

Vascular Plants of Milam County

Tradescantia ernestiana – ERNEST'S SPIDERWORT [Commelinaceae]

Tradescantia ernestiana E. S. Anders. & Woods., ERNEST'S SPIDERWORT. Perennial herb, rhizomatous, fibrous-rooted, several-stemmed from rhizome, erect to suberect, in range to 50 cm tall; shoots with several basal leaves (spaced 1–2.5 mm apart on belowground stem) withered at flowering and several cauline leaves, each principal shoot arising from a white axillary bud belowground strongly flattened front-to-back, green tissue on especially upper plant with unbranched nonglandular hairs and each hair with a short, enlarged basal cell, in range stalked glandular hairs not observed; rhizome horizontal, 12–15 mm diameter, with several persistent, brown papery sheaths of basal leaves, appearing lobed (at bases of adventitious roots), surface and tissue white; adventitious roots fleshy, \pm cylindrical, 2.5–4 mm diameter, orangish brown, lacking “tomentose” hairs, tissue white. **Stems:** lacking ridges and \pm cylindrical, to 7 mm diameter, white belowground and aboveground green, internodes increasing upward to 180 mm long (approaching inflorescence), aboveground internodes mostly glabrous, of the upper stem or uppermost internode (below inflorescence) short pilose in lines between veins; solid, pith colorless when first cut and watery (root pressure). **Leaves:** helically alternate, simple with sheath; sheath closed, to 16 mm long, not ridged, sometimes appearing 1-pleated with V-notch, green, lacking hairs; blade strap-shaped to narrowly lanceolate-linear, mostly 180–270 \times 18–26 mm, folded upward but not sharply bent from midrib, with base narrower than sheath (cut open and spread), entire and short-ciliate on margins, acute-acuminate at tip, parallel-veined with veins slightly sunken on upper surface and midrib somewhat raised on lower surface of the uppermost leaf blade width \gg opened (flattened) sheath. **Inflorescence:** condensed cyme, terminal, subtended by 2 conspicuous, alternate distichous, leaflike bracts partially concealing flower buds and bases of pedicels, consisting of 2 cymes at top, in terminal cluster together many-flowered potentially with several flowers per inflorescence opening 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 exerted on pedicel and horizontally positioned, corolla ephemeral and lasting only several hours before shriveling and liquidifying on top of ovary, bracteate, pilose on green tissues; peduncle stemlike, to 150 mm long, green, glabrous at base of internode changing to short-pilose from below midpoint; bract subtending the lowest cyme with narrowly closed sheath somewhat pouchlike, blade widely spreading, densely short-pilose; blade leaflike strongly folded upward (keeled), linear, to 150 \times 10 mm, short-hairy and short-ciliate along margins, lower bract \gg second bract and \gg third bract (if present), internode between first and second bract short or internode to 50 mm long; bractlet subtending pedicel concealed by base of leaflike bract, membranous, overlapping in row on 2 broad sides of paired cymes, the longest bractlets paired at the center (the oldest flowers) mirror-images not folded, triangular to \pm rectangular and sheetlike, mostly 4–7 \times 2 mm, shorter and narrower outward, acute or 2–3-toothed at tip; pedicels arching, < 20–29 mm long, ca. 0.6 mm diameter at base to 1 mm diameter above midpoint, at base whitish changing to pale pink-purple at top, conspicuously pilose with hairs ca. 0.5 mm long \perp to axis, enlarged at base of flower. **Flower:** bisexual, radial, in range 16–33 mm across, lacking **nectaries**; **sepals** 3, equal, during pollination widely spreading to somewhat deflexed, cupped acute-ovate and boat-shaped, in range 6–9 \times 2.7–4.5 mm, green with

margins narrowly membranous and colorless to purplish, sometimes parallel veins pigmented purple (veins to 9), outer (lower) surface conspicuously pilose but in range having no obvious glandular hairs, other epidermal cells domed, inner (upper) surface with 3 conspicuous veins at base, glabrous, and glossy; **petals** 3, lacking claw, widely spreading, cupped broadly ovate to \pm circular, $9\text{--}17 \times 11\text{--}14$ mm, in range violet to violet-blue, finely but inconspicuously many-veined at base, rounded, glabrous; **stamens** 6 in 2 whorls, fused to base of sepals, all fertile (no staminodes); filaments ascending to suberect, 6–7 mm long, in bud white aging violet (white only at base), each having violet hairs from base to midpoint, the hairs spreading, to 3 mm long, beadlike especially above midhair; anthers dorsifixed, strongly dithecal, butterfly-shaped with wide connective, $0.6\text{--}0.7 \times 1\text{--}1.3$ mm, bright yellow with yellow-orange connective, notched at top, longitudinally dehiscent; pollen bright yellow; **pistil** 1; ovary superior, 3-sided ovoid, 3-lobed, ca. $2.5 \times 1.5\text{--}1.8$ mm, white to pale green with parallel veins, lobes rounded with bulging ovules, conspicuously short-pilose above midpoint or base-to-top, 3-chambered, each chamber with 2 ovules; style erect, 3.5–4.5 mm long, violet with yellow at narrow at top next to anther and often colorless and flattened front-to-back at base; stigma terminal, truncate, violet, conspicuously papillate, style sometimes exerted from calyx after flowering.

Fruit: capsule, loculicidal, strongly deflexed on curved pedicel, 3-valved, 3–6-seeded, 3-sided and shallowly 3-lobed, in range oblong-obovoid to D-shaped bulging from seeds (not ovoid), before drying ca. $7 \times 3.5 \times 3$ mm, green before drying light brown, with many colorless pilose hairs, dehiscing from tip downward but not to base with valves shrinking and somewhat spreading releasing seeds from top; at maturity capsule with sepals drooping beside or below bract sheath on looped pedicel, initially with shriveled, veiny petals on the side of capsule and a semi-persistent straight style pointing downward. **Seed:** semi-elliptic in outline, in range $2.5\text{--}4 \times 2.4\text{--}2.8 \times 1.5$ mm, white, truncate between stacked seeds, rounded on 1 face (outfacing within fruit) and flattish on other face with long, linear hilum (attached to placenta).

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