

Cheilanthes Swartz LIP FERN

Cheilanthes newberryi (D. C. Eaton) Domin, NEWBERRY'S LIP FERN. Perennial herb, rhizomatous, fibrous-rooted, rosetted, in range 6–16 cm tall; shoots with spreading to ascending basal leaves; fiddleheads not obvious, with emerging leaf blade appearing hooklike, densely cobwebby-tomentose, the hairs long, soft, pale brown; rhizomes horizontal, branched and typically contorted, compact or short-creeping, 3–5 mm diameter, densely covered with scales, the scales strongly appressed, 1.5–2 mm long, persistent, of 2 forms, the common form uniformly brown or with tannish base and long-tapered with a hairlike tip, the other form tannish or golden brown, linear awl-shaped and narrower than the brown form, rhizome axis vertically elliptic in \times -section with grayish white, U-shaped vascular core (stele). **Leaves (fronds):** helically alternate, typically odd-2-pinnately compound (occasionally 3-pinnate at base) with 6–14 primary leaflets per side, opposite below and alternate above midblade, petiolate; petiole (stipe) cylindric, never straight, brittle, \pm glossy, with crooked, pale brown hairs becoming glabrescent, occasionally with pale brown linear scales along lower axis as well as typical rhizome scales near the base; blade lanceolate in outline, in range $< 100 \times 25$ –45 mm; rachis cylindric, $1/4$ – $1 \times$ petiole, < 0.5 mm diameter, dark brown, tomentose but shedding hairs in patches; primary leaflets lanceolate to oblong, to 20 mm long below midpoint and decreasing upward, with tomentose, green veins; secondary leaflets subopposite to alternate, sessile, narrowly ovate to oblong, to 6 mm long, lobed, lateral lobes obovate or 3-lobed (basal), ultimate lobes fan-shaped, crenate on margins, lobes down-curved but not forming false indusia, upper surface dull green and cobwebby-tomentose with tomentose, green minor veins, lower surface densely tomentose. **Sori:** submarginal on lower surface, appearing discontinuous and concentrated opposite small, down-curved, crenate lobes of margin. **Sporangia:** < 0.3 mm wide, the sides finely netlike, brownish, and translucent, the ringlike dehiscence mechanism (annulus) darker, each sporangium with 64 or 32 spores. Sporulation early March–mid-April.

Native. Perennial herb, a highly restricted fern of southern California, in range occurring occasionally in shady soil nooks of volcanic, west-facing outcrops on Conejo Mountain, and probably elsewhere, in the westernmost SMM. *Cheilanthes newberryi* has densely tomentose leaves, unlike *C. cooperae*, which instead has glandular hairs.

B. A. Prigge & A. C. Gibson