

***Hordeum depressum*** (Scribn. & J. G. Smith) Rydb., LOW BARLEY, ALKALI BARLEY.

Annual, fibrous-rooted, several-stemmed at base, erect to ascending (sometimes stem bent at the lowest node), in range 15–40 cm tall; shoots with several cauline leaves, glabrous, pubescent to short pilose, and scabrous. **Stems (culms):** cylindrical, 0.6–1 mm diameter (swollen nodes to 1.3 mm diameter), light green to pale yellowish green, internodes 5–50 mm long, smooth, glabrous; internodes hollow. **Leaves:** alternate distichous, simple with sheath; sheath closed only 2.5–4 mm, 18–60 mm long, the longest = flag leaf, sheath < internode, green with pale green, raised veins, densely pubescent with hairs slightly downward-pointing, membranous on overlapped margin, without lobes (auricles) at top; ligule membranous, truncate, 0.2–0.7 mm long, entire or splitting in age, semi-transparent and whitish, glabrous; blade narrowly triangular to linear, in range 15–40 × 1–2 mm, the shortest = flag leaf, flat, entire, parallel-veined, upper surface glabrous to sparsely pilose, lower surface pubescent to short-pilose. **Inflorescence:** spikelets, in term, dense “spike,” spike cylindrical, in range 33–40 mm long, < 10 mm diameter (including awns), generally exerted from sheath of flag leaf, of 18–25 nodes, spikelets in alternate distichous clusters having 3 spikelets per node, spikelet with 1 floret, initially appressed aging suberect, bracteate, conspicuously awned; peduncle 75–125 mm long, green, glabrous; bract subtending the lowest node = oblique rim; rachis segments inversely triangular, ca. 1.2 × 1.3 mm, flattened with inner side slightly concave and other side slightly convex or ridged, glabrous on faces and ascendingly pubescent on margins, with purplish red arches (pulvinus) between central and each lateral spikelet, and between central spikelet and point of attachment of the last (distal) rachis segment, central spikelet sessile, lateral spikelets subsessile to 0.3 mm long, at maturity fragmenting at each node. **Central spikelet:** **glumes** 2, on lemma side of spikelet, awned, narrowly awl-shaped to hairlike with a terminal, scabrous, straight awn, in range 8.3–12.5 × 0.3–0.5 mm (including awn), green between a pale greenish yellow midvein and the pale greenish yellow margins, scabrous; rachilla extension above floret ca. 3 mm long, prolonged behind palea; **lemma** awned, lanceolate-ovate, 11–13 × 1.3–1.7 mm (including awn), light yellowish green, rounded on back, faintly 5-veined, entire with margins incurved and embracing palea, acuminate and tapering into awn, at base glabrous changing to scabrous above, the teeth upward-pointing, the awn 3.5–5 mm long; **palea** lanceolate to ovate 2-toothed at tip, 4.8–5.5 × 1.2–1.7 mm, entire, pale green, 2-veined with green veins narrowly separated and ± keeled along veins at least at tip. **Flower:** bisexual; **perianth (lodicules)** 2, free, asymmetrically ovate to ovate-triangular, ca. 0.7 × 0.3 mm, translucent, at anthesis fleshy at base, unlobed but slightly convex on outer margin below midpoint, succulent at base during anthesis, short-ciliate approaching tip and on lower part of outer margin, sometimes also short-ciliate on inner margin and above midpoint on outer margin; **stamens** 3, free; filaments threadlike, whitish; anthers basifixed, dithecal, oblong, 0.5–0.7 mm long, light yellow, longitudinally dehiscent; pollen light yellow; **pistil** 1, to 2 mm long; ovary superior, with a fleshy, pilose, 2-lobed, terminal appendage, 1-chambered with 1 ovule; styles 2, distinct to base, ca. 0.8 mm long, whitish, feathery (plumose) with kinky stigmatic hairs. **Lateral spikelets:** sterile or rarely staminate; **glumes** 2, awned, staggered, narrowly lanceolate but inner glume wider than outer glume, inner glume (inner) 7.5–9 × 0.6–0.65 mm, slightly expanded and flattened in basal 1/3, upper glume 6.5–9 × 0.4–0.5 mm, lower surface minutely scabrous, with minute, straight awn; rachilla between upper glume and lemma ca.

0.5–0.7 mm long, curved toward central floret at base and outward distally, not prolonged behind palea; **lemma** lanceolate, 2.5–3 mm long, light green, rounded on back, incurved with overlapping, entire margins, minutely scabrous; **palea** absent. **Fruit:** achene (caryopsis), dispersed as unit of awned lemma and palea, ovoid or ellipsoid to oblong compressed front-to-back, ca. 2.5–3 × 1.5 mm, rounded at base, convex on lemma side, with longitudinal groove on side facing palea, pilose on broad appendage at tip. Mid-April–late May.

Native. Annual known from several tiny populations growing in grassland swales on cracking clay where spring rainfall collects, e.g., in the southernmost quadrant of SMMNRA Cheeseboro (SH), in association with *Lepidium latipes*. *Hordeum depressum* is easily mistaken for *H. intercedens* Nevski, which also has been collected in range and is very similar in character, because both have comparatively slender inflorescences. Alkali barley does not appear every year, and the known Cheeseboro population is surrounded by a vast population of *H. murinum*, which is more robust and mostly finishes flowering before blooming begins in *H. depressum*.

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