

Castilleja exserta (A. A. Heller) T. I. Chuang & Heckard subsp. *exserta*, PURPLE OWL'S CLOVER. Annual, photosynthetic root parasite (hemiparasite), taprooted, 1–several-stemmed at base, with several ascending branches, erect, 10–45 cm tall; shoots with finely lobed cauline leaves, pilose to villous. **Stems:** ridged, to 5 mm diameter, with ridges descending from leaves and bracts, dark reddish, pilose-villous. **Leaves:** helically alternate, deeply 1–2-pinnately dissected, sessile, without stipules; blade 10–45(–55) mm long, divided into 2–6 lateral lobes or at base of plant often entire and linear, lobes linear, 4–35 mm long, entire or further divided with 1–3 sublobes, palmately 3-veined at expanded base, sparsely pilose, principal veins often pink or rose. **Inflorescence:** leafy spike, terminal, dense, club-shaped, 20–200 × 18–40 mm, with many ascending, helically alternate flowers, bracteate, villous; peduncle weakly ridged, glossy and purplish; bract subtending flower leaflike, obovate in outline, 5–7(–9) lobed, 12–28 mm long, of lower flowers lobes linear and green with whitish tips, of other bracts with narrowly oblanceolate lobes (terminal lobe often 3-toothed) and green to red with pink to pink-purple tips (rare mutants pale pink or white) subtended by a pale pink or light green band, 3-veined at base, hirsute at base grading to densely pubescent above; pedicel < 0.5 mm long. **Flower:** bisexual, strongly bilateral, in range ± 5 mm across; **calyx** 4-lobed, 10–22(–30) mm long, with pubescence and coloration like bract but lacking white subterminal band, split 2/3 length on inner side and to midpoint on outer side; tube 4-pleated, light green; lobes 2 per side, ascending, ± equal, narrowly oblanceolate, 4.5–6.5 mm long; **corolla** 2-lipped, (12–)25–36 mm long; tube + throat ca. 2/3 corolla length, whitish at tube base to purplish pink (light rose to white) and villous on throat; upper lip hooded (galea) but slender and beaklike, ± 8 mm long, strong reddish purple, densely villous with beaded (nodulated) hairs, internally pink-villous; lower lip 3-lobed, pouched and with a palate at base, pubescent with mostly short and some long hairs (septate), velveteen-papillate on surface, the terminal lobes acute, white or white-margined, with or without a moderate or dark red spot, the pouch having 3 longitudinal sacs, pink at base and banded moderate purplish red (dark rose to white) and whitish or pale green approaching tip with bright greenish yellow margin, spotted with dark red or purplish red spot between sacs near tip, villous within pouch at tip of sacs, the sacs with a subterminal lobe 2-toothed and also rounded lateral lobes, the palate of 2 yellow humps with rose-red or purple spots; **stamens** 4, lacking staminode, fused to corolla at different levels, 2 arising below lower lip, 2 arising closer to corolla orifice and below upper lip (galea); filaments ± 12 mm long (lower stamens) and ± 6 mm long (upper stamens), pink, villous; anthers dorsifixed, dithecal, each sac ± 1 mm long, unequally placed with 1 attached at its middle and the other at its tip, light yellow, longitudinally dehiscent before anthesis; pollen light yellow, copious; **nectary disc** surrounding 1/2–2/3 ovary base, green; **pistil** 1, 1–2 mm < upper lip of corolla; ovary superior, compressed-ovoid to compressed-conic, ca. 4.5 × 1.5–2 mm, green, glabrous, 2-chambered, each chamber with many ovules attached to center; style straight except sharply curved below stigma, whitish at base to pink or pink-purple above; stigma fully exposed and facing outward, capitate, 1 mm diameter, dark pink-purple, papillate. **Fruit:** capsule, loculicidal, many-seeded, compressed-ovoid, 10–12(–15) mm long, brown, having 2 chambers of different widths; surrounded by papery corolla with prominent dark veins. **Seed:** roundish, 1 mm, with a dark brown ovoid body and loose-fitting, honeycombed, netlike cover often separating from seed body. Late January–mid-June.

Native. Annual extremely common in openings in chaparral and coastal sage scrub or in grasslands throughout the range. *Castilleja exserta* formerly was treated as *Orthocarpus purpurascens* Benth. Purple owl's clover is easily recognized by its dense purplish red spikes, and within the bracts can be seen the white lower lip of the corolla. If enough acreage is surveyed, a rare pinkish or white individual may be found, a genetic form wherein the purple pigment is not expressed.

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