

Avena barbata Link, SLENDER WILD OATS. Annual, fibrous-rooted, several-stemmed at base, not branched above base, initially prostrate bending erect, 30–130 cm tall; shoots having to 5 leaves, mostly glabrous. **Stems (culms):** cylindric, to 5 mm diameter, nodes maroon-dark green and glossy; internodes hollow. **Leaves:** alternate distichous, simple with sheath; sheath open, not keeled, narrowly membranous on margins, pilose (basal leaves) and glabrous (cauline leaves), without lobes (auricles) at top; ligule translucent-milky membranous, broadly deltate to crescent-shaped, (1–)1.8–7 mm long, irregularly serrate or cut to jagged on obtuse margin, later often splitting from margin downward, minutely scabrous with backward-pointing hairs on outer surface, glabrous on inner surface; blade linear, 55–330 × (2–)3.3–10(–14) mm, flat, collar whitish, minutely toothed on margins, parallel-veined with well-defined midrib on lower surface, lacking microhairs. **Inflorescence:** spikelets, in terminal, open panicles, panicle 130–400 × 100–180 mm, with several widely spaced semi-whorls of spreading lateral branches and stalked spikelets, the lowest nodes with 2–3 branches + 4–5 stalked spikelets, decreasing in number approaching tip, with pendent spikelets having 2–3 bisexual florets + 0 or 1 sterile floret, awned; peduncle cylindric, 230–680 mm long (= from node of flag leaf to the lowest branch); rachis 100–290 mm long, wiry, finely striped, basal internodes 85–120 mm long decreasing upward to 28–35 mm long; lateral branches 25–110(–160) mm long, each branch with 2–5 spikelets; stalk of spikelet 5–46 mm long, very fine, at end often sharply bent ($\pm 90^\circ$), swelling beneath spikelet 0.4–0.8 mm wide. **Spikelet:** before anthesis narrowly fusiform, 1.7–2.5(–3) mm wide, not compressed, long-hairy, breaking above glumes and between florets; **glumes** 2, widespread at anthesis, subequal, acuminate-lanceolate, 16.5–25(–30) mm long, > florets, upper glume 0.2–2.6(–3) mm > lower glume, membranous striped with green along each side of veins, 8–9-veined below midpoint and typically 6–7-veined above midpoint, glabrous, the green stripes often radiating at base; rachilla internodes 1.2–4 mm long (for fertile florets) and 3.7–4.3 mm long (for sterile floret), progressively longer, producing an elliptic scar on callus of floret; callus soft long-hairy, the hairs to 3 mm long; **lemma** of fertile floret awned, membranous, lanceolate, 17–20 mm long (the lowest floret) decreasing upward, 6-veined, with ascending soft hairs 4–5 mm long from base to below midpoint, forked at tip = 2 bristles 2–6 mm long, the awn arising 5–6 mm from lemma base, 20–45 mm long, blackish brown, stiff, bent and twisted at or before midpoint, with longitudinal groove conspicuous in twisted segment, not twisted above midpoint, persistent; **palea** of fertile floret membranous, narrowly oblanceolate to linear, 11–13.8 mm long, flat, 2-veined, 2-keeled, short 2-forked at tip, ciliate along keels. **Flower:** bisexual, protandrous; **perianth (lodicules)** 2, lanceoloid, 1.3–1.8 mm long, translucent, tapered at tip; **stamens** 3, free, exerted laterally; filaments ± 3 mm long, translucent-white; anthers dorsifixed, dithecal, 4–4.7 mm long, light yellow, longitudinally dehiscent; pollen light yellow; **pistil** 1, 2.5–3.5 mm long; ovary superior, inverted conic to wedge-shaped and compressed, ± 1 mm long, covered by erect, straight hairs, -chambered with 1 ovule; styles 2, exerted laterally, widely spaced and arising from near lateral margins, ca. 2.5 mm long, whitish, feathery (plumose) for ca. 3/4 of length. **Sterile floret:** short, with rudimentary lemma, lacking awn and palea. **Fruit:** achene (caryopsis), concealed by lemma and palea, narrowly ellipsoid, 6–6.5 × ± 1.3 mm, light tan, with deep longitudinal groove on side facing palea, sparsely sericeous; floret awned, whitish long-hairy, lemma and palea light bright, lemma erect, strongly ridged; scar ca. 0.4 mm wide. Late December–late April.

Naturalized. Annual occurring commonly in openings of shrubland communities, on exposed slopes, and in waste areas throughout range. *Avena barbata* is more slender than *Avena fatua* and tends to flower somewhat earlier in the season, although they often grow in mixed stands. Although there are several technical ways to tell the species apart, slender wild oats has a swelling beneath the spikelet of about half a millimeter in diameter, whereas the swelling of *A. fatua* is about one millimeter in diameter. Although harder to measure, the bristle tips of the lemma of *A. barbata* typically are at least two millimeters long in flower or fruit, therefore being much longer than in *A. fatua*.

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