

Rumex acetosella L., SHEEP SORREL, FIELD SORREL. Perennial herb, clonal, rhizomatous, fibrous-rooted, somewhat rosetted or not, 1–several-stemmed at base from tip of rhizome, initially unbranched with terminal inflorescence later forming ascending lateral shoots progressively from inflorescence downward, ± ascending, in range to 45 cm tall; dioecious; shoots with basal leaves and cauline leaves, glabrous; rhizome shallow, horizontal, 2 mm diameter, brown. **Stem:** 5-ridged (internodes) aging ± cylindric, to 3 mm diameter, lower stem striped purplish red. **Leaves:** helically alternate, simple with 2 basal lobes (hastate, lower leaves) to unlobed (upper cauline leaves), petiolate, with stipules; stipules (2) fused into cylinder sheathing stem (ocrea) and fused to upper side of oblique petiole, membranous, 8–12 mm long, with several ± parallel veins to midpoint, initially reddish at base to transparent above midpoint drying brownish at base to silvery above, very fragile and generally splitting lengthwise several times by adjacent stem growth; petiole deeply channeled-winged, to 48 mm long, the wings ascending approaching blade; blade of most leaves with principal lobe in range oblanceolate to narrowly obovate, 30–57 × 8–12 mm, ≥ petiole, tapered at base with subopposite, oblong basal lobes to 20 mm long, sometimes with a deltate sublobe 1 mm long between basal lobe and principal lobe, principal lobe entire, acute at tip, pinnately veined but only midrib conspicuous, lacking glandular dots; blade of upper cauline leaves (grading into bracts) narrowly oblanceolate-linear and lacking basal lobes, to 28 × 3 mm, with only midrib and raised on lower surface. **Inflorescence:** panicle, unisexual, lateral branches erect to ascending and lax (condensed cymes), the nodes helically alternate and lateral branch appearing interrupted but congested approaching tip, flowers in each cluster opening on different days, bracteate, glabrous; bract subtending panicle = unlobed cauline leaf + membranous ocrea, bract subtending lateral branch = unlobed, oblanceolate-linear cauline leaf + membranous ocrea or blade reduced (sometimes short and delate) + ocrea, of other branches = only ocrea, ocrea reduced upward and along branch at each node, split by emergent axis and flower buds and drying silvery; axis ridged, internodes 3–10 mm long, often red ring at node where ocrea attached; pedicel arching, 1–3 mm long, mostly rose-red, tip concealed by swellings of perianth, with convex cells. **Staminate flower:** radial, 3–3.5 mm across, dish-shaped, in bud somewhat 3-sided and beadlike; **perianth** 6-lobed, lobes in 2 distinct whorls, red (green); tube dishlike, short, with swelling at base of outer lobes; outer whorl of lobes (calyx) narrowly ovate, 1.1–1.3 × 0.6–0.7 mm, acute at tip, somewhat keeled to rounded on back, lacking callosity (lacking a tubercle); inner whorl of lobes (corolla) not keeled, ovate, 1.2–1.5 × 0.9–1.1 mm, inner lobes slightly > outer lobes and thinner on margins, obtuse at tip; **stamens** 6, essentially in 1 whorl, arising from top of perianth tube; filaments spreading, 0.4–0.75 mm long, pinkish, tapered from base to tip; anthers basifixed, strongly dithecal, 1.3–1.7 mm long, pale light yellow or tinged red aging red, longitudinally dehiscent; pollen pale yellow; **pistil** absent. **Pistillate flower:** radial, ca. 1.5 mm across (not opening), in bud somewhat 3-sided and beadlike; **perianth** 6-lobed, lobes in 2 distinct whorls, re. appressed to ovary; tube dishlike, short, with swelling at base of outer lobes; outer whorl of lobes (calyx) narrowly ovate, 0.8–1 × 0.6–0.7 mm, acute at tip, somewhat keeled, lacking callosity (lacking a tubercle); inner whorl of lobes (corolla) not keeled, ovate, 1.2–1.5 × 0.9–1.1 mm, inner lobes < outer lobes and thinner on margins, obtuse at tip; **stamens** absent; **pistil** 1; ovary superior, ovoid and strongly 3-

angled, 0.4–0.45 mm long and wide, glossy light green, 1-chambered with 1 ovule; styles 3, spreading, short and threadlike, with seastarlike stigmas exerted from perianth from between perianth lobes and resting on back of inner lobes, \pm 0.45 mm across, translucent pink aging tannish, with about ca. 10 short, stigmatic and conspicuously papillate arms.

Fruit: achene enclosed within brown perianth (diclesium) adherent to achene, strawberrylike and somewhat 3-sided, 1.2–1.5 mm long, with beaded red surface before drying with persistent seastarlike stigmas, outer perianth lobes distinctly < inner lobes and lacking tubercles; achene 3-angled ovoid, 0.9–1.1 \times 0.6–0.7 mm, brown to dark brown, 1 face narrower. Late March–early May.

Naturalized. Clonal, rhizomatous perennial herb known in range only from a single staminate population in a disturbed field at Trippet Ranch, Topanga State Park. *Rumex acetosella* has distinctive petiolate leaves with a pair of basal lobes (hastate), and the inflorescence has strawberry red buds, flowers, and immature fruits. In this species, the perianth conceals and traps the achene, and the dried stigmas, which resemble tannish ten-armed seastars may persist on the outside of the fruit (diclesium).

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