

Hordeum brachyantherum Nevski subsp. *californicum* (Covas & Stebb.) Bothmer, N. Jacobsen & Seberg, CALIFORNIA BARLEY. Perennial herb, fibrous-rooted, clumped, several-stemmed at base, erect to ascending, 20–65 cm tall; shoots having basal leaves and cauline leaves, with 3–4 nodes above base and basal leaves badly weathered at flowering, glabrous to pubescent. **Stems (culms):** cylindrical, < 2 mm diameter, straight or bent (geniculate) at 1 or 2 nodes, nodes typically exposed, internodes 12–145 mm long, light green to pale yellowish green, smooth (lower internodes) to ridged (upper internodes), nodes sometimes elongate and barrel-shaped, brownish; internodes hollow. **Leaves:** alternate distichous, simple with sheath; sheath closed for 3–5 mm at base, 15–70 mm long (the longest on flag leaf), generally glabrous or sometimes pubescent (on same plant), green with raised, pale green veins, with membranous on overlapped margins, throat 5–45 mm long, without lobes (auricles) at top; ligule membranous, truncate to slightly convex, in range 0.3–0.4 mm long, entire to jagged and splitting, semi-transparent and whitish, glabrous; blade narrowly triangular to linear, in range 20–86 × 1.7–2.5 mm (the shortest on flag leaf), flat, densely scabrous on margins, parallel-veined with raised veins on both surfaces, pubescent. **Inflorescence:** spikelets, in terminal, dense “spike,” cylindrical, in range 30–40 × 7–18 mm, at anthesis partially enclosed in sheath of flag leaf becoming well-exserted, spikelets in alternate distichous clusters of 3, nodes 25–35+, central spikelet sessile and bisexual, subtended by a 2-lobed pulvinus, lateral spikelets sterile or rarely staminate and with short stalk (0.5–1 mm long), spikelets with 1 floret, bracteate, awned, glumes and awns initially appressed later spreading to arching outward; peduncle increasing to 133–200 mm long, green, ca. 0.8–1 mm wide at top of sheath, 0.5 mm diameter below a prominent, slightly oblique, terminal rim, glabrous; rachis segments ± oblong, ca. 1–1.5 × 0.4–0.8 mm, segments slightly wider at top, concave and glabrous on inner face, convex or ridged and sometimes pubescent on outer face, narrowly winged and ciliate on margins, light green to light yellowish green, without purplish red on pulvinus, at maturity breaking into segments above each node. **Central spikelet: glumes** 2, on outer (lemma) side of spikelet, awned, narrowly awl-shaped to hairlike (setaceous), in range 11–12.8 mm long (including awn), 0.1–0.15 mm wide, light green aging tannish with purplish red or brownish above midpoint, scabrous, the awn initially straight later arching, minutely scabrous; rachilla extension absent; **lemma** awned, lanceolate, 11.5–16 × 1.1–1.3 mm, rounded on back, light yellowish green and faintly 5-veined, entire with incurved margins embracing palea, acuminate at tip tapering into awn, scabrous with upward-pointing teeth (antrorse) on margins 4.5–5.5 mm long, glabrous at base to scabrous above; **palea** lanceolate, 6.5–7.7 × 0.9–1.2 mm, light green, obscurely 2-veined with 2 longitudinal, rounded ridges separated by a white-membranous groove becoming keeled near tip, entire and incurved at margin, antrorsely scabrous at minutely 2-toothed tip. **Flower:** bisexual; **perianth (lodicules)** 2, obovate with lateral lobe on outer margin or mitten-shaped, 0.6–0.8 × 0.3–0.4 mm, at anthesis fleshy at base, translucent, ciliate on out margin (including lateral lobe) or ciliate at tips of main lobe and smaller lateral lobe; **stamens** 3, free; filaments finely threadlike, 1–1.5 mm long, whitish; anthers basifixed, dithecal, narrowly oblong, yellow, longitudinally dehiscent; pollen light yellow; **pistil** 1, 1.5–1.7 mm long; ovary superior, inversely conic and compressed top-to-bottom, 0.6–1 × 0.3–0.5 mm, tomentose or pilose above midpoint, ± 2-lobed at tip, 1-chambered with 1 ovule; styles 2, distinct and arising from ovary lobes, 0.8–1 mm long, forked (dendritic) with wavy,

unbranched white, stigmatic hairs to 0.4 mm long. **Lateral spikelets:** sterile or staminate; **glumes** 2, subopposite, hairlike, 8.8–15 mm long (inner glume slightly > outer glume), < 0.2 mm wide, antrorsely scabrous on lower surface; rachilla ca. 0.7–1 mm long, straight or slightly curved inward, not prolonged behind palea; **lemma** awned, lanceolate, 2.7–5.4 mm long, light green, rounded on back, minutely scabrous, entire and incurved with overlapping margins, sometimes awned, the awn < 1 mm long; **palea** absent. **Flower:** staminate, **perianth (lodicules)** 2, obovate with lateral lobe on outer margin or mitten-shaped, 0.6–0.8 × 0.3–0.4 mm, at anthesis fleshy at base, translucent, ciliate on out margin (including lateral lobe) or ciliate at tips of main lobe and smaller lateral lobe; **stamens** 3, free; filaments finely threadlike, 1–1.5 mm long, whitish; anthers basifixed, dithecal, narrowly oblong, yellow, longitudinally dehiscent; pollen light yellow; **pistil** absent. **Fruit:** achene (caryopsis), dispersed as a unit with hardened lemma and palea, ovoid to ellipsoid or oblong and compressed top-to-bottom, 3–3.5 × 1–1.1 mm, rounded at base, pilose on broad appendage at tip, convex on lemma side, with longitudinal groove on side facing palea.

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