

*Elymus multisetus* (J. G. Smith) Burt Davy, BIG SQUIRRELTAIL. Perennial herb, not rhizomatous, fibrous-rooted, several-many-stemmed at base, caespitose with unbranched ascending to erect shoots, 20–75 cm tall; shoots glabrous or pubescent to finely hirsute, smooth to minutely scabrous. **Stems (culms):** cylindric, to 2 mm diameter, tough; internodes hollow. **Leaves:** alternate distichous, simple with sheath; sheath open, low-ridged, > internode, sometimes minutely scabrous along veins, sometimes with lobes (auricles) at top, auricles to 1 mm long; ligule membranous, truncate, 0.2–0.7(–1) mm long, entire to jagged to cut on margin; blade linear, 145–240(–400) × ((0.8–)2.5–5 mm, flat or inrolled when water-stressed, long-tapered to fine tip, parallel-veined with principal veins raised on upper surface and less so on lower surface, upper surface moderately fine-pilose and sometimes scabrous along veins, lower surface glabrous and nearly smooth. **Inflorescence:** spikelets, in terminal, spikelike panicles with sessile spikelets, inflorescence (30–)130–160(–200) × (50–)110–160 mm (including awns; width in fruit with spreading awns), nodes close and regularly spaced, generally with 2 suberect spikelets per node, spikelet with 2–4 florets, the lowest floret vestigial and glumelike in 1 or both spikelets at the node, awned; rachis with internodes compressed front-to-back, internodes (3–)3.8–5.8(–8) mm long, 0.6–0.9 mm diameter near base and 0.8–1.1 mm diameter near top of internode, ± glossy tawny but greenish on margins, slightly curved and low-convex on both faces but more prominently on outer face and inner face often ridged, narrowly winged on margins, mostly glabrous by minutely scabrous to short-hairy on upper portion of margins. **Spikelet:** (10–)13–15 mm long (excluding awns), breaking above glumes and between florets; rachilla 1.6–2 mm long, glossy, glabrous; callus 0.4–0.5 mm long, glabrous or short-hairy on upper portion of the larger margin; **glumes** 2, divided near the base into several awnlike divisions, each division 25–100 mm long, divisions united at base for 2–4(–5+) mm, 0.7–0.9 mm wide, conspicuously 2(–3)-ridged at base with ridges forking again, hard (indurate), scabrous, the awns unequal, 4–97 mm long, flexuous to outwardly curved above midpoint; **lemma** of fertile floret awned, lanceolate, 7.5–11.5 × 1.3 mm, convex on back or having 5 slightly raised veins above midpoint, generally with 2 bristle-tipped lobes at top and with awn arising in notch between lobes, the lobes 0.3–5.5+ mm long, sometimes appressed to awn, the awn (10–)25–78(–110) × 0.6 mm, widely spreading to curved; **lemma** of sterile florets < fertile lemma, 1–3-awned with lateral lobes sometimes awnlike; **palea** of fertile floret lanceolate, 7.5–10.3 mm long (excluding bristles), 2-veined, 2-keeled, with veins sometimes extended to 0.5 mm as 2 bristles, concave and membranous between veins, incurved or clasping achene along ± green margins, acute to truncate at tip, glabrous, minutely scabrous along keels; **palea** of sterile floret absent. **Flower:** bisexual; **perianth (lodicules)** ± lanceolate, ca. 1.5 × 0.4 mm, fleshy at base, entire on both sides or with a short lateral lobe or tooth on 1 side, acuminate at tip, translucent, ascending-ciliate on margins; **stamens** 3, free; filaments threadlike; anthers fully exerted, dorsifixed, dithecal, 1–2 mm long, pale light yellow or with purple-red edges, longitudinally dehiscent; pollen pale yellow; **pistil** 1; ovary superior, oblong compressed front-to-back, ca. 2 × 0.7 mm, pale green with appressed short hairs (not at base), 1-chambered with 1 ovule; styles 2, exerted and spreading near base of lemma, 1.7–2 mm long, pale green, with stigmatic branches base to tip, with branches to 1 mm

long. **Fruit:** achene (caryopsis), ± lanceoloid, 3.5–4.6 × 0.5 mm (not including tuft of hair at top), orangey tan, concave on palea side, convex and generally with a medial ridge on lemma side, truncate at tip with dense tuft of hairs to 0.8 mm long.

Native. Perennial herb collected from one site and probably never was firmly established. *Elymus multisetus* is a distinctive species, having a dense inflorescence with long awns, which overall resembles a squirrel's tail when the awns spread widely in fruit. This species is also unique for *Elymus* in our area because the rachis breaks apart (disarticulates).

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