

Vascular Plants of Williamson County

Avena fatua – WILD OATS [Poaceae]

Avena fatua L., WILD OATS. Annual, fibrous-rooted, several–many-stemmed at base, not branched above base, initially prostrate bending upward at the lowermost nodes (geniculate), erect, in range to 90 cm tall; shoots having to 5 leaves, mostly glabrous (sparsely pilose). **Stems (culms):** cylindrical, to 5.5 mm diameter, glossy, pilose or with backward-pointing hairs above and below the uppermost node; internodes hollow. **Leaves:** alternate distichous, simple with sheath; sheath open, not keeled, narrowly membranous on margins, glabrous to sparsely pilose (basal leaves) and glabrous (cauline leaves), without lobes (auricles) at top; ligule translucent-milky membranous, broadly deltate to acute, 1.2–6 mm long, irregularly cut to jagged on obtuse margin, later often splitting from margin downward; blade linear, 95–450 × (3–)5–15 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 70–400 × 50–110(–200) 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 cylindrical, 230–410 mm long (= node of flag leaf to the lowest branch); rachis finely striped, basal internodes to 80 mm long reduced upward; lateral branches 25–160 mm long, with 2–5 spikelets; stalk of spikelet 9–55 mm long, very fine, at end often sharply bent ($\pm 90^\circ$), swelling beneath spikelet 1.1–1.3 mm wide. **Spikelet:** before anthesis narrowly fusiform, 3.4–5.2 mm wide, not compressed, long-hairy, breaking above glumes and between florets; **glumes** 2, widespread at anthesis, subequal, acuminate-lanceolate, (18–)22–26(–32) mm long, > florets, upper glume 0.9–3.5 mm > lower glume, membranous striped with green along each side of veins, 9–11-veined below midpoint and typically 7–9-veined above midpoint, glabrous, the green stripes often radiating at base; rachilla internodes 1.1–3.5 mm long (for fertile florets) and 3–4.3 mm long (sterile floret), progressively longer, producing a triangular to ovate (round) scar on callus of the floret; callus soft long-hairy, the hairs ca. 1/4 lemma long, tawny; **lemma** of fertile floret awned, membranous, narrowly lanceolate, 14–22 mm long (lowest floret) decreasing upward, 6-veined, with ascending hairs 4–5 mm long, forked at tip 0.7–1.7 mm long, without bristles, sometimes with a small tooth on outer edge; the awn arising 5–6 mm from lemma base, (23–)37–42 mm long, dark 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 on keels. **Flower:** bisexual, protandrous; **perianth (lodicules)** 2, lanceoloid, 1.8–2.7 mm long, translucent, tapered at tip; **stamens** 3, free, exerted laterally; filaments 1.7–2.5 mm long, translucent-white; anthers dorsifixed, dithecal, 4.3–5.8 mm long, light yellow, longitudinally dehiscent; pollen light yellow; **pistil** 1, ca. 4.5 mm long; ovary superior, inversely conic to wedge-shaped and compressed, ± 1 mm long, covered by erect, straight hairs to 2.5 mm long, 1-chambered with 1 ovule; styles 2, exerted laterally, widely spaced and arising from near lateral margins, 3.3–4.2 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, 6.5–8 × 1.7–2.3 mm, light tan, with

deep longitudinal groove on side facing palea, sparsely sericeous; floret awned, tawny long-hairy, lemma and palea dark brown, lemma erect, strongly ridged, palea glossy; scar ca. 0.9 mm wide.

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