Atriplex serenana Abrams, STINKING ORACH, BRACTEATE ORACH, BRACTSCALE. Annual, taprooted, many-stemmed at base, branched throughout, decumbent and somewhat matlike with overlapping branches to ascending, 30–100 cm tall, when sprawling to 200 cm across; monoecious; shoots with leaves green or greenish on both surfaces, initially with ± moderate layer of colorless, bladderlike hairs (vesicular) drying with collapsed hairs and sparsely white-scurfy, foul-smelling. **Stems:** cylindric, to 6 mm diameter, initially light green with vesicular hairs becoming yellowish green and glabrescent, eventually tan with fractured periderm. **Leaves:** helically alternate, simple, subsessile, without stipules; petiole < 0.5 mm long; blade lanceolate to elliptic or oblong, 8.5–21.5(–30) × 2–5.5(–12) mm, thin, broadly tapered to somewhat narrowly tapered at base, entire (sharply dentate) and often wavy on margins, acuminate to acute at tip (obtuse), pinnately veined with midrib raised on lower surface, scurfy but more densely so on lower surface. **Inflorescence:** leafy panicle of clusters of unisexual flowers (glomes) on spikelike branchlets, terminal, spikes of staminate flowers with 6–15 glomes and 12–50 mm long (terminal) or 2–11 glomes and 3–25 mm long (lateral branch), bracteate, scurfy. **Staminate inflorescence:** glome subspheroid to hemispheroid with several–many flowers; bract subtending staminate glome narrowly linear, 1–1.8 mm long. **Staminate flower:** radial, 1.5–2 mm across; **perianth** calyxlike, 5-lobed, fused at base; lobes cupped-ovate to cupped-obovate, 0.7–0.9 × 0.5–0.7 mm, green with whitish and membranous on broad margins, acute to obtuse at tip, outer surface scurfy; **stamens** 5, opposite perianth lobes, fused in ring ca. 0.2 mm at base; filaments 0.8–0.9 mm long, light yellowish green, tapered; anthers dorsifixed, dithecal, 0.4–0.5 mm long, light yellow becoming tinged reddish orange, the sacs attached near top by short connective, oblong to obovoid, longitudinally dehiscent; pollen light yellow; **pistil** minute and sterile. **Pistillate inflorescence:** spike lateral, 1.5–45 mm long; bract subtending pistillate glome leaflike, < 7 × 2 mm; pistillate glome of ca. 3 flowers; bracteoles subtending and enclosing pistillate flower 2, initially subsessile, ovate to ± rhombic, at anthesis 1.5–2.5 × 1.2–1.8 mm, fused to 2/3 or 3/4, light green, 1-toothed and green on each free margin, acuminate at tip, outer surface with minute bumps (tuberculate), scurfy-vesicular. **Pistillate flower: perianth** absent; **stamens** absent; **pistil** 1, at anthesis 1–1.5 mm long; ovary superior, compressed and rounded to transversely ellipsoid, 0.4–0.6 × 0.7–0.8 mm, green, 1-chambered with 1 basal ovule; style 0.55–0.7 mm long, pale green, 2-branched, the branches 0.4–0.5 mm long, stigmatic most of length. **Fruit:** utricle, vertical, enclosed by 2 bracteoles; utricle thin, white-transparent, with wall adherent to seed coat, wrinkled, with persistent style; bracteoles in fruit sessile or stalked to 0.8 mm long, fused at least 2/3, ovate in outline with fused portion roundish to obovate, 2.1–3 × 1.8–3.2 mm, very dark brown or blackish at maturity, rounded at base, acuminate above midpoint forming a narrow beak above fused portion, sharply toothed and narrowly lobed on margin above midpoint but below beak, typically with a medial vein or slight ridge, with 2(3) narrow bumps on each side of vein or ridge on outer face, whitish scurfy. **Seed:** ± discoid, 1.1–1.2 × 1.1–1.3 × 0.6–0.7 mm, slightly wider than long, dull light brown above perisperm and darker brown on margin above embryo, with tip of radicle ascending. Late June–late October.

Naturalized. Annual growing on waste ground at scattered localities, e.g., on margins of coastal salt marsh or inland at abandoned homesites in Liberty Canyon (SMM). *Atriplex*

serenana is one of the few species in California having leaves that are green on both sides, i.e., they are not concealed by vesicular hairs. Its bracteoles have several well-defined teeth on the free margins.
B. A. Prigge & A. C. Gibson