

Quercus wislizeni DC., INTERIOR LIVE OAK. Shrub (tree), evergreen, sclerophyllous, in range 100–350 cm tall, commonly breadth > height; monoecious; shoots white stellate-pubescent on young growth; bark of trunk and larger branches nearly black and deeply furrowed with broad scaly ridges, 5–6 cm thick (on trees), on smaller branches relatively medium and dark gray and relatively smooth. **Stems:** angular becoming cylindrical, stellate-pubescent somewhat persistent on new periderm. **Leaves:** helically alternate, simple, petiolate, with stipules; stipules 2, attached to base of petiole ± axillary, oblanceolate-linear to linear, 2.5–5 × 0.5 mm, tannish (reddish), tomentose-ciliate, early-deciduous; petiole subcylindric, 3–15 mm long, tomentose-stellate but less so on old leaves; blade oblong or broadly elliptic to roundish or narrowly ovate, 20–70 × 13–50 mm, flat, obtuse to truncate or cordate at base and sometimes oblique, entire or spinose-serrate on margins having to 11 short spines per edge, acute and short-spined at tip, pinnately veined with principal veins raised on both surfaces, stellate-pubescent becoming glabrescent but with numerous, minute, light orangey hairs with beadlike cells, upper surface ± glossy dark green, lower surface less glossy and paler green. **Staminate inflorescence:** catkin, spikelike (rarely with 1 side branch), having 1–6 catkins arising from winter buds at the lowest axils of new spring growth, catkins pendent from axis, typically (20–)50–55+ × 6–8 mm, with 9–24 helically arranged flowers, the flowers mostly sessile to subsessile at base of catkin, congested or sometimes with the lower ones spaced along the axis; bract subtending peduncle cupped to scoop-shaped, ± 5 mm long, brownish, stiff, ciliate on margins, lower surface glabrescent, deciduous; peduncle typically < 6 mm long; rachis flexible, light green with scattered, whitish stellate hairs; bractlet subtending flower 0 or 1, acute-lanceolate, membranous and green or reddish, ciliate on margins, early-deciduous. **Staminate flower:** ± radial, 2.5–5.5 mm across at anthesis; **calyx** unevenly 4–6-toothed, bell-shaped to deeply cuplike, commonly splitting in 1 or more places to base; tube 1.5–1.8 mm long, ≥ lobes, green at base and brownish and membranous above, mostly glabrous externally and internally; teeth obtuse to rounded, 0.2–1 mm long, membranous with a brownish tinge, villous on margins and submargins; **petals** absent; **stamens** 2–8+, free; filaments ascending, 1–2.5 mm long, green to light yellowish green, glabrous; anthers basifixed, dithecal, 1.3–1.5 × 0.7–1 mm, yellowish to orangey but reddish along suture margins and at tip, longitudinally dehiscent; pollen light yellow, dry, windborne; **pistil** absent. **Pistillate inflorescence:** spike, axillary on leafy spring shoots on successive nodes above staminate catkins, 1–2-flowered (sometimes 3-flowered but terminal flower aborted), at anthesis each flower subtended by ca. 5 bracts + numerous bract primordia; peduncle 1.5–2 mm long, densely stellate pubescent; rachis absent (1-flowered) or very short and stout (2+-flowered); **involucre** (cupule) bracts deltate-acuminate to triangular, the outermost ca. 2 × 1 mm, pubescent with ascending hairs, becoming brownish and membranous approaching tip, thicker at base, persistent, bract primordia many, helically alternate and overlapping, developing inward. **Pistillate flower:** 2–2.5 × 1.3–1.5 mm; **calyx** 6-lobed; tube 0.6–0.7 mm long, greenish, glabrous, internally pubescent at base; lobes cleft or 2-toothed to obtuse or acute, 0.3–0.6 mm long, greenish becoming dark reddish, with hairy margins; **petals** absent; **stamens** absent; **pistil** 1; ovary inferior, ovoid, 3–4-chambered, each chamber with 2 ovules; styles 3–4, ascending to spreading, 0.9–1.2 mm long, green, expanding slightly into stigmatic tip, persistent on early fruit; stigmas terminal, ± kidney-shaped to 2-lobed, yellowish green

aging dark red. **Fruit:** acorn (glans), maturing in fall of year 2; involucre hemispheric to deeply cup-shaped or top-shaped, mostly 11–14 mm deep and 12–16 mm wide, covering basal 1/3–1/2 of fruit, glabrous to sparsely pubescent (scale margins and tips), internally glabrous or pubescent (denser on innermost 1/3), scalelike bracts ± flat and thin, often short-ciliate on acute tips; nut conic to ovoid or narrowly oblong, 21–44 × 8–14 mm, light brown, acuminate with point at tip, glabrous, the basal scar circular, mostly 4–5 mm diameter, convex and gray; shell internally densely woolly. Late March–late April.

Native. Evergreen oak in range shrublike, known from small populations, e.g., at the summit of Saddle Peak growing beside sandstone boulders. *Quercus wislizeni* is in range a chaparral shrub, whereas the typical woodland form is arborescent, but there are no other clearly stated differences between the two forms except that chaparral plants tend to have smaller leaves with deeper lobes and teeth. Some authors recognize named varieties of *Q. wislizeni*, and ours until recently has been called var. *frutescens* Engelm., whereas the chaparral form has also been treated as a distinct species, *Q. parvula* Greene.
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