESS SPIDERWORT. Perennial herb, not rhizomatous, fibrous-rooted with thick, brown, “tomentose” roots (in sand), several–many-stemmed at ground level having a branch from each aboveground node, axillary shoot not erupting through sheath, with ascending and spreading shoots closely packed, in range < 15 cm tall; shoots with basal leaf and 1–2 cauline leaves below peduncle of inflorescence, each principal shoot arising from a white, deltate axillary bud just below ground level, conspicuously long-hairy (pilose to villous) with nonglandular hairs to 4 mm long on exposed surfaces radiating to leaning (appressed) and each with short basal cell, changing to stalked glandular hairs or mixed with nonglandular hairs in inflorescence, glandular hairs radiating to 0.55 mm long with minute, colorless heads; roots tuberlike, fleshy, narrowly oblanceoloid to \pm cylindric, to 5.5 mm diameter, dark brown, with a surface tangle of brown, fine root hairs. **Stems:** lacking ridges but not cylindric, to 4 mm diameter, white (belowground) and solid purple or striped pink-purple and paler (aboveground stems) and dark red-purple approaching inflorescence, internodes aboveground long; solid, pith colorless when first cut and watery (root pressure). **Leaves:** helically alternate, simple with sheath; sheath closed, 5–10 mm long, sometimes appearing 1-pleated, at V-notch often purple, sparsely pilose; blade strap-shaped to narrowly lanceolate-linear, 100–190 \times 8–15(–18) mm, folded upward but not sharply from midrib, long-tapered at base with whitish base narrower than sheath (cut open and spread), entire and purple on margins, \pm acute at tip, parallel-veined with veins sunken on upper surface and midrib somewhat raised on lower surface, pilose (where not crushed) or glabrous on whitish upper surface near sheath. **Inflorescence:** condensed cyme, terminal and later axillary, subtended by 2 conspicuous, unequal, leaflike bracts concealing flower buds and bases of pedicels, consisting of 2 cymes at top, together often 18–30-flowered with only 1–2 flowers per inflorescence each day, having 2 parallel rows of flowers with the oldest flower of each cyme in the center and progressively younger flowers and buds toward both flanks, each flower at pollination on and ascending pedicel and horizontally positioned, corolla ephemeral and lasting only several hours before shriveling and liquidifying on top of ovary, pedicel soon becoming recurved for fruit development, bracteate, glandular-hairy but in range mixed with some longer nonglandular hairs; peduncle stemlike, dark red-purple, glandular-hairy; peduncle to 125 mm long, red-purple and hairy; lower bract subtending cymes with open sheath clasping sheath of upper bract, widely spreading, blade linear-lanceolate and folded upward (not keeled), to 125 \times 14 mm, green with purple margins, nonglandular hairs pilose to villous, blade of upper bract acuminate-narrowly ovate to lanceolate, 30–50 \times 7–12 mm, \gg lower bract and smaller on axillary inflorescences, sheath pouchlike at base, inner (upper) surface close to stem glossy green and glabrous and exposed surfaces pilose; bractlet subtending pedicel concealed by bases of leaflike bracts, membranous, overlapping in row on 2 broad sides of paired cymes, the longest bractlets paired at the center (the oldest flowers) mirror-images and somewhat folded, asymmetric and acute, 3.5–4 \times 1.4 mm, shorter and wider outward and mostly acute ovate and 2–2.5 \times 1.5–2 mm; pedicels touching, at base whitish changing shortly to red-purple, initially glandular-hairy with radiating hairs but on upper portion some becoming pilose nonglandular hairs. **Flower:** bisexual, radial, 16–21 mm across, lacking

nectaries; sepals 3, equal or subequal, during pollination widely spreading with tips visible between petals, otherwise erect and touching, acute-ovate and somewhat cupped, in range 7–9 × 3.2–3.5 mm, minutely mottled green and purple, margins narrowly membranous and colorless to purple, outer (lower) surface glandular-hairy and with some long, nonglandular hairs, inner (upper) surface glabrous and glossy (mostly green) with several parallel veins; **petals** 3, not clawed, widely spreading (midday), broadly ovate cupped somewhat downward, 9–11 × 10–12 mm, length ≤ width, light to intermediate blue (violet) on upper surface and pale blue (violet) on lower surface, glabrous; **stamens** 6 in 2 whorls, free, all fertile (no staminodes); filaments ascending to suberect, ca. 3 mm long, in bud white aging light to pale violet, each having a conspicuous tuft of light blue-violet hairs along margins and on back, the hairs 1.5–2 mm long, beadlike; anthers dorsifixed, strongly dithecal and butterfly-shaped with wide connective, 1.2–1.4 × 1.5–1.9 mm, bright yellow, notched at top, longitudinally dehiscent; pollen yellow; **pistil** 1; ovary superior, 3-sided with bulging ovules, 3-lobed (not ovoid), ca. 1.5 × 1 mm, pale green to opaque greenish white, having a tuft of colorless, stalked glandular hairs at top to 0.4 mm long, 3-chambered, each chamber with 2 ovules; style erect, narrow at base gradually tapered to the widest at tip, ca. 3 mm long, white at base in bud pale green above midpoint aging light violet; stigma terminal, truncate, whitish, conspicuously papillate. **Fruit:** capsule, loculicidal, 3-valved, 3–6-seeded, 3-sided and shallowly 3-lobed (in range not ovoid), 5.2–6 × 3–3.3 mm, green before drying brown, with colorless, stalked glandular hairs on top surrounding slender style. **Seed:** ± hemi-ellipsoid to oval compressed front-to-back, 2–2.9 × ± 1.5 mm, dull brown.

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