

Rumex californicus Rech. f., CALIFORNIA WILLOW DOCK. Perennial herb, taprooted and fibrous-rooted, several-stemmed from base, not rosetted, eventually forming branches at most nodes on principal shoots, principal branches decumbent to ascending, 30–90 cm tall; sometimes polygamomonoecious; shoots with only cauline leaves, glabrous; adventitious roots sometimes at node on buried basal stems. **Stems:** low-ridged aging smooth and cylindrical, to 7 mm diameter, tough, scarcely zigzagged and with axillary shoots diverging nearly erect, not noticeably swollen at nodes, internodes to 80 mm long; solid, pith ca. 2 mm diameter. **Leaves:** helically alternate, simple, petiolate, with stipules; stipules (2) fused to form a sheath (ocrea) above node and fused to upper side of petiole, membranous, 7–43 mm long, with < 15 parallel veins, initially light green or transparent-membranous soon drying pale brown and smooth between reddish veins, very fragile and fracturing irregularly with some fractured parts adhering to stem or petiole; petiole hemi-cylindric but broadly U-shaped at pale green base (where attached to ocrea), < 10–75 mm long, thick, ± fleshy, flexible, green, sometimes with minute teeth on margins, upper side 3-veined; blade lanceolate to narrowly elliptic, 55–140 × 12–35 mm, tapered at base, entire and sometimes somewhat wavy on margins near base, acute at tip, pinnately veined with midrib raised on both surfaces, upper surface with midrib often 3-veined below midblade, lower surface midrib ridged (large leaves). **Inflorescence:** panicle, terminal, erect to ascending, of stalked flowers in dense whorl-like clusters of (several–)10+ per node (condensed cymes), the nodes helically alternate and below midpoint branched with each = racemelike stalk < 20 mm long, the terminal axis unbranched to 50 mm long, congested but at anthesis axes interrupted and later appearing slightly interrupted where internodes longer, bracteate, glabrous; bract subtending branch leaflike, linear to lanceolate-linear and with a reduced ocrea, to 70 mm long, reduced above and eventually with only a short ocrea, the ocrea drying brown and fracturing; axis ridged; pedicel arching, ca. 1.5 mm long, with abscission zone about 0.5 mm (= persistent base). **Flowers:** bisexual and pistillate (also possibly with staminate flowers), radial, 1 mm across (pistillate flower) and 2–2.5 mm across (bisexual flower), protandrous when bisexual; **perianth** 6-lobed, lobes (sepals and petals) in 2 distinct whorls; tube (receptacle) inversely conic, ± 0.4 mm long, green; outer whorl of lobes (calyx) ascending, cupped, oblong to narrowly ovate, 1–1.5 × 0.5–0.65 mm, green with narrow membranous margins to tip; inner whorl of lobes (corolla) at anthesis elliptic to oblong, 1.6–1.8 × 0.7 mm, green with narrow colorless margins above midpoint, entire, obtuse to acute at tip, pinnately veined with raised midvein becoming enlarged and 1 forming a callosity on basal 1/2 in fruit; **stamens** 6 in 2 whorls, free, arising from the rim of perianth tube; filaments ± 0.25 mm long, colorless, flaring at base, soon abscising; anthers basifixed, dithecal, 0.9–1 mm long, pale light yellow, longitudinally dehiscent; pollen light yellow; **pistil** 1 (absent in staminate flowers); ovary superior, ovoid and strongly 3-angled, 0.4–0.5 mm long and wide, glossy light green, 1-chambered with 1 ovule; styles 3, slightly deflexed and projecting between and sometimes spreading petals, 0.55–0.65 mm long, pale green at base to whitish at tip, flared at tip into ca. 10, short, tentaclelike stigmatic branches. **Fruit:** achene enclosed within persistent, brown perianth (diclesium) and having a persistent pedicel; sepals dry, persistent, similar in size and shape as when in flower; petals in fruit deltate to triangular, 2.5–3.1 × 2.2–2.5 mm, each with pinnate venation and a raised midvein but sometimes 1 petal having a midvein (tubercle) somewhat larger than the others, with several small to inconspicuous teeth on each margin

below midpoint, the largest tubercle lanceoloid, ca. 1.5×0.5 mm, whitish drying brown like perianth (immature perianth often purple-red); achene 3-angled ovoid, $1.8\text{--}2 \times 1.2\text{--}1.4$ mm, glossy reddish brown, with styles \pm persistent, ca. 1 mm long and deflexed; pedicel (abscised from persistent base) curved, to 4 mm long. Mid-May–early October.

Native. Perennial herb known from a seasonally moist meadow at SMMNRA Arroyo Sequit, but possibly will be found at other localities. *Rumex californicus* was formerly treated as *R. salicifolius* var. *denticulatus*. This species has a short perianth, and in fruit the inner perianth lobes (petals) typically are less than three millimeter long. Each inner perianth lobe forms a raised midvein, and the outward-facing one may be enlarged enough as a tubercle, but the distinction between a raised midvein and tubercle is not obvious. The tubercle of this species is the same color as the perianth.

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