

*Quercus douglasii* Hooker & Arnott, BLUE OAK. Tree, evergreen, sclerophyllous, with several trunks, in range 8 m tall, commonly broader than tall; monoecious; shoots on young growth stellate-pubescent; bark on trunk deeply fissured, gray. **Stems:** slightly ridged becoming cylindric, densely stellate-pubescent aging glabrescent, aging light reddish brown with whitish lenticels, green beneath and slightly visible through young periderm. **Leaves:** helically alternate, simple, petiolate, with stipules; stipules 2, attached to base of petiole, linear-oblong to oblanceolate to spatulate, 3–4.8 × 0.5–1.5 mm, tannish, mostly short-strigose but with some stellate hairs mostly at base, early-deciduous; petiole subcylindric, 3–8 mm long, tomentose-stellate; blade obovate to elliptic or oblong, 24–45 × 13–28 mm, flattish or slightly cupped upward or inward, long-tapered to tapered or rounded at base (sometimes oblique), having 0–3 teeth with short points per side (entire), obtuse and often with point at tip, pinnately veined with principal veins raised on lower surface, initially densely pubescent with silvery white stellate hairs having 4–9 arms becoming glabrescent, upper surface glossy dark green or becoming glaucous, lower surface dull pale green. **Staminate inflorescence:** catkins, spikelike (rarely forked at base), 2–9 arising from winter buds at the lowest nodes of new spring growth, catkin ± pendent from axis, 8–11 × 1.8–3.2 mm, with 3–9 helically alternate flowers, flowers unevenly spaced, sessile, sometimes bracteate; bract subtending peduncle ± intermediate to winter bud scales and stipules, cupped-ovate to broadly oblanceolate, 1.5–4 mm long, orangey brown to tannish, membranous on margins, strigose on lower surface, sometimes stellate hairs at base, villous-ciliate at tip, early-deciduous; peduncle 1.5–5 mm long; rachis to 35 mm long, light green with scattered, whitish villous hairs; bractlet (if present) linear, 0.7–1.5 × 0.15 mm, pubescent, early-deciduous. **Staminate flower:** ± radial, 2–3 mm across at anthesis; **calyx** unevenly 5–6-lobed or toothed, rotate; fused base greenish, 5-veined with each vein extending into base of each lobe; lobes unequal, triangular to oblong, 0.25–1.5 × 0.3–1 mm, sometimes with a tooth on one or both margins, acute or rounded to truncate, 2-toothed or 3-toothed at tip, teeth obtuse to rounded, membranous with a brownish tinge, villous-ciliate; **petals** absent; **stamens** 4–7, free; filaments ascending to spreading, 0.3–0.9 mm long, whitish, glabrous; anthers basifixed, dithecal, 0.8–1.4 × 0.8–1.1 mm, sometimes sacs oblique, yellowish green becoming purplish red from top downward, longitudinally dehiscent; pollen light yellow, dry, windborne; **pistil** absent. **Pistillate inflorescence:** typically 3 flowers in a sessile, very condensed spike, axillary at ends of leafy spring shoots, each flower subtended by an involucre (cupule) of many bracts and bract primordia; rachis absent (1-flowered) or very short and stout (2+-flowered); cupule bracts deltate-acuminate to triangular, the outermost bracts ca. 1.5 × 1 mm, ciliate, pubescent with ascending hairs, becoming brownish and membranous with thicker bases, persistent, bract primordia developing inward, becoming a cupule of numerous, helically alternate and overlapping bracts in fruit. **Pistillate flower:** 1.5–3 × ca. 1 mm; **calyx** ca. 6-lobed, greenish; tube ca. 0.5 mm long, glabrous; lobes obtuse or acute to cleft or 2-toothed, 0.3–0.6 mm long, becoming dark reddish, with ascending hairs on outer surface and margins; **petals** absent; **stamens** absent; **pistil** 1; ovary inferior, inversely conic, greenish, 2–3-chambered, each chamber with 2 ovules; styles ascending to spreading, 2–3, 0.8–1 mm long, mostly dark purplish red but green at base, grooved on inner face, expanding slightly and bent outward at rounded tip, persistent on early fruit; stigmas decurrent from tip along inner face of style, dark purplish red, slightly papillate.

**Fruit:** acorn (glans), maturing in fall of year 2; involucre (cupule) cup-shaped, 5–10 × 10–15 mm, with thin to bumpy (tuberculate), shinglelike scales (bracts), pubescent on tubercles and ciliate on exposed margin, glabrous on inner surface; acorn attachment scar circular, ca. 5 mm diameter, convex, gray; acorn ± subcylindric, 20–30 × 10–16 mm, light brown, acuminate with point at tip, glabrous; shell densely woolly inside. Late February–April.

Native (possibly introduced). Deciduous tree native north of range, at Wildwood Regional Park (SH), mother tree likely planted without records, and at SMMNRA Paramount Ranch where one of two mother plants survives. During early spring, *Quercus douglasii* forms leaves that are entire or with only several shallow teeth. Both populations have several other individuals, but this species does not appear to be sexually reproducing in range at the current time because the mother plants have not produced acorns in recent years. It is possible that several younger individuals are of hybrid origin, and therefore leaf blades could be more variable as they relate to *Q. lobata* or *Q. berberifolia*.

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