

Vascular Plants of Williamson County

Hordeum vulgare subsp. *vulgare* – CULTIVATED (SIX-ROW) BARLEY [Poaceae]

Hordeum vulgare L. subsp. *vulgare*, CULTIVATED (SIX-ROW) BARLEY (including BEARDLESS BARLEY). Annual, fibrous-rooted, many-stemmed at base (tillering), principal shoots unbranched, erect with terminal inflorescences, 25–85 cm tall, with both fertile and later formed sterile shoots; shoots to 6-leaved, glabrous, conspicuously scabrous, at maturity inflorescence generally nodding and shoot often reclined. **Stems (culms):** cylindrical, tough, to 5.5 mm diameter, glaucous below each node; internodes hollow. **Leaves:** alternate distichous, simple with sheath; sheath open, to 190 mm long (flag leaf), smooth, striped with pale veins, with lobes (auricles) at top, auricles clasping and crescent-shaped 3.5–6 mm long, whitish arising from white color; ligule membranous, truncate, 1–2(–4) mm long, translucent-milky, short-ciliate, persistent; blade linear-lanceolate and long-acuminate, to 250 × 4–19 mm, the widest near base, flat, entire, parallel-veined with well-defined midrib sunken on upper surface and raised on lower surface, minutely scabrous along veins, upper surface with minor veins slightly sunken. **Inflorescence:** spikelets, in terminal, dense, “spike,” spike cylindrical, 70–100 × 15–20 mm (excluding awns), with 10–24 nodes, spikelets in alternate distichous sessile clusters of 3, with spikelets in 6 vertical rows (6-ranked), long-awned, spikelet with 1 floret, often sterile at the lowest 2 nodes, flowering when emerging from sheath of flag leaf; peduncle glabrous, not scabrous, terminated by conspicuous rim, awned; rachis strongly flattened, edges and inner face just above node densely short-tomentose, glabrous and glossy on outer faces and beneath fruits. **Spikelet:** central spikelet sometimes slightly > lateral spikelets, breaking above glumes; **glumes** 2, both formed on outer (lemma) side of spikelet so not clearly paired with spikelet, awned, subequal, linear, 8–15 × 1 mm (including awn), outer glume of each lateral spikelet slightly > other glume of spikelet, stiff and flat, 3-veined, glaucous, pubescent below midpoint and scabrous above midpoint + awn, the awn straight, 1–5 mm long; rachilla prolonged behind palea as a puberulent axis < 3 mm long; **lemma** awned, lanceolate, 15–35 mm long, of bearded barley form < 20 mm long + a long, terminal awn, rounded on back, 5-veined and with minute teeth along large veins, glaucous especially below midpoint, the awn erect to suberect, 50–160 mm long, 3-veined, scabrous; of beardless barley form (so-called var. *trifurcatum*) oddly 3-lobed at tip (lemmas at the lowest nodes sometimes unlobed and broadly needlelike), central lobe folded and typically inrolled, 4–8 × 2–4 mm, often hooded, sometimes with a downward-pointing awn and other appendages from hooded tip, the lateral lobes spreading, flat, long-acuminate sometimes with awn at tip, the awn 1–15 mm long; **palea** inrolled around flower and later around developing fruit, as long as lemma, transparent-green membranous with 2 submarginal green veins, not 2-keeled, with V-shaped channel at base. **Flower:** bisexual (sterile); **perianth (lodicules)** 2, free, ± rectangular to asymmetrically ovoid or wedge-shaped, 1–2.2 mm long, translucent, villous above midpoint or with a tuft of hairs at tip, persistent beneath palea on developing fruit; **stamens** 3, free; filaments threadlike, 2.5 mm long, whitish; anthers sometimes exerted, dorsifixed, dithecal, linear, 2.5–3 mm long, pale yellow, longitudinally dehiscent; pollen white; **pistil** 1; ovary superior, weakly 2-lobed obovoid compressed side-to-side, 1.1–2.3 mm long, glabrous below and canescent above midpoint, 1-chambered with 1 ovule; styles 2, ascending, ca. 1.5 mm long, stigmatic above

midpoint, colorless, feathery (shaggy-plumose). **Fruit:** achene (caryopsis), tightly enclosed within straw-colored lemma and palea, oblanceoloid, 10–12 × 3.5 mm, orange-brown, short-hairy at top 1/4, with persistent white styles at tip.

A. C. Gibson & B. A. Prigge