

*Cheilanthes cooperae* D. C. Eaton, MRS. COOPER'S LIP FERN. Perennial herb, rhizomatous, fibrous-rooted, rosetted, in range 6–14 cm tall; shoots with ascending basal leaves, glandular-pilose, the hairs several-celled, in range never sticky; emerging leaf blade appearing fiddleheadlike; rhizomes horizontal, contorted and irregular, compact or short-creeping, 2–3 mm diameter, densely covered with scales, the scales appressed, 1.5–3 mm long, persistent, of two forms, the common form uniformly brown and long-tapered with a hairlike tip, the other form tannish or golden brown, linear awl-shaped, and narrower than the brown form. **Leaves (fronds):** helically alternate, in range  $\pm$  odd-2-pinnately compound with 8–14 primary leaflets per side in pairs and subopposite below midblade, regularly alternate and only pinnately lobed above midblade, petiolate; petiole (stipe)  $\pm$  cylindrical, 40–60  $\times$  ca. 0.5 mm, brittle, glossy purplish red aging reddish brown, initially having mostly straight hairs although hairs often drying crooked, lacking scales; blade  $\pm$  lanceolate in outline, in range  $< 90 \times 20$ –30 mm; rachis cylindrical, = petiole,  $< 0.5$  mm diameter, glossy purplish red aging reddish brown, with glandular hairs like petiole; primary leaflets ovate to lanceolate, in range to 15 mm long below midpoint and decreasing upward, sparsely long-hairy; secondary leaflets (of lower primary leaflets) subopposite to alternate, sessile, narrowly ovate to oblong, to 5 mm long, lobed, lateral lobes obovate or 3-lobed (basal), fan-shaped with crenate lobes on margins, the margin down-curved but not forming a false indusium, sparsely long-hairy, the hairs irregularly spaced,  $> 1$  mm long, and never straight, with small glandular heads, upper surface dull green. **Sori:** submarginal on lower surface, appearing discontinuous and concentrated on each lobe, each lobe with several–20+ sporangia. **Sporangia:** 0.25–0.3 mm wide,  $\pm$  red and translucent, the dehiscence mechanism (annulus) darker, sporangium with 64 spores. Sporulation late April–late May.

Native. Perennial herb recently discovered in range by Carl Wishner occurring along the edges of calcareous sandstone outcrops along a ridge in Dayton Canyon near West Hills (SH). *Cheilanthes cooperae* in range to date includes less than 50 individuals, all plants depauperate and smaller than seen elsewhere in California. This species is best described as glandular-pilose; hairs generally have small glandular heads, although the plant does not appear to be glandular and is never sticky. The larger, closely related *C. viscida* Davenport is covered with much shorter glandular hairs and has sticky (viscid) blades.  
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