

*Rhamnus* L. BUCKTHORN

***Rhamnus ilicifolia*** Kell., HOLLY-LEAVED BUCKTHORN, HOLLYLEAF REDBERRY. Shrub, evergreen, sclerophyllous, somewhat spinescent, lacking spur shoots, with dense canopy, 100–400 cm tall; dioecious; shoots with leathery leaves, new axes soon becoming woody. **Stems:** cylindric, tomentose to short-tomentose on young stems, periderm aging dark red. **Leaves:** helically alternate, simple, petiolate, with stipules; stipules 2, attached to petiole base, lanceolate-linear, 3–6 mm long, base swollen, with scattered hairs on outer surface, upper part deciduous; petiole cylindric, 2.5–7 mm long, green, short-tomentose; blade oval to roundish or broadly ovate, 15–75 × 13–62 mm, tough, when water-stressed often cupped, somewhat inrolled, or crisped, broadly tapered to rounded at base, sharply dentate-serrate on margins forming hard, conic points, when old mildly spinose, points aging reddish or colorless, rounded to obtuse or truncate to shallowly notched at tip and often with midrib extended as short point, pinnately veined with midrib slightly sunken on upper surface and conspicuously raised on lower surface (principal veins less so), the principal lateral veins never ending in teeth, with a conspicuous network of minor veins (lower surface), initially pubescent, upper surface becoming dark green and aging glabrate, lower surface bright green, remaining hairy along midrib and some principal veins. **Inflorescences:** functionally unisexual cymes in racemelike arrays, forming as winter or spring shoot from axillary bud becoming a vegetative shoot at the tip while still in flower, many-flowered, occasionally isolated pistillate flowers produced on staminate plants, cymes alternate (subopposite), 1–7-flowered, bracteate, short-tomentose; axis to 30 mm long, pale, densely short-tomentose; bracts (bud scales) subtending inflorescence and branchlets cupped-ovate to cupped-deltate, 1–2.3 × 0.9–1.7 mm, increasing upward, dark purplish red or reddish brown where exposed above midpoint and yellowish tan or light green below midpoint, acute and commonly split or 2-toothed at tip, puberulent on outer surface, minutely ciliate on exposed margins, with light greenish to pale green, short-stalked, ovoid glands on lower inner surface ca. 0.2 mm long, deciduous and leaving a persistent, ledgelike base; bractlet subtending pedicel absent; pedicel slender, 1–4.5 mm long increasing in fruit (pistillate), unequal in each cyme, green, flexible, sparsely short-pilose and often with shorter, inconspicuous glandular hairs. **Staminate flower:** radial, 5–6 mm across; hypanthium narrowly bell-shaped to funnel-shaped, 2–2.5 mm long, green, sparsely short-pilose externally and internally, externally also with scattered glandular hairs, thickened near rim beneath filaments, not filled with nectar; **sepals** 4(–5), initially erect then spreading  $\perp$  to hypanthium, triangular-ovate, 2–3 mm long, green, sparsely short-pilose with short glandular hairs on outer (lower) surface; **petals** absent; **stamens** 4(–5), free, alternate sepals; filaments erect, to 1.3 mm long, greenish or yellowish; anthers dorsifixed, dithecal,  $\pm$  1.2 mm long, pale yellowish green, longitudinally dehiscent; pollen greenish; **pistil** 1, vestigial, < 0.9 mm long. **Pistillate flower:** radial, 3–4 mm across; hypanthium 2/3-spheric, 1–1.5 mm long, green, sparsely short-pilose externally and internally, externally also with scattered glandular hairs, filled with nectar; **sepals** 4, ascending, triangular-lanceolate, 2–3 mm long, green; **petals** absent; **stamens** 3–4, free, alternate sepals, sterile and vestigial; **pistil** 1, < ascending sepals; ovary superior but appearing inferior within hypanthium, compressed-spheroid, green or red, sparsely short-hairy, 2(–3)-chambered, each chamber with 1 ovule; style exserted, 1.5 mm long, greenish

aging pinkish, 2(–3)-branched just below midpoint, base swollen, becoming recurved.

**Fruit:** drupe, fleshy, spheric, 6–7.5 mm, red and drying cherry red, 2-stoned; pulp juicy, clear watery-yellow; stones ovoid but flattened on 1 face, 4.5–5 × 2.8–3.5 mm, tannish, inner side deeply indented dissected by persistent, brownish ridge. Early December–mid-June.

Native. Sclerophyllous evergreen shrub relatively common in tall chaparral and southern oak woodland throughout the range. Care must be taken to observe both sexes, and the nonshowy flowers are similar except that pollen on *Rhamnus ilicifolia* is not produced in anthers on pistillate plants, and pistils do not mature as fruits on staminate plants. Holly-leaved buckthorn is superficially very similar to holly-leaved cherry (*Prunus ilicifolius*), but they are easy to distinguish when in vegetative condition by scratching the twig bark, because species of *Prunus* release hydrogen cyanide, thereby producing the odor of bitter almonds.

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