

Orobanche L. BROOMRAPE

Orobanche fasciculata Nutt., CLUSTERED BROOMRAPE. Parasitic perennial herb, achlorophyllous, with haustorial root embedded in host root, branched belowground, with 1–several subterranean stems, erect, in range 8–20 cm tall; shoots densely glandular-pilose, the hairs colorless with yellowish amber heads. **Stems:** cylindric, < 5 mm diameter, fleshy, brownish on subterranean portion, reddish on aerial portion. **Leaves:** absent. **Inflorescence:** raceme, appearing scapose, 5–15+-flowered, flowers helically alternate, bracteate; bractlet subtending pedicel, simple, sessile, achlorophyllous, appressed, scalelike, 1.5–12 mm long, partially sheathing rachis, typically purplish, entire or with several short teeth on margins, conspicuously glandular-hairy; pedicel erect, cylindric, in range to 120 mm long, to 1.8 mm basal diameter, reddish to flesh-colored, glandular-hairy, without bracteoles, hollow. **Flower:** bisexual, bilateral, 12–17 mm across; receptacle conic, ± 2 mm long; **calyx** 5-lobed, slightly bilateral with lower 2 lobes slightly longer and with a deeper sinus between them, in range 8–10 mm long, glandular-hairy; tube cup-shaped, $2.5\text{--}5 \times 4.5\text{--}5.5$ mm, yellowish or flesh-colored; lobes long-tapered awl-shaped, 4.8–6.5 mm long, in range typically > tube, purple, at anthesis with tips generally spreading, venation obscure; **corolla** 2-lipped, to 34 mm long; tube + throat $18\text{--}30 \times \pm 5$ mm but narrower above ovary, light yellow with rose reddish to purplish or dark yellow veins, slightly arched outward, slightly compressed side-to-side most of length but circular to compressed top-to-bottom at orifice, internally longitudinally 2-ridged on lower side by inward folds of the tube, the ridges prominent, ± 1 mm tall, extending length of throat from above stamens to mouth of throat, pubescent; lips defined by sinuses 6–10 mm deep, yellow, hairy on faces, ciliate on margins; upper lip 2-lobed, lobes erect to spreading, narrowly oblong to tongue-shaped, 3–4.5 mm wide, rounded to acute at tip, the sinus between lobes 4–7 mm deep; lower lip 3-lobed, lobes oblong, $6\text{--}9.5 \times 3\text{--}4$ mm, all similar in size; lobes 3-veined at base; **stamens** 4, fused to corolla at base of throat, staminode absent; filaments 8–10 mm long, 2 fused to upper side of corolla, 2 fused to lower side, of lower stamens to 2 mm > upper stamens and attached ca 0.5 mm lower on corolla tube; anthers basifixed, dithecal, ± 1.7 mm long and wide, pale yellow, each sac obovoid with short tail at base, villous-tomentose, longitudinally dehiscent; pollen pale yellow; **pistil** 1, 20–23 mm long; ovary superior, ellipsoid, $6\text{--}7 \times 3.5\text{--}4.2$ mm, slightly compressed side-to-side, glabrous, 1-chambered with 4 placentae and numerous ovules (parietal); style glabrous, 12–14 mm long, white or pale yellowish green except reddish at tip; stigma 2-lipped and sometimes funnel-shaped, each lobes deltate to roundish, $1.2\text{--}2 \times 2.2\text{--}3$ mm, dentate on margin, dentate to short-acuminate at tip, papillate on surface. **Fruit:** capsule, loculicidal, 2(weakly 4)-valved, many-seeded, ovoid-ellipsoid, $6.5\text{--}7 \times 3.8\text{--}4.2$ mm, slightly compressed \perp septum, light brown, enclosed by persistent calyx; calyx purplish in developing fruit aging brown, with 5 conspicuous, low ribs alternating with lesser ones on expanded tube, lobes erect, to 4 mm long. **Seed:** subspheroid to irregular, $0.3 \times 0.2\text{--}0.3$ mm, dark brown, netlike. Mid-April–May.

Native. Parasitic perennial herb rarely found in range, growing in coastal sage scrub on roots of the shrubs *Artemisia californica*, *Eriogonum fasciculatum*, and *Eriodictyon crassifolium*, but nobody knows its habitats because so seldom found. *Orobanche*

fasciculata is the easiest broom-rape in range to spot, because it is reddish with yellow flowers, often visible against a drab background; but this plant can also be purplish and have essentially purple flowers. Seeds are minute.

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