

Vascular Plants of Williamson County

Chasmanthium latifolium – CREEKOATS, INDIAN WOODOATS, BROADLEAF CHASMANTHIUM
[Poaceae]

Chasmanthium latifolium (Michx.) H. O. Yates, CREEKOATS, INDIAN WOODOATS, BROADLEAF CHASMANTHIUM. Perennial herb, rhizomatous, fibrous-rooted, cespitose, several-stemmed at base, each shoot unbranched aboveground, erect to ascending with drooping terminal inflorescence, in range 35–100+ cm tall; shoots with several, short-lived, bladeless, underground leaves from rhizome, when flowers having only cauline leaves, foliage thin, dark green, and nearly flat, essentially glabrous or having several pilose hairs on upper surface of blade near its base; rhizome shallow and horizontal, with short internodes, to 3 mm diameter, concealed by overlapping, triangular cataphylls < 3–10 mm long, initially whitish when dry appearing strongly ridged, with axillary buds and developing rhizome at top of older rhizome; adventitious roots from rhizome nodes and at buried node of a shoot. **Stems:** cylindric but on lower plant swollen just above node, to 3.5 mm diameter, tough, aboveground green but often reddish at nodes, internodes to 100 mm long; internodes hollow. **Leaves:** alternate distichous, simple with sheath and lacking a “petiole”; prophyll only visible appressed to axillary bud at the first node above rhizome, closed ca. 0.5 mm long, 2-keeled with keels widely spread by axillary bud, \pm 2.5 mm long, leathery, lower keels rounded, keel ca. 0.25 mm wide and upper portion minutely ciliate, obtuse at tip; sheath open, low-ridged, < internode, glabrous; ligule truncate, membranous with jagged to short-ciliate margin, in range ca. 0.7 mm long, lower portion often brownish, splitting downward; collar ca. 2 mm long, whitish or with pale purplish blotches, wavy, sometimes with 1–several pilose hairs; blade acuminate-lanceolate to acuminate-oblong lanceolate, mostly 90–195 \times 10–23 mm (the lowest cauline leaf linear and narrower), tapered to rounded at base, minutely serrate on colorless margins, long-acuminate at tip, parallel-veined with midrib slightly raised on lower surface, upper surface scarcely furrowed sometimes with pilose hairs to 4 mm long near base. **Inflorescence:** spikelets, in a terminal, open panicle with with several–30 broad, strongly flattened spikelets on to 12 drooping primary branchlets, to 250 mm long, each primary branchlets with 1–6 fertile spikelets (the lowest branchlet sometimes with a diminutive spikelet), the upper branchlets each with only 1 spikelet, fertile spikelet with 1–3 neuter lower florets and above mostly 12+ bisexual florets, bracteate, pilose at bases of nodes, at forks of branchlets, and at the base of spikelet and each floret (callus), conspicuously scabrous along edges of axes; panicle rachis with a ring of pilose hairs around each node, rachis, branchlet axis, and stalk of each spikelet wiry, green, with 2–3 minutely toothed edges, branchlets to 120 mm long, pulvinus at base and several mm above pulvinus unequally 2-forked with stalk of a spike and the thicker branchlet axis, stalks of spikelets 10–30 mm long, with small pulvinus at base, pilose at top. **Spikelet:** ovate in outline flattened side-to-side, mostly 20–30 \times 12 mm, florets conspicuously alternate distichous, rachilla ca. 1.6 mm long with hairy callus at top, breaking above glumes and between florets; **glumes** 2, \pm equal, in range mostly 5–6.5 \times 2 mm then strongly folded and keeled, green with membranous margins, the lower glume mostly 5-veined and upper glume mostly 7-veined, scabrous along keel; **lemma** strongly flattened and keeled, acute-ovate mostly 9–11 mm long (of neuter floret shorter but lemma longer and wider than glume), green with

membranous margins, with many parallel veins at base, along keel ciliate on lower portion (concealed) and scabrous on exposed keel; palea always present, of neuter floret ca. 5–6 mm long, arched from base, with 2 winglike keels and colorless, with wide membranous margins, of fertile florets mostly 6.5–7.5 mm long with green keels. **Flower:** bisexual, florets not spreading apart (cleistogamous); **perianth (lodicules)** 2, narrowly wedge-shaped, ca. 0.5 mm long, colorless; **stamen** 1, free; filament ca. 1 mm long, whitish; anther basifixed, dithecal, \pm 0.6 mm long, pale yellow, longitudinally dehiscent; pollen whitish; **pistil** 1, ca. 4 mm long; ovary superior, obovoid, ca. 0.5 mm long, pale green, 1-chambered with 1 ovule; styles 2, separate at top of ovary, feathery (plumose) initially straight, to 4 mm long, colorless at base and light pink-purple above aging white at bases and pigmented above drying reddish. **Fruit:** achene (caryopsis), elliptic to ovate in outline strongly compressed, mostly $4.5\text{--}5.5 \times 2.3\text{--}2.7 \times 0.6$ mm, dark brown, often with 1–2 persistent styles.

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