

*Polypodium* L. POLYPODY

*Polypodium californicum* Kaulf., CALIFORNIA POLYPODY. Perennial herb, drought-deciduous, rhizomatous, fibrous-rooted, not rosetted, in range < 35 cm tall; shoots with 1–several leaves somewhat spaced along a rhizome and visible at soil surface; fiddlehead 2–3 mm diameter; rhizomes horizontal, creeping at or near surface, axis (3–)4–8(–10) mm diameter, dull yellowish, inconspicuously glaucous, knobby from leaf bases, covered by light brownish, deciduous scales; adventitious roots produced on lower side of rhizome. **Leaves (fronds):** alternate, deeply pinnately lobed (nearly to leaf axis) with 5–18 lobes per side, petiolate; petiole (stipe) erect to spreading, cylindrical or sometimes ridged on upper side, in range 30–100 × ca. 2 mm, tough but flexible, with scales only at base of petiole, the scales ovate with long-tapered tip (caudate), 4–6 × 1.5–2 mm, translucent light brown and thin, ± entire; blade triangular to ovate or lanceolate in outline, 45–300 × 32–125 mm, leaf axis (rachis) cylindrical, light green, raised on both surfaces, with scattered soft hairs especially on upper surface, glabrate to inconspicuously hairy or with scales on lower surface, the scales deltate to ovate and > 10 cells wide at base; lobes mostly alternate but sometimes opposite at base of blade or with mostly with opposite lobes, narrowly elliptic to lanceolate or linear-oblong, 18–82 × 5.5–15 mm, the longest at or near the base, broadly attached to leaf axis, shallowly and irregularly short-serrate on margins, acuminate or long-tapered to obtuse at tip, pinnately veined with midrib raised on both surfaces and often purplish, the lateral veins purple and conspicuous or inconspicuous, regularly diverging but 1–4 forked with 2 veins from different lateral veins off midrib commonly fused to form an areole, never shiny, upper surface lobe midrib = reddish midstripe. **Sori:** formed on lower surface midway between midrib and margin or slightly closer to midrib, to 35 per lobe, elliptic to circular, 1.5–3 × 1.3–2.4 mm, almond shell to hazelnut brown or orangish, in 2 rows along each side of midvein; indusium absent. **Sporangia:** stalked, ± 0.2 mm diameter. **Spores:** pale yellowish.

Native. Perennial herb visible during cooler months throughout the range on north-facing slopes, cliffs and rock outcrops, trail cuts, waterfalls, and other situations where the rhizomes have abundant soil moisture during winter months. *Polypodium californicum* has leaves that bear mature sporangia 1–2 months after they begin to grow, and plants become dormant during springtime when soil moisture is exhausted. This fern, the only polypody in range, has two rows of sori per lobe and lacks an indusium, and its rachis and lobe midveins are puberulent on the upper surface.

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