

Vascular Plants of Williamson County

Setaria scheelei – SOUTHWESTERN BRISTLEGRASS, SCHEELE BRISTLEGRASS [Poaceae]

Setaria scheelei (Steud.) C. L. Hitchc., SOUTHWESTERN BRISTLEGRASS, SCHEELE BRISTLEGRASS. Perennial herb, bunchgrass, rhizomatous, fibrous-rooted, many-stemmed at base, shoots unbranched, in range to 90 cm tall; shoots with at least 2 basal leaves and to 5 cauline leaves, foliage green and not glaucous, scabrous; rhizomes shallow, horizontal, to 3 mm diameter, whitish, with appressed, upward-pointing hairs (strigose); scales appressed, deltate to broadly triangular, to 4 mm long; adventitious roots at nodes only on rhizome. **Stems (culms):** cylindric, to 3 mm diameter, smooth, with a ring of upward-pointing strigose hairs at each node; internodes hollow. **Leaves:** alternate distichous, simple with sheath (the first basal leaf often lacking blade); prophyll hidden and inconspicuous, flattened triangular strongly 2-folded with overlapped margins, to 5 mm long, nongreen, minutely ciliate along folds, short-hairy; sheath open, \pm keeled, with slightly raised minor veins, at least basal leaves sparsely short-pilose, without lobes (auricles) at top; ligule truncate, membranous and short-ciliate, in range mostly < 0.5 mm long; collar inconspicuous; blade linear, (of basal leaves 6–50–)150–290 \times 5–13 mm, the widest at 1/3 from base, flat or lower portion folded upward from midrib, minutely serrate on colorless margins, long-tapered to tip, parallel-veined with mainly fine veins and midrib raised on lower surface, upper surface often minutely scabrous along veins. Inflorescence: spikelets, in terminal spikelike panicles, panicles with hundreds of spikelets, with conspicuous, ascending bristles (= reduced branchlets) $>$ spikelets, panicle cylindric, 90–150+ \times 5–10+ mm (excluding bristles), spikelet with 2 florets, flower one sterile and upper one bisexual, bracteate, lacking awns; principal rachis \pm ridged with 1 ridge descending from each lateral branch, scabrous and with scattered pilose hairs; lateral branches alternate, to 10 mm long (excluding bristles) having to 8 fully developed spikelets and to 7 vestigial spikelets and to 15 bristles, lacking an axillary pulvinus; stalk of spikelet usually to 1 mm long, whitish, and bearing only 1 bristle; bristles scabrous with upward-pointing barbs (antrorse), ascending at anthesis and in fruit, mostly wavy, in range 6–12 mm long, yellowish green to straw-colored. **Spikelet:** ovoid, 2.2–2.5 mm long, glabrous, breaking below glumes and leaving a whitish disc; **glumes** 2, dimorphic, glabrous, lower glume not fully sheathing, 1–1.2 mm long, membranous with 3 green veins, midvein nearly to tip and lateral not converging; upper glume cupped-elliptic, 1.8–2 mm long, membranous with 5 green veins, midvein ending at tip, and middle lateral veins converging; **lower floret lemma**, ovate, 2 mm long, similar to upper glume, membranous with 5 green veins, **palea** vestigial, 2-folded, ca. 0.8 mm, minutely textured; **upper floret lemma** ovate inrolled around palea, 2 mm long, green with 5 veins, at anthesis minutely textured with vertical files of minute bumps (cells), palea 2-folded with margins lobelike below midpoint, membranous and 2-veined. **Flower: perianth (lodicules)** 2, narrowly fan-shaped, 0.4 \times 0.2 mm, translucent; **stamens** 3, free, included; filament \pm 0.6 mm, translucent; anthers dorsifixed, dithecal, ca. 1.2 mm long, pale yellow, longitudinally dehiscent; pollen colorless; **pistil** 1, 2.2–2.4 mm long; ovary superior, ovoid, 0.5 mm long, translucent, 1-chambered with 1 ovule; styles 2, colorless except exerted, papillate stigmatic tips purple-red, threadlike to midpoint. **Fruit:** achene (caryopsis) tightly enclosed by hardened lemma and palea (upper floret), ovoid, unit ca. 2 mm long, drying

whitish, surface with wavy raised arcs of cells (transversely rugose); achene ellipsoid flattened front-to-back, ca. 1×0.7 mm, whitish.

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