

Zannichellia palustris L., COMMON POOLMAT, GRASS-WRACK. Submersed aquatic annual, fibrous-rooted in muck, branched from creeping, rooted main axis, typically several-branched, to 50 cm long; monoecious; shoots wispy and flexible, appearing tufted with a cluster of fine cauline leaves, glabrous; adventitious roots nodal, 1 or 2 per node. **Stems:** cylindric, < 1 mm diameter, translucent-white and microscopically striped. **Leaves:** alternate to opposite or pseudowhorled (= alternate), simple with a sheath (ligule); sheath membranous, 3–7 mm long, not persistent; blade threadlike, in range 15–50 × 0.2–0.3 mm, in x-section compressed-oval, often whitish at base, entire, narrowly acute with short point at tip, midvein faint to inconspicuous, with an air chamber on each side of midvein from base to near tip. **Inflorescence:** axillary cyme having 1 sessile, staminate flower at base (= 1 stamen) and 1 stalked pistillate flower at tip (appearing like several stalked pistils), bracteate, glabrous; bract at base of pedicel either 1 and sheathing (perfoliate) or 2 and distinct, greenish and thin, perfoliate bract (= sheath) cup-shaped to funnel-shaped, 0.7–0.8 mm long, 1–1.4 mm diameter, distinct bracts unequal, deltate-ovate and 0.75 × 0.75 mm (small bract) and depressed-ovate and 0.7 × 1.2 mm (larger bract); pedicel 0.2–0.4 mm long. **Staminate flower:** perianth absent; stamen 1, free; filament ca. 1.8 mm long; anther basifixed, dithecal, oblong, 1–1.5 × 0.5 mm, whitish, terminated by a conic, green connective, longitudinally dehiscent; pollen spheric, whitish; pistil absent. **Pistillate flower:** of (4–)5–7 pistils, sessile to short-stalked (stipe, gynophore), stipe at anthesis < 0.2 mm long, expanding into ovary base; perianth absent; stamens absent; pistils ovaries superior, ± ellipsoid but somewhat flattened on upper (adaxial) side; ovary ± ellipsoid (but ± flattened adaxially), 0.7–1.2 × 0.35–0.5 mm, green except for stigma, each ovary 1-chambered with 1 ovule attached at top; style 0.4–0.7 mm long, green; stigma asymmetrically umbrella-shaped (peltate), deltate to ± rhombic or funnel-shaped, 0.9 × 0.8 mm, whitish to light tan. **Fruits:** drupelets, to 7, indehiscent, each drupelet on stalk < 1 mm long (podogyne); drupelet slender D-shaped narrowly compressed side-to-side and slightly incurved with beak, 1.7–2.8 mm long, golden brown with colorless outer wall, smooth aging slightly dentate or ridged on out-facing, convex edge, eventually appearing minutely spiny; beak tapered, 0.8–1.5 mm long. **Seed:** sausage-shaped and slightly curved, 1.6–2 mm long, yellowish white, smooth. Mid-June–mid-September.

Native. Inconspicuous submersed aquatic annual occasionally found rooted in muck of clear, very shallow, quiet freshwater of sloughs and lake margins in the western portion of the range, e.g., Lake Sherwood or in Agoura Hills. *Zannichellia palustris* is most easily recognized by its cluster of drupelets with somewhat hooked beaks, and its leaves appear opposite or in pseudowhorls. This species has a worldwide distribution, attributable to its dispersal via the beaked fruits by waterfowl between quiet bodies of water.

B. A. Prigge & A. C. Gibson