

Vascular Plants of Williamson County

Bothriochloa laguroides subsp. *torreyana* – SILVER BLUESTEM, SILVER BEARDGRASS
[Poaceae]

Bothriochloa laguroides (DC.) Herter subsp. *torreyana* (Steud.) Allred & Gould, SILVER BLUESTEM, SILVER BEARDGRASS. Perennial herb (bunchgrass), rhizomatous, fibrous-rooted, cespitose, several–many-stemmed at base, inflorescences ascending to erect, in range to 120 cm long; shoots with to 4 basal leaves and < 10 cauline leaves, mostly glabrous but short-pilose to pilose and mostly nodes; rhizome horizontal, to 4 mm diameter, with short internodes; adventitious roots from bases of each new shoot. **Stems:** ± cylindrical or internode flattened on 1 side and swollen at nodes, 2(–3) mm diameter, pilose at node straight hairs and to 2 mm long, glaucous; internodes solid. **Leaves:** alternate distichous, simple with sheath; prophyll open, narrowly triangular and 2-keeled, 7–20 mm long, glabrous on margins, short-ciliate to minutely ciliate along elevated keels base-to-tip, surface of keels short-strigose with upward-pointing hairs, outer surface glossy, sericeous at basal 3 mm; sheath open with lower portion overlapping, to 125 mm long (flag leaf), rounded and smooth, glabrous, without lobes (auricles) at top; ligules variable, mostly membranous, obtuse to rounded and ca. 2(–2.4) mm long, sometimes short-ciliate, of the uppermost leaf shorter and sometimes long-ciliate; collar to 1.3 mm long, pale green; blade strap-shaped, < 50–225 × 1.7–8 mm (of flag leaf to 30 × 3 mm), the widest approaching midblade, minutely toothed on colorless margins, long-tapered tip, parallel-veined with principal veins raised on upper surface but only midrib raised on lower surface, surfaces appearing glabrous but often with inconspicuous microhairs especially visible approaching tip, sometimes with some pilose hairs near the base, lower surface with hairs to 9 mm long. **Inflorescence:** spikelets, in terminal panicles, panicle exerted or initially partly enclosed in sheath of flag leaf, narrowly funnel-shaped with appressed branches alternate distichous with 1 per node, initially 35–70 × 4–5 mm, of 6–10 ascending branches, the primary branches to 85 mm long (excluding awns) decreasing upward and arising from a rachis and 2–4+ secondary branches (rame; 2-forked at the lowest 1–2 nodes) from lower nodes of each branch, ultimate branchlets to 5-order bearing spikelets, spikelets paired with a sessile and fertile spikelet with 2 florets with a stalked and sterile spikelet, bracteate, awned; peduncle of inflorescence cylindrical, to 1 mm diameter, green, smooth, and glabrous; primary rachis cylindrical, light green or somewhat glaucous, mostly glabrous, secondary and lesser axes often with some curved internodes and with fine long hairs, lacking pulvinus for each branch or branchlet, the first internode of primary branch straight to bent, to 3 mm long, often enlarged at top with a tuft of hairs to 6 mm long, above the first node internodes and internodes of ramet with tuft of hairs at base, axis internodes mildly arched, ca. 2 × 0.25 mm, having a colorless channel flanked by narrower green edges, with lines of straight, pilose hairs along internode, hairs ascending and straight, < 0.5 mm increasing to 6–9 mm long along each internode with the longest hairs at top and in rame > sterile and stalked spikelets and somewhat concealing both spikelets; stalk of spikelet from base of sessile spikelet, ascending, straight, 1.5–2.5 × 0.2 mm, slightly more slender than axis internode, conspicuously pubescent with long hairs pilose along both edges increasing upward from 0.5–5 mm long at top and > stalked spikelet. **Stalked spikelet:** sterile, lanceolate to elliptic in outline and flattish, 2.2–3 × 0.7–1 mm, never opening, not abscising or delayed abscising from stalk or rame; **glumes** 2, dimorphic,

lower glume with 7 green veins, with inrolled margins and midvein extended into short awnlike tip, margins whitish above midpoint, with tuft of hairs at base; upper glume < lower glume, acute-lanceolate, ca. $2 \times 0.4\text{--}0.5$ mm, membranous with 3 green veins, inner surface with several short veins; **lemmas** and **paleas** typically absent. **Sessile spikelet:** ovate, mostly 3.8–4.5 mm long, awned, somewhat concealed by pilose hairs; **glumes** 2, dimorphic, lower glume flattish with inrolled margins and notched at tip, mostly with 7 green veins, outer surface with short appressed hairs to midpoint, lacking a secretory pit above midpoint; upper glume folded, acute-ovate < than lower glume, $2.3\text{--}3 \times 1.3$ mm, mostly colorless with 3 green veins, glabrous; of lower floret **lemma** slender, with infolded margins ca. 3×0.3 mm, mostly colorless with green midvein, persistent; **palea** membranous, < 1.5 mm long, lacking veins, persistent within spikelet; of upper floret **lemma** linear and flat, $1.7\text{--}2 \times 0.15\text{--}0.2$ mm, white and 1-veined, vein continuous with terminal awn, 8–12.5(–16) mm long, the lower portion of awn red and twisted with bend at ca. 1/3 from base, the upper portion mostly straight and not twisted aging straw-colored. **Flower** (upper floret of sessile spikelet): bisexual; perianth (lodicules) 2, notched fan-shaped and folded, 0.4×0.3 mm, translucent; **stamens** (2–)3, free; filaments threadlike, 0.5 mm long, colorless; anthers dorsifixed, dithecal, with anther sacs free from base to midpoint, mostly 1–1.4 mm long, yellowish and red, longitudinally dehiscent; pollen colorless; **pistil** 1; ovary superior, \pm narrowly conic, 0.5×0.3 mm, green, glabrous, 1-chambered with 1 ovule; styles 2, separate at base, 1.7–2 mm long, lower portion colorless, upper portion exerted from lemma and palea, of stigmatic papillate hairs, 1–1.2 mm long, red, when dry remaining on hairs of inflorescence. **Fruit:** achene (caryopsis), tightly enclosed within sterile spikelet with attached pedicellate spikelet as a hairy dispersal unit; achene ellipsoid to narrowly top-shaped, $\pm 1.2 \times 0.6$ mm, tannish to purplish, smooth; sessile spikelet elliptic in outline compressed front-to-back with lemma only partially visible; stalk of stalked spikelet flat, ca. 2.5 mm long, with long silky hairs along margins, spikelet with diminutive glume 1.8 mm long and lacking awn.

A. C. Gibson