

Vascular Plants of Williamson County
Bromus racemosus – SMOOTH BROME [Poaceae]

Bromus racemosus L., SMOOTH BROME. Annual, fibrous-rooted, several-stemmed at base, with ascending to suberect shoots, in range to 80 cm tall; shoots typically with several basal leaves (including sheath only) and several cauline leaves, with straight hairs on exposed surfaces of vegetative plant. **Stems (culms):** cylindrical, in range to 4 mm diameter, internodes smooth and glabrous and nodes short-pilose; internodes hollow. **Leaves:** alternate distichous, simple with sheath; sheath closed, to 10 mm long, ridged and short-pilose, lacking lobes (auricles) at top; ligule membranous, jagged-subtruncate, in range 2–3 mm long, short-ciliate, back short-pilose and front glabrous; collar 1 mm long, whitish, sparsely short-ciliate on margins; blade linear, in range to 205 × 8 mm, the widest approaching midblade, flat, minutely toothed on margins, parallel-veined with veins raised on both surfaces, upper surface pilose and lower surface short-pilose, not glaucous. **Inflorescence:** spikelets, in terminal, open panicles, panicle with widely spaced nodes, in range to 180 × 70 mm, spikelet with 5–7 bisexual florets, at pollination 10–11 mm wide, bracteate, awned; nodes along rachis alternate distichous, at the lowest node with ca. 6 branchlets, at the second node ca. 5 and the third node ca. 4, decreasing upward, the branchlets ascending, on slender, flexible, wiry axes, the longest branchlet to 150 mm long and unequal at each node, having to 4 spikelets on the longest branchlets and many with only a terminal spikelet, most florets fertile and bisexual but terminal floret potentially sterile (= reduced lemma); sheath of flag leaf < first node. to 170 × 4 mm, upper surface pilose and lower surface short-pilose; rachis mostly ridged but smoother at the top of each internode, having a translucent ring subtending the first and often second node; branchlet axes with axillary pulvinus at base and minutely scabrous, glabrous. **Spikelet:** ± narrowly lanceoloid when closed but at anthesis fertile florets spreading fully exposing anthers and styles, not conspicuously compressed, in range mostly 13–18 mm long (excluding awns), essentially glabrous, breaking above glumes and between fertile florets; **glumes** 2, unequal, green with membranous margins, lacking awns, lower glume in range 4–5.3 × 2–2.5 mm and (3)5-veined, upper glume 5.5–6.3 × 3–3.5 mm and 7(9)-veined, lower glume < upper glume, glumes to 1/3 spikelet (excluding awns) and < lower lemma, midvein to tip and lateral veins not converging at tip, especially upper glume minutely scabrous on principal veins, minutely notched at tip, and minutely ciliate on margins approaching tip; rachilla segments 1–1.5 mm long, white, glabrous; **lemma** awned, body obovate rounded on back (never keeled), in range 7–8.2 × 3–4.5 mm, green with membranous margins not inrolled, 7(9)-veined (on sterile florets shorter and having fewer veins) with principal veins not raised, minutely ciliate on margins, minutely scabrous especially of membranous tissues and along veins, notched at tip with 2 triangular lobes ± 1 mm long, the awn from notch straight, 5–9 mm long; **palea** on only fertile florets, 2-veined, obovate 2-keeled strongly folded flat along keels, 5.5–6(–7) × 1.5 mm (folded, 2.5 mm unfolded), < lemma, notched at tip, membranous with keel veins green and short-ciliate along keels. **Flower:** bisexual, fully exposed at anthesis; **perianth (lodicules)** 2, acute-ovate, ca. 1.2 × 0.5 mm, translucent; **stamens** 3, ± exserted; filaments threadlike, 2–2.5 mm long, translucent; anthers basifixed, dithecal, 1.6–2.1 mm long, pale light yellow, longitudinally dehiscent; pollen light yellow; **pistil** 1; ovary superior, columnar,

ca. $1.5 \times 0.7 \times 0.5$ mm, translucent, 2-lobed at tip short-pilose, 1-chambered with 1 ovule; styles 2, arising separately on lemma side from 0.5 mm from top of ovary (subapical), ca. 1.5 mm long, colorless, with numerous branchlets (plumose). **Fruit:** not observed, achene (caryopsis), dispersed as floret tightly enclosed within adherent palea and awned lemma + a rachilla segment.

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