

*Pedicularis densiflora* Hooker, INDIAN WARRIOR, WARRIOR'S PLUME. Perennial herb, photosynthetic and  $\pm$  parasitic (hemiparasite) on the root of a host shrub, fibrous-rooted and tuberous-rooted, rosetted, several-stemmed at base with basal leaves in clumps, each rosette with an erect inflorescence, 10–30(–55) cm tall; shoots with basal leaves and ascending cauline leaves, soft-hairy; vertical roots somewhat fleshy, pale yellowish, tuberous axes horizontal near soil surface, ellipsoid, to 10 mm thick, whitish, finely ringed (= leaf scars). **Stems:**  $\pm$  ridged, 2–5 mm diameter, with low, broad ridge descending from each leaf, villous with arching hairs. **Leaves:** helically alternate, simple and wrapping stem base (from below ground) and deeply 1–2-dissected, petiolate or sessile, without stipules; petiole hemi-cylindric, 15–60 mm long, sparsely villous on lower side and on margins; blade of belowground leaves sessile, linear to narrowly elliptic or oblanceolate, 10–35  $\times$  1.5–5 mm, brown or green drying brown and papery, entire, sparsely hirsute-ciliate; blade of aboveground leaves lanceolate or oblong to oblanceolate in outline, 50–220(–280)  $\times$  12–55 mm, deeply incised, the primary lobes typically 10+ per side, serrate and often lobed again, principal sinuses deeper at base of blade or occasionally sinuses to midrib, pinnately veined with midrib glabrous and strongly raised on lower surface, principal veins somewhat sunken and deep purple-red on upper surface and slightly raised and often pink or rose on lower surface, appearing glabrous with inconspicuous, minutely stalked glandular hairs, often purple-red along midrib and on margins. **Inflorescence:** leafy raceme, terminal, dense, 50–150+ mm long, many-flowered, of spreading, helically alternate flowers, bracteate; peduncle somewhat angular and ridged, pale green or pinkish, villous; bractlet subtending pedicel leaflike, lanceolate to narrowly ovate,  $\pm$  25  $\times$  15 mm and green to pinkish at the lowest node decreasing upward, the uppermost bractlets reddish like calyx, broadly to narrowly tapered at base, serrate with or without several sublobes, coarsely ciliate on basal margins, persistent and conspicuous in fruit; pedicel 0.5–2 mm long. **Flower:** bisexual, bilateral, ca. 4 mm across; **calyx** 5–6-lobed, (8–)10–15 mm long, deep rose to green or green tinged rose; tube bell-shaped, strongly pleated with a ridge to each lobe, with long, shaggy, colorless hairs along principal veins; lobes erect,  $\pm$  equal, 2–4 mm long, upper lobe slightly shorter and laterals paired, acute at tip and sometimes with a lateral tooth; **corolla** 2-lipped, 5-lobed, 23–28(–36) mm long, fuchsia to dark rose and brighter than calyx, externally glabrous; tube cylindric,  $>$  calyx, whitish at base; upper lip = 2 fused lobes, compressed side-to-side and hooded (galea), 8–14+  $\times$  3.5–4 mm, strongly keeled, veiny, yellowish next to lower lip and internally glandular-hairy on this yellowish patch; lower lip shallowly 3-lobed, wedge-shaped, ca. 1/4–1/3 of galea, lobes rounded,  $\pm$  1 mm long; **stamens** 4, lacking staminode, fused to corolla at different level, 2 lower stamens attached below tube midpoint and 2 upper stamens at tube midpoint; filaments  $\pm$  straight, 15–19 mm long, white, glabrous; anthers dorsifixed, dithecal, 2–3 mm long, yellow, acute at base, longitudinally dehiscent on the side opposite filament; pollen yellowish white; **nectary disc** beneath and wider than ovary, ringlike and weakly 5-lobed, bright green, producing copious nectar; **pistil** 1,  $>$  corolla with style projecting ca. 2 mm from hood tip; ovary superior, compressed-ovoid,  $\pm$  2 mm long, light green, glabrous, 2-chambered, each chamber with many ovules; style bent to project at right angles from corolla, white changing to rose and deep rose approaching tip; stigma capitate, weakly 2-lobed, rose, short-papillate. **Fruit:** capsule, 2-

valved, 6–10-seeded, compressed-ovoid, 8–13 mm long, ± glossy dark brown, somewhat bulging by seeds; surrounded by papery corolla with conspicuous dark veins. **Seed:** ovoid to irregularly ellipsoid, 4–4.5 × 1.8–2.3 mm, dark brown, netlike (honeycombed). Mid-February–Mid-April.

Native. A parasitic perennial herb observed occasionally growing in shade of chaparral shrubs because typically found attached to the root of a shrub, in range especially on chamise (*Adenostoma fasciculatum*). *Pedicularis densiflora* superficially appears to be free-living because it has photosynthetic leaves, and is classified also as a hemiparasite. The red flower of Indian warrior is adapted for hummingbird pollination, for which copious nectar is provided as a reward, but in range this species does not appear to be regenerating sexually, because virtually every potential fruit is attacked by seed-consuming larvae, commonly one larva for each chamber.

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