Olea europaea L. Tree, evergreen, sclerophyllous, several-trunked at base, in range < 6 m tall (without supplemental water); shoots with tough, slender stems and leathery leaves, having appressed, umbrellalike (peltate) scales (hairs). **Stems:** initially 4-ridged, with 2 ridges decurrent from each leaf, flexible, tannish with dense scales; young bark light gray with lenticels resembling paired lips. **Leaves:** opposite decussate (whorled), simple, short-petiolate, without stipules; petiole cylindric slightly flattened on upper side, 1–7 mm long; blade ± narrowly elliptic to oblanceolate (on young waif plants often short and ovate to obovate), (7–)25–100 × (5–)8–22 mm, flat, entire, acute with hard point at tip, pinnately veined with veins visible but inconspicuous on upper surface, with only midrib conspicuous and raised on lower surface, upper surface semiglossy dark green, with scattered peltate scales, lower surface ash gray to gray-green with dense scales. **Inflorescence:** paniclelike and racemelike cluster of cymes, axillary (terminal), < leaf, < 40 mm long (unwatered specimen), 10–20-flowered, branchlets and cymes opposite decussate, ultimate cyme 1–3-flowered, flowers bisexual and functionally staminate on an individual plant and often on a single inflorescence, ± sessile, bracteate, with dense scales on axes; peduncle, rachis, and branchlet axes 4-ridged like stem, tannish (= scales); bract subtending cyme (2 per node), linear-lanceolate, 1–2.5 mm long, with dense scales; bractlet subtending pedicel or flower awl-shaped, 0.8–1.5 mm long, with dense scales; pedicel < 1 mm long, greenish with some peltate scales. **Flower:** bisexual and functionally staminate, 4–6 mm across, sweetly fragrant; **calyx** inconspicuously to shallowly 4-lobed; tube broadly funnel-shaped, 1–1.3 mm long, pale green, mostly glabrous; lobes short and wide with minute point at tip, minutely papillate in 1 or more patches on margins; **corolla** 4–5(–6)-lobed, rotate, in bud greenish white maturing whitish to cream-colored; tube wide funnel-shaped, < 1 mm long; lobes ovate and somewhat cupped, 2.5–3.2 × 1.5–2 mm, thickish, with inrolled margins, faintly 3-veined; **stamens** 2, fused to top of corolla tube alternate corolla lobes; filaments 0.5–1.5 mm long, with several hairs along outfacing side; anthers dorsifixed, strongly dithecal, mostly hemispheroid with sacs narrowly kidney-shaped, (1.5–)2.3–2.6 × 2 mm, yellowish orange aging darker with paler yellow margins and a wide connective initially green aging pale yellow, longitudinally dehiscent; pollen bright yellow, copious, dry and mostly wind-borne; **pistil** 1, of bisexual flower 2–2.3 mm long, of staminate flower < 1 mm long at anthesis aging < 2 mm long; ovary superior, subspheroid, ca. 1 mm, green, sometimes slightly 4-ridged, 2-chambered, each chamber with 2 ovules; style erect, pale green; stigmas 2, ± appressed and together appearing compressed-ovoid and thickish, light green, papillate; pistil of staminate flower mostly red-brown to brown with outer ovary being a ring of green resembling a nectary. **Fruit:** drupe, ovoid, in range 9–20 mm long, green aging bluish black, glaucous; pulp (mesocarp) oily; stone (endocarp) extremely hard. Late April–early June.

Waif. Evergreen tree widely cultivated in range and persisting at several former residences, but also known in the wild from one sapling established in chaparral above Rustic Canyon (SMM). Shoots of *Olea europaea* are densely coated with overlapping peltate scales, which become sparse on the upper surface of leaf blades to expose green, but otherwise young axes and the lower surfaces of leaves are densely covered with scale, ash gray, and highly reflective. An individual may or may not flower in a given year; its

whitish flowers produce heavy crops of dry pollen, much of which is air-borne, but honeybees collect pollen and can be effective cross pollinators. Many flowers on an individual are functionally staminate. A fertile pistil has a green ovary, pale green style, and light green stigmas, whereas a sterile pistil is mostly red-brown to brown when pollen is released. If a single olive tree does not seem to produce fruits, it would be because certain varieties can only set fruit using pollen from a genetically different plant (self-incompatible).

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