

Vascular Plants of Williamson County

Leptochloa dubia – TEXAS CROWFOOT, GREEN SPRANGLETOP [Poaceae]

Leptochloa dubia (Kunth) Nees, TEXAS CROWFOOT, GREEN SPRANGLETOP. Perennial herb, not rhizomatous, fibrous-rooted, many-stemmed at base, branching only at plant base, ascending to spreading, in range 28–60 cm tall; shoots with basal leaves and to 4 cauline leaves, the early basal leaves of each shoot = folded, triangular sheaths. **Stems (culms):** somewhat compressed, to 3 mm diameter, tough, smooth, green, internodes solid (lower stem) and hollow (upper stem), glabrous. **Leaves:** alternate distichous, simple with sheath; prophyll membranous, triangular and strongly 2-keeled, to 12 mm long, with 2 green veins next to white keel, ciliate (base) to short-ciliate (tip) along keels; sheath open, folded nearly base-to-top, typically > internode, having wide membranous margins at base decreasing upward, veins slightly raised, often somewhat glaucous, minutely scabrous along veins, glabrous or above midpoint with pilose hairs having bulbous bases (pustulate) approaching blade, without lobes (auricles) at top; of initial basal leaf of shoot, to 12 mm long, membranous with 2 lateral green veins; ligule membranous and short-ciliate (erose), truncate, in range < 1 mm long; blade linear, (0)23–160+ × 2–5.2 mm, sometimes folded on the lowermost blade and at tip but mostly flat, not inrolled when water-stressed, minutely toothed on margins, long-tapered to tip, parallel-veined with veins raised on both surfaces, surfaces minutely scabrous along veins, lower surface somewhat glaucous and veins often purple-red. **Inflorescence:** spikelets (functionally all cleistogamous), in terminal, paniclelike array with (2–)3–7+ spreading to ascending (“chasmogamous” but bracts not spreading), racemelike lateral branches, cleistogamous and racemelike, axillary with exposed spikelets but mostly tightly concealed within sheath of each cauline leaf, bracteate, awned or not, the awn 0–0.7 mm long. **Terminal inflorescence:** on long peduncle not close to flag leaf, lateral branches spreading to ascending, mostly to 60(–100) mm long, with 12–25+ spikelets spaced to 7 mm apart, spikelet with (2–)4–11+ florets, florets bisexual but 1(–2) upper florets smaller and sterile or pistillate, bracteate; peduncle (culm) 100–210+ × < 1 mm, smooth, glabrous; principal axis ± concave on 1 side, internodes to 5–7 mm long, puberulent; lateral branches mostly 50–100 mm long, axis pulvinus axillary, green, conspicuously stiff-hairy, above pulvinus sinusoidal, ca. 0.35 mm diameter, green, puberulent; stalk of spikelet angled, 0.8–1 mm long, puberulent with short, stiff, ascending hairs. **Axillary inflorescence:** peduncle and lateral branches parallel with stem, spikelets spaced to 11 mm apart, florets mostly bisexual; stalk of spikelet to 4 mm long, puberulent with stiff, ascending hairs. **Spikelet:** elliptic somewhat compressed side-to-side but aging with spreading florets (fruits causing florets to spread), in range at anthesis compacted 5–11 mm long (chasmogamous) and ± zigzagged and more open (cleistogamous), with florets ascending, breaking above glumes and between florets; **glumes** 2, somewhat unequal, lower glume narrowly triangular, (3–)3.5–4 mm long, upper glume narrowly ovate, 4–4.6 mm long, slightly longer and wider than lower glume, 1-veined, folded and keeled, membranous with minute projections on outer surface (reddish on chasmogamous spikelets), vein scabrous with teeth base-to-tip, lacking awn at tip; rachilla internodes ca. 1 mm long (chasmogamous) and ca. 2 mm long (cleistogamous) between florets; **lemma** (fertile florets) ± obovate notched at tip (mucronate), in range 3.5–6 mm long (not including awn), with 3 principal veins (only midvein to tip) and a minor

vein between midvein and each principal lateral vein mostly below midpoint, lobes rounded, 0.4–0.5 mm, from sinus with awn absent to ca. = lobes, short-hairy below midpoint between margin and lateral vein, scabrous along principal veins, minutely jagged on lobes, of chasmogamous florets often aging purplish red above midpoint but lobes aging whitish at tips or lemma whitish from midpoint and purplish red lobes, of hidden spikelets lacking red pigment; **palea** membranous, 2-keeled and strongly folded along keels, to 3.8 mm long and < lemma, 2-veined, veins green, notch at tip to 0.5 mm long, short-ciliate along keels, puberulent on tip. **Flower:** bisexual; **perianth (lodicules)** 2, ca. 0.25 mm long, colorless; **stamens** 3, free, included; filaments threadlike, 0.7–1.5 mm long, whitish (diminutive stamens appearing sterile); anthers dorsifixed, dithecal, mostly 0.25–0.6 mm long, whitish to pale yellow, longitudinally dehiscent; pollen colorless; **pistil** 1, ca. 2 mm long (ca. 1 mm long in pistillate flower having diminutive styles), included; ovary superior, compressed-obovoid, ca. 0.4 × 0.15 mm, translucent to greenish, glabrous, 1-chambered with 1 ovule; styles 2 from top of ovary but widely separated at top of ovary, thickened at base, bottlebrushlike stigmatic from or below midpoint. **Fruit:** achene (caryopsis), dispersed as unit covered by palea and lemma and with rachilla segment attached; achene ellipsoid-ovoid compressed front-to-back (short-surfboardlike) rounded at tip with flattish side and low-convex side having embryo, 2.8–3.2 × 1.2–1.4 mm (chasmogamous floret) and 2.3–2.5 × 0.9–1 mm long (cleistogamous floret), glossy whitish to pale greenish gray and smooth, with stubs of style bases at top, embryo ca. 1 mm long drying brown; rachilla segment angled and ca. 1 mm long (chasmogamous) and cylindrical ± 2.2 mm long (cleistogamous), densely puberulent.

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