

*Leptosyne californica* Nutt., CALIFORNIA COREOPSIS, CALIFORNIA TICKSEED. Annual, taprooted, rosetted, short 1-stemmed at base (acaulous), with 1–several inflorescences, 4–39 cm tall; shoots leafy only at base, with ascending, slender basal leaves, sparsely puberulent and inconspicuously glandular-hairy, not aromatic. **Stems:** cylindric, to 1.7 mm diameter, green to purple, 10–30 mm long; narrowly hollow. **Leaves:** helically alternate (occasionally the uppermost leaves opposite), simple and unlobed or 1-pinnately dissected with 3 linear lobes, somewhat petiolate (indistinct from blade), without stipules; blade 35–80 mm long, axis and lobes threadlike, 0.5–1.1 mm wide, green to purplish red, axis  $\pm$  channeled below lobes, lobes arising above midpoint, to 30 mm long, entire and when young at base sometimes short glandular-hairy, truncate (obliquely so) at tip, obscurely veined. **Inflorescence:** heads solitary, terminal, on a scapelike peduncle, head radiate, 10–28 mm across, in range with 3–11 ray flowers and 5–70 disc flowers, bracteate, glabrous; peduncle cylindric, 35–370 mm long, becoming purplish red initially along veins and then on intervening tissue, without bracts along axis, nearly glabrous but with scattered nonglandular and glandular hairs below head; bracts subtending involucre (1–)2–7 (calyculus), appearing in 1 whorl, somewhat appressed to involucre, narrowly oblong to linear,  $3.5\text{--}6.5 \times 0.6\text{--}1.2$  mm,  $\pm$  knobbed at base, obtuse to blunt-acute at tip, green aging dark purplish red at tip; **involucre** bell-shaped, 8–13 mm wide, phyllaries (3–)5–8 in 1–2 series and opposite the outer ray flowers, erect then sharply spreading above midpoint, oblanceolate or obovate to ovate,  $6\text{--}8 \times 1.7\text{--}3.2$  mm, not fleshy, greenish yellow to yellow, sometimes with red spots, acute at tip, 7–15-veined, mostly glabrous but minutely hairy at tip; receptacle convex, with bractlets (paleae), palea erect, free from ovary, oblong-oblanceolate to oblanceolate,  $4\text{--}4.7 \times 0.8\text{--}1.2$  mm, cupping ovary but  $\pm$  flat above and acute at tip, parallel-veined, membranous and yellow-orange mostly above midpoint becoming scarious. **Ray flower:** bilateral, pistillate, 4–7.5 mm across; **calyx (pappus)** absent; **corolla** 3-lobed (rarely deeply 3-lobed to midpoint), bright yellow to vivid yellow; tube  $\pm$  compressed front-to-back, 1–1.3 mm long, greenish yellow, with glandular hairs; limb obovate to fan-shaped,  $6\text{--}7.7\text{--}10 \times (4\text{--})5\text{--}5.5\text{--}7.5$  mm, having 7–11 parallel veins; **stamens** absent; **pistil** 1; ovary inferior, narrowly obovoid flattened front-to-back, 1–1.5 mm long, light green, with a central rib on inner face, covered with colorless short glandular hairs on edges and outer face, 1-chambered with 1 ovule; style 2–3 mm long, 2-branched, the branches exerted and spreading to recurved, tapered to tip, minutely papillate-stigmatic on inner face. **Disc flower:** bisexual, radial, 1.5–2 mm across; **calyx**  $\pm$  absent (rarely of 1–2 vestigial scales), forming a low rim  $< 0.2$  mm tall; **corolla** 5-lobed; tube cylindric,  $1\text{--}1.7 \times 0.3\text{--}0.4$  mm, yellowish, lacking glandular hairs, with a ring of colorless hairs at junction of tube and throat; throat expanding upward,  $1.5\text{--}2 \times 0.8\text{--}1$  mm, yellow-orange; lobes spreading,  $\pm$  deltate,  $0.5\text{--}0.7 \times 0.4\text{--}0.6$  mm long, vivid yellow to orange-yellow, somewhat inrolled, papillate on thickened margins; **stamens** 5, fused to corolla at base of throat, slightly exerted at anthesis; filaments ca. 0.6 mm long, orange-yellow; anthers fused into cylinder surrounding style, basifixed, dithecal, 1.6–2 mm long, yellow-orange, rounded at base, with a triangular appendage at each tip, longitudinally dehiscent; pollen orange; **pistil** 1; ovary inferior, oblanceolate to oblong, 1.2–1.6 mm long, slightly flattened front-to-back, light green, with a central rib on inner and outer faces, covered with colorless short glandular hairs on edges and ribs, 1-chambered with 1 ovule; style  $\pm 4.5$  mm long, golden yellow, 2-branched, the branches

exserted, initially ascending, ca. 1 mm long, deltate and papillate-hairy at tip. **Fruits:** cypselae,  $\pm$  monomorphic but variable, straight obovoid to oblanceoloid and compressed front-to-back,  $3\text{--}4.5 \times 1.4\text{--}2.6$  mm, yellowish to pale brown often with red dots or dashes, convex on outer face, central-ribbed on inner, concave face, edges winged and somewhat corky, the wings somewhat wider and often with indentations or bumps on ray cypselae, having short, club-shaped hairs on margins and faces with or without permanent, swollen bases; pappus absent. Late February–early April.

Native. Annual first discovered spring 2008 in range by Tarja Sagar growing in Malibu Creek State Park (SMM) on an exposed talus slope in mixed stands with *Lasthenia californica*, about one kilometer from the M.A.S.H. film site. *Leptosyne californica* is essentially acaulous, with ascending basal leaves and a long peduncle bearing a single head. Within the local population, as with other annual Asteraceae, head size and flower number scale with plant height, so that the tiniest individuals may have small heads with just three ray flowers and as few as five disc flowers. This species is very similar to and a close relative of *L. douglasii*, and mature fruits are required for proper identification.  
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