

Vascular Plants of Williamson County
Setaria parviflora – KNOTROOT BRISTLEGRASS [Poaceae]

Setaria parviflora (Poiret) Kerguélen, KNOTROOT BRISTLEGRASS. Perennial herb, rhizomatous, fibrous-rooted, several-stemmed at base, \pm caespitose (tufted), ascending, in range to 120 cm tall; shoots typically bent (geniculate) at each node; rhizomes to 40 mm long, knotty with dormant buds or spheric swellings at base of active shoots; adventitious roots from rhizomes and at lower nodes of shoot. **Stems (culms):** \pm cylindrical to elliptic in \times -section, to 3 mm diameter, tough, sometimes with groove along entire length of internode, glabrous; internodes narrowly hollow. **Leaves:** alternate distichous, simple with sheath; sheath open, 45–130 mm long, angled along midvein, margins narrowly membranous and generally overlapping basally, V-shaped at throat, without lobes (auricles) at top, glabrous; ligule truncate, 0.5–1.3 mm long, membranous on lower 1/2–2/3 and densely ciliate-hairy on margin; blade linear, 35–200(–250) \times 2–4.5(–8) mm, keeled, long-tapered above midblade, V-shaped in \times -section at base becoming inrolled (involute) toward tip, entire at base to minutely toothed on margins above midblade, narrowly prowl-like at tip, dull, parallel-veined, upper surface sparsely long-pilose at base with hairs 2–6 mm long. **Inflorescence:** spikelets, in terminal, spikelike panicles, panicle cylindrical, densely flowered, with conspicuous bristles (= reduced branchlets) $>$ spikelets, in range 25–70 mm long, 3.5–4.5 mm diameter (excluding bristles) and 5–7 mm diameter (including bristles), spikelet with 2 florets, lower one sterile (staminate) and upper one bisexual, bracteate, lacking awns; principal rachis ridged, pubescent with erect or ascending hairs mostly along ridges; lateral branches \pm pseudowhorled, each with 1 spikelet at tip to several spikelets below, with a glossy, axillary pulvinus; stalk of spikelet $<$ 0.3 mm long, expanded and saucerlike at tip, bearing (4–)6–7(–12) bristles in 2, often unequal, clusters at base of stalk; bristles scabrous with upward-pointing barbs (antrorse), ascending at anthesis and in fruit, wavy or arched, (1.3–)2–7.5 mm long, pale yellowish green to yellowish tan. **Spikelet:** compressed-ellipsoid, 2.2–2.5 mm long, glabrous, easily deciduous, breaking below glumes leaving a whitish disc ca. 0.3 mm across; **glumes** 2, unequal, dimorphic, broadly ovate and acute to obtuse at tip, lower glume sheathing, membranous, 1.1–1.5 \times 0.8–1 mm and 3-veined, broadly obtuse at tip, upper glume 1.7–1.8 \times 1.1–1.2 mm and 3–5-veined, glumes pale green and semi-transparent becoming whitish and opaque with green veins, sometimes purplish red at tip; **lower lemma** (sterile floret) similar to upper glume in texture, ovate, 2.2–2.5 \times 0.9–1.2 mm, flattened on back, with inrolled margins (clasping upper floret), 5-veined, \pm with short point at tip; **lower palea** membranous and ovate, 1.8–2.1 \times 0.8–1.2 mm, 2-veined, sharply infolded at margins; **upper lemma** (fertile floret) ovate, 2–2.2 \times 0.9–1.3 mm, with inrolled margins and clasping palea, translucent-green but light green or often purplish red on exposed portion, netlike throughout and conspicuously transversely ridged below midpoint (appearing reptilian); **upper palea** 1.6–2 mm long, 2-veined, netlike and with transverse ridges between veins, smooth and infolded outside of veins and eventually clasping fruit. **Flowers:** bisexual or staminate; **perianth (lodicules)** 2, trapeziform (broad at top), 0.25–0.4 \times 0.2–0.35 mm, glossy, colorless, truncate and sometimes also notched at tip; **stamens** 3, free; filaments threadlike, 2–2.5 mm long, translucent-white; anthers exerted, versatile, dithecal, 0.9–1 mm long, orangey brown, sacs linear-ellipsoid and free at ends,

longitudinally dehiscent; pollen light yellow to light yellow orange; **pistil** 1; ovary superior, ovoid, ca. 0.4×0.3 mm, translucent-white, glabrous, 1-chambered with 1 ovule; styles 2, ca. 1 mm long, translucent-white, smooth; stigmas exerted near tip of lemma, 1.2–1.5 mm long, reddish to purplish red, conically branched (plumose). **Fruit:** achene (caryopsis) tightly enclosed by hardened lemma and palea, ovoid compressed top-to-bottom, $1.5\text{--}1.7 \times 1$ mm, dull grayish brown; lemma and palea brownish to orangey brown.

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