

Dudleya cymosa (Lem.) Britt. & Rose subsp. *cymosa*, CANYON LIVEFOREVER. Perennial herb, leaf succulent, evergreen, taprooted with aboveground, branched or unbranched stem (caudex), \pm hemispheric-rosetted, having 1–2(–several) rosettes but not caespitose, with ascending axillary inflorescences 4–22(–35) cm tall; shoots with terminal rosettes 18–100 mm across, having (6–)10–20 current-year leaves, a set of immature leaves in the center, and several weathered, partially withered leaves of previous year on the under side of the rosette, glabrous, glaucous. **Stems:** below rosettes, in range 3–20 \times 6–24 mm, virtually without internodes, internally with water-storing tissues and a cylinder of highly specialized wood, covered with periderm and old leaves. **Leaves:** helically alternate, simple, sessile, without stipules; blade oblanceolate to spatulate or rhombic and generally slightly narrowed above broad base and widened beyond midblade (1–2 \times base width) or oblong, in range 16–80 \times 4–20 mm, \pm crescent-shaped in \times -section, 1.8–5 mm thick, entire, acute to acuminate at tip, venation obscure, glaucous, grayish green when young, sometimes becoming purplish red or brownish at tip and on lower surface, on drying twisted at tip or with margins incurved approaching tip. **Inflorescence:** cyme, axillary from 1–several weathered basal leaves, terminal on long peduncle, with 4–14 bracts (“cauline leaves”) helically alternate and grading upward, many-flowered, 1-sided with flowers erect, typically 1–3 \times 2-forked or sometimes unbranched (3-forked), cyme branches from fork commonly asymmetric for length and degree of branching; peduncle ascending, mostly cylindric, in range 20–145 mm long, 1–3.5 mm diameter expanded to 7 mm wide and flattened to angled or winged at base, light green to tannish becoming densely mottled with purplish red or dark pink, lacking bracts for 15–65 mm from base; bracts along peduncle ascending to spreading, sessile, acuminate-triangular to narrowly heart-shaped, 6–28 \times 2.7–9.5 mm, clasping and short-lobed at base; intermediate branches generally shorter (< 25 mm long) and lacking flowers; ultimate branches ascending, 8–70 mm long, with succulent bractlet \pm opposite pedicel and often displaced slightly upward; ultimate branches 2–11-flowered, glabrous; bractlet ascending, triangular to deltate-ovate, 2.5–11 \times 0.8–5.5 mm, 0.8–1.7 mm thick; pedicel 4–16 \times 0.8–1.6 mm, light green to purplish pink, weakly glaucous. **Flower:** bisexual, radial, erect, angularly urn-shaped, 4–6.1 mm wide at calyx, 2.9–3.4 mm wide below spreading tips of corolla lobes, at anthesis 3.3–5.7 mm wide from spreading tips of corolla lobes, 10–18 mm long; **calyx** 5-lobed, fused at base, fleshy; lobes erect and appressed to corolla, triangular, 3–6 \times 2.3–3 mm, green soon becoming reddish to purplish red or dark reddish orange, glaucous; **corolla** 5-lobed, fused at base, at anthesis \pm urn-shaped; tube 1.5–3 mm long; lobes erect, narrowly oblong to lanceolate (elliptic), in range 7.5–14.5 \times 1.9–2.6 mm, stiff, with margins overlapping most of length, yellow or orangey yellow to reddish on exposed surfaces, yellow on unexposed, overlapped margin, slightly greenish and sometimes glaucous on convex ridge, 1–1.5 mm at tip ascending to spreading, **stamens** 10 in 2 whorls, alternate with (outer whorl) and opposite (inner whorl) petals, fused to corolla tube, of outer whorl slightly arising higher, included positioned at base of spreading corolla tips; filaments \pm cylindric, long-tapered, free portion 3.5–6.5 mm long, ca. 0.5 mm wide and slightly flattened at base, light greenish yellow; anthers of outer whorl with anthers positioned above anthers of stamens of inner whorl, basifixed, dithecal, oblong, 0.55–0.65 \times 0.4–0.45 mm, bright yellow, longitudinally dehiscent; pollen bright yellow to pale yellow; **nectaries** 5, opposite each ovary, oblong and slightly curved, 0.7–1.2 \times 0.2–0.5 mm, pale green, flat

on top; **pistils** 5, erect, 5.6–8.5 mm long; ovaries superior, 4.9–6.4 × 1–1.3 mm, fused at base for ca. 0.7 mm, ± pie-shaped in ×-section, whitish to pale green, gradually tapered to style, each ovary 1-chambered with 12–34 ovules attached to outer side; style 0.7–2 mm long, pale to light green; stigma terminal, minute, positioned at level of anthers. **Fruits:** follicles, 5, mostly many-seeded, erect, narrowly lanceoloid, ca. 7.5 mm long. **Seed:** ± lanceoloid, ca. 1 × 0.4 mm, brown, with slightly wavy longitudinal ridges. Late April–early June.

Native. Leaf-succulent perennial herb growing on volcanic rock faces in cool, moist, shaded habitats in the fog belt of western SMM, especially in Carlisle Canyon of SMMNRA Circle X Ranch, on the north-facing side of Boney Ridge, and in Lobo Canyon. *Dudleya cymosa* subsp. *cymosa* is the form in range that tends to have more than ten living leaves in the basal rosette, and the corolla is orangey yellow to reddish on exposed surfaces. Local efforts have been made to preserve these populations.

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