

Vascular Plants of Williamson County

Bromus catharticus var. *catharticus* – RESCUE GRASS [Poaceae]

Bromus catharticus Vahl var. *catharticus*, RESCUE GRASS. Annual (biennial herb), fibrous-rooted, 1–several-stemmed at base, ascending to decumbent and often arching to nodding in fruit, in range 30–65 cm tall; shoots typically with basal and several cauline leaves, basal leaves finely pilose with downward-leaning hairs and cauline leaves and upper shoot glabrous except around margins below ligule. **Stems (culms):** cylindric, in range 2–4 mm diameter, internodes 30–150 mm long, mostly glabrous; internodes solid to hollow. **Leaves:** alternate distichous, simple with sheath; prophyll 2-keeled, to 32 mm long, keels wavy and short-ciliate but otherwise glabrous; sheath closed, of cauline leaves closed at least to midpoint, drying ridged and somewhat keeled above midpoint with a strongly raised, whitish midvein, throat narrowly membranous, ciliate on margins of basal leaves, upper leaves essentially glabrous but with scattered pilose hairs at top of sheath (below collar), without lobes (auricles) at top; ligule translucent-membranous, jagged-obtuse, 0.8–6 mm long (short on basal leaf and the longest on flag leaf), glabrous; blade linear, in range 40–375 × 3–10 mm, the widest at base, flat, minutely toothed on margins, parallel-veined with midrib and principal veins raised on lower surface, both surfaces pilose on basal leaves, on cauline leaves upper surface pilose mostly above midblade and lower surface scabrous above midblade. **Inflorescence:** spikelets in open panicle, terminal, panicle with widely spaced nodes, in range to 300 mm long, branching nodes alternate distichous, at each node with 1–5 ascending to nodding branches on slender, flexible stalks, branches to 110 mm long, each with 1–4(–5) spikelets but most branches having 1–2 spikelets, spikelet with 3–6 florets, most fertile but terminal 2 florets commonly sterile, the lower sterile floret with reduced lemma and palea, the uppermost sterile floret with diminutive lemma only) and some spikelets abortive, short-awned; bract subtending the lowest node absent; branches at principal nodes unequal, short–35 mm long; rachis flat above branches at each node, glabrous; axes of branches wiry and lax, often aging purple-red, glabrous and smooth, often with pulvinus in axil at base. **Spikelet:** ± narrowly obovate in outline, strongly flattened, with lemmas somewhat spreading at anthesis and in fruit, in range mostly 22–32 mm long (including awns), breaking above glumes and between fertile florets (sterile floret persistent on rachilla with fertile floret); **glumes** 2, subequal, lanceolate and keeled, lower glume in range 7–12.5 × 2–2.5 mm and mostly 5–7-veined, upper glume 9–13.5 × 3.5–4 mm and mostly 7–9-veined, lower glume < upper glume, glumes to midspikelet (including awns) and < lower lemma, lateral veins not converging at tip, green with membranous margins base to tip with green aging purplish red in fruit, keel scabrous mostly above midpoint and ending in a sharp tip but not an awn; rachilla pale green, segments 1.4–2.5 mm long, finely short-hairy on convex face and glabrous on hidden, flat face; **lemma** body lanceolate keeled above midpoint, in range 13–16 mm long on fertile floret, 7–13-veined (on sterile florets shorter and having fewer veins), with principal veins slightly raised at least above midpoint, tip scarcely lobed next to awn base, green where exposed and light green below and whitish membranous and toothed on margins (especially conspicuous below midpoint) and scabrous along veins; the awn attached at lemma tip, (0)1–3.5 mm long, tan aging red; **palea** on only fertile florets, elliptic, 8.5–11.7 mm long, ca. 4 mm < lemma, strongly 2-keeled folded flat along keels,

concave between keels, with 2 teeth at tip to 0.6 mm long, mostly light to pale green, keel veins green and ascending short-ciliate, membranous surfaces lacking hairs between keels but with minute hairs on margins. **Flower:** bisexual, concealed within floret; **perianth (lodicules)** 2, lanceolate, oblong, to elliptic, $0.5\text{--}1.2 \times 0.25\text{--}0.5$ mm, translucent, at anthesis bulbous at base and persistent but flat during fruit development; **stamens** 3, included; filaments 0.7–2 mm long, translucent-white; anthers basifixed, dithecal, oblong but sacs unequal, 0.5 mm long or 0.8–4 mm long, yellow, longitudinally dehiscent; pollen pale yellow; **pistil** 1, at anthesis 1.2–2.7 mm long; ovary superior, obovoid, $0.5\text{--}1.2 \times 0.35\text{--}0.8$ mm, colorless, with ascending hairs above midpoint, with 2 sterile, colorless flaps extending beyond tip, 1 flap elliptic, the longer flap notched and 0.5 mm long, flaps persistent in fruit; styles 2, arising separately from near top of ovary (subapical); 0.8–2 mm long, colorless to white, with numerous branchlets (plumose), the branchlets twisted, wavy, and often intertwined. **Fruit:** achene (caryopsis), dispersed as floret tightly enclosed within adherent palea and awned lemma + a rachilla segment, short-awned dispersal unit commonly 14–17 mm long; achene narrowly obovoid not compressed, $6.5\text{--}8 \times 1.6\text{--}2 \times 1.6\text{--}2$ mm, reddish brown, deeply grooved on palea side, with whitish flap 0.5 mm long and tuft of short hairs on tip; lemma with raised, scabrous veins, reddish purple and scarious; palea short-ciliate along keels, membranous tissue between keels glabrous, membranous margins with short hairs above midpoint; rachilla segment appressed, flattened front-to-back, 1.4–2.5 mm long; the uppermost fertile floret retaining rachilla and 2 sterile florets.

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