

Triticum aestivum L., BEARDED BREAD WHEAT (including CLUB WHEAT). Annual, fibrous-rooted, 1–several-stemmed at base, unbranched above, erect, in range 50–100 cm tall, in fruit with lax or nodding spikes; shoots with only cauline leaves, in range essentially glabrous and leaves conspicuously glaucous. **Stems (culms):** cylindrical, minutely low-ridged, to (4)6 mm diameter, internodes 60–160+ mm long, nodes glabrous or pubescent, glaucous around each node; internodes hollow (at least when dry). **Leaves:** alternate distichous, simple with sheath; sheath open, strongly overlapping at margins, striped dark green and whitish (pale green to pale yellowish green), commonly glaucous, not ridged but sometimes slightly ridged after being dried, with lobes (auricles) at top, auricles overlapping, crescent-shaped, 3.5–6 mm long (straighter and only 1–3.5 mm long in club wheat), often deep purple; collar puberulent on upper surface, often deep purple; ligule membranous, ± truncate, 1.5–3(–4) mm long (mostly 1–2 mm long in club wheat), sometimes short-ciliate; blade strap-shaped, 140–350 × 10–22 mm, the widest somewhat above the base, flat with a well-defined midrib, minutely toothed on margins, long-tapered at tip, parallel-veined with veins except midrib raised on upper surface and only midrib raised on lower surface, upper surface minutely scabrous along veins, not glaucous, lower surface glabrous, glaucous. **Inflorescence:** spikelets, in terminal, dense “spike” of alternate distichous, subsessile spikelets, spike of bearded form to 150 × ± 12 mm (excluding awns) with 20–27 nodes, of club wheat 60–95 × 10 mm (excluding awns) with 12–17 nodes, spikelets appressed to rachis, bracteate, in range awned (weakly so in club wheat), with parts pubescent; peduncle < 150 × 7–10 mm, hidden by sheath of flag leaf, hollow to tip (at least when dry), not terminated with a prominent rim; rachis remaining intact, internodes obovoid compressed front-to-back, ca. 5 × 3 × 1.5 mm, dull pale yellowish tan and partially green-striped and glaucous, slightly convex on back, longitudinally concave but transversely flat on inner side, the thickest near tip, densely short-hairy on edges and at nodes of inner surface, hairs whitish or golden, somewhat glossy on inner surface. **Spikelet:** of bearded forms 2–3-flowered or of club wheat 3–5-flowered (if > 3, staminate or vestigial and sterile), typically 10–15 mm long (excluding awns), flattened side-to-side, not breaking apart; **glumes** 2, firm and leathery (coriaceous), subequal, boat-shaped, 8.5–11.5 mm long (excluding awn), 3–3.5 mm wide, asymmetrically keeled (or not keeled at base), green and white-striped, glaucous on exposed surfaces, indistinctly ca. 12-veined, scabrous along keel with upward-pointing teeth, short-ciliate at base where attached and finely pilose to pubescent on inner surface above midpoint, membranous and sparsely short-ciliate on margins, margins 0.5–0.7 mm wide; of bearded form long-awned, the awn stout, 3.2–6(–40) mm long, scabrous with upward-pointing teeth; rachilla < 0.5 mm long on the lowest lemma to ca. 2.5 mm below the uppermost sterile lemma; of club wheat lacking awn but toothed at tip; **lemma** of fertile florets (bearded form) similar to glume in size (typically 10.5–11 mm long) and pubescence but symmetric, long-awned, firm and pliable, rounded on back, glaucous on exposed surface, obscurely ± 12-veined, the awn subterminal, ascending and later spreading, 25–52(–120) mm long (present only on fertile florets), scabrous short-serrate; of sterile florets shorter (2.5–9 mm long), lacking awn; of club wheat mostly lacking awn but on spikelets above midpoint awns short and increasing to 20 mm long on terminal spikelets; **palea** of fertile floret lanceolate, 9–10.5 mm long, < lemma, membranous, 2-veined, strongly 2-keeled, concave on back, sharply angled inward at margin, 2-toothed at

tip, not splitting at maturity, keels membranous and short-ciliate, veins green; of staminate or sterile florets absent or shorter (3–7.5 mm long). **Flower:** bisexual; **perianth (lodicules)** 2, free, asymmetrically ovoid or wedge-shaped (sometimes symmetric), 1.5–1.8 mm long, colorless, with swollen base, long-ciliate on margins, the hairs 0.7–1 mm long; **stamens** 3, free; filaments threadlike, 6–9 mm long, translucent to white; anthers basifixed, dithecal, sacs narrowly lanceolate to linear, 2–3.1 mm long, yellow to light yellow, longitudinally dehiscent; pollen pale to light yellow; **pistil** 1; ovary superior, ± obovoid or inversely conic to mushroom-shaped, 1.1–2.5 × 1.5–2.8 mm, flat and grooved on side facing lemma, conic below midpoint, glabrous on base, convex on top, weakly 2-lobed, densely pilose on top, 1-chambered with 1 ovule; styles 2, 2.3–3.4 mm long, shaggy-feathery (plumose) base-to-tip with colorless stigmatic hairs. **Fruit:** achene (caryopsis), in range rarely observed, oblong, ± 8 mm long, brown, with deep longitudinal groove on side facing palea, glabrous. Late April–late May.

Waif. Annual occasionally spotted along trails used by horses. Voucher specimens of the awn-bearing bearded bread wheat document occurrence of *Triticum aestivum* from 2005 growing under *Quercus agrifolia* along Old Topanga Road near Calabasas and from 2008 along a hiking trail in Malibu Creek State Park, but undoubtedly it has been observed numerous times within range and spontaneously appears. Bearded wheat has glaucous leaves, and both glumes and fertile lemmas produce awns.

Sometimes occurring in range is a mostly awnless form known as club wheat (sometimes designated *T. compactum*), first observed in March, 2010 in central SMM. It appears to differ from typical awned forms in being a shorter plant, having narrower axes and shorter and narrower spikes with fewer spikelets (twelve to seventeen). In club wheat, even glumes are not awned (they have a vestigial tooth) and the lemmas either lack awns or above midpoint of the spike awns are present, with the longest awns forming on the terminal spikelets. Other forms of cultivated wheat should be expected when they appear in livestock feed.

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