

Vascular Plants of Williamson County
Buchloë datyloides – BUFFALOGRASS [Poaceae]

Buchloë datyloides (Nutt.) Engelm., BUFFALOGRASS. Perennial herb, clonal, stolon-producing, tufted from stolons, fibrous-rooted, several-stemmed per tuft, in range mostly < 20 cm tall; dioecious (monoecious); shoots with basal leaves and several cauline leaves, commonly having pilose hairs to 3 mm long at least at bases of some blades; stolons horizontal (to 20 mm deep), tough, cylindrical, internodes to 70 mm between shoot tufts, to 1 mm diameter but much thickened at nodes, glabrous and green, smooth or veins slightly raised, having a leaf at each node with sheath and blade < 8 mm long, solid; adventitious roots on lower side of stolon node and belowground stems of aerial shoots. **Stems:** cylindrical, nodes to 1.3 mm diameter, finely ridged, glabrous; solid. **Leaves:** alternate distichous (not evident), simple with sheath; prophyll with each shoot, membranous, strongly 2-keeled, ca. 7 mm long, with 2 points at tip, with 2 green veins next to keels, keels short-ciliate, with wide membranous margins; sheath open, ca. 10-ridged on outer surface with green veins and having wide membranous margins, veins mostly raised, glabrous (even when blade hairy), lacking lobes (auricles) at top; ligule membranous short-ciliate from midpoint, 0.4–1 mm long; collar narrow, whitish; blade linear long-tapered to tip, < 6–130 × 1–2.7 mm, minutely toothed on margins, parallel-veined with 9–21 fine veins slightly raised on both surfaces, surfaces glabrous to pilose hairs minimally on margins at base of blade and along collar, maximally scattered on both blade surfaces, upper surface sometimes having puberulent hairs approaching tip, hairs on lower surface often appressed upward-pointing. **Staminate inflorescence:** racemelike and 1-sided with 7–15 spikelets overlapping and alternating in 2 close rows, mostly < 12 mm long, spikelets radiating from rachis, spikelet with 2 fertile florets, in bud each floret narrowly ellipsoid, bracteate, lacking awns; peduncle of 1-sided raceme 1–2.5 mm long, at the base with some relatively long, straight hairs, above minutely scabrous, the axis with green, minutely scabrous ridges on outer side and puberulent and scabrous on spikelet side and on wavy margins, the spikelets spaced ca. 1 apart along axis; stalk of spikelet short and stout, green, glabrous or minutely puberulent. **Spikelet:** < 7 mm long, the florets subequal, drying usually without breaking apart; **glumes** 2, unequal, asymmetric, membranous typically with 1 green vein; lower glume lanceolate, 1.8–2.5 × 0.5 mm, membranous sides not equal; upper glume ovate and boat-shaped unequally keeled, 3.5–3.9 mm long, > lower glume, often blushed purplish red on exposed surface, keel minutely scabrous and sometimes with short awnlike tip; rachilla ± 0.5 mm long, glabrous; **lemma** membranous, cupped-elliptic, 4–4.5 mm long, > glume, finely 3-veined with green lateral veins near margins and but veins not converging at tip, on back often minutely puberulent above midpoint; **palea** membranous with 2 fine green veins, margins not folded, slightly shorter than lemma, often minutely notched at scabrous tip, back often minutely puberulent above midpoint. **Staminate flower:** **perianth (lodicules)** 2, fan-shaped, 0.25–0.3 mm long, colorless; **stamens** 3, free; filaments threadlike, 3–4 mm long; anthers basifixed, dorsifixed, fully exerted, linear, 3.3–3.7 × 0.5 mm, pale orange, longitudinally dehiscent; pollen nearly colorless; **pistil** absent. **Pistillate inflorescence:** burlike cluster of 2–7 spikelets condensed with spikelets fused to shortened rachis axis, terminal but appearing axillary somewhat concealed by leaf blades and leaflike bracts, typically with 3 principal, leaflike bracts and 2 or 3 branchlets 2 burs, the uppermost branchlet older and the terminal bur

developing first; principal bracts having an open sheath with wider membranous margins to 12 mm long, often \pm folded to rounded or keeled, ca. 13-veined, blade leaflike, narrowly lanceolate, to 34 mm long decreasing upward; prophyll closed ca. 1 mm, membranous, strongly 2-keeled, ca. 7.5 mm long, 2-pointed at tip, 4-veined; axis internodes between principal bracts < 1 mm long, green, glabrous; axis of branchlet unequally 2-forked, the terminal axis curved (around other spikelet cluster), hemi-cylindric, 5.5–6 mm long, minutely scabrous on 2 edges and densely pubescent at top, the shorter axis straight, 1–1.5 mm long, densely pubescent at top. **Spikelet:** with ca. 6 persistent teeth at top; **glumes** 2, strongly dimorphic; lower glume concealed on inside of bur, membranous acuminate-triangular, to 2.5 mm long, whitish with a green midvein above midpoint, puberulent; upper glume overall ovate in outline, ca. 6 mm long, lower portion thick-walled and light yellow-green with membranous margins sheathing lemma and palea, short-ciliate on margins, whitish, upper portion with 3(–5) unequal, erect, tough, dark green, narrowly triangular teeth 1–3.5 mm long (central tooth the longest), the teeth minutely scabrous and puberulent; **lemma** enclosed by glume, lanceolate inrolled with 3 unequal, linear teeth, ca. 6 mm long, whitish with 3 dark green veins from midpoint and puberulent above midpoint; palea 2-folded along principal veins, membranous narrowly lanceolate, 4–4.5 \times 1 mm, whitish with veins pale green to midpoint and dark green about midpoint, minutely scabrous along folds and minutely fringed at tip. **Pistillate flower:** **perianth** apparently absent; **stamens** absent; **pistil** 1; ovary superior, ovoid slightly compressed front-to-back, ca. 0.7 \times 0.5 mm, colorless to greenish, 1-chambered with 1 ovule; styles 2, touching at base, exerted from bur, 6.5–9 mm long, included portion colorless, exerted stigmatic portion light purple-red, conspicuously papillate-hairy. **Fruit:** achenes (caryopses) 1 per spikelet in indehiscent, burlike cluster of to 7 spikelets; bur oblique and asymmetric with spikelets alternating in 2 rows, to 6 mm long and wide, lower portion with achenes covered by hard (indurate) glumes strongly attached to rachis, upper portion of erect, brown, narrowly triangular teeth of upper glumes and lemmas; achene oval-ellipsoid slightly compressed front-to-back, ca. 2–2.3 \times 1 mm, brown, firmly enclosed by upper glume.

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