Ruppia maritima L. Aquatic perennial herb, halophytic, submersed, clonal via fragmentation forming dense mats and colonies, rhizomatous or not (unattached), fibrous-rooted in muck but most plants without roots, when growing from a horizontal rhizome with a shoot ascending at each node, < 100 cm long; shoots wispy and flexible, having only cauline leaves, glabrous; adventitious roots at nodes. **Stems:** cylindric, 0.5–1 mm diameter, green becoming white, internodes 16–53(–150) mm long. **Leaves:** alternate distichous (appearing subopposite at flowering nodes), simple with enlarged sheath (= 2 colorless stipules fused to leaf base except at round tip), with 1 "intravaginal" scale; scale narrowly oblong, 3.5–5.5 mm long, clear, 2-toothed to obliquely truncate at tip; sheath open, (6–)13–20 mm long, membranous on margins, 3-veined, lobed at top, the lobes erect, semicircular, 0.3–0.5 × 0.6–1 mm, membranous; blade threadlike linear, (20–)40–100(–150) mm × 0.25–0.5 mm, thin, green, entire except minutely toothed at and below acute tip, 1-veined; internally with 2 longitudinal air chambers separated by midvein; lacking stomates. **Inflorescence:** 2-flowered spike, at comparatively few nodes, flowers alternate separated by ca. 0.6 mm on rachis, bracteate, glabrous; spike in bud surrounded and subtended by a pair of spathelike leaf sheaths; peduncle 0.5–1.5 mm long, eventually elongating and before anthesis exserting spike from bract to water surface; leaf sheath in bud narrowly lanceoloid, 7.5–8 mm long, translucent, with linear blade 20–100 mm long; peduncle at anthesis ascending and somewhat stiff, short, during fruit development becoming elongate, flexible, and coiled; flowers sessile at anthesis. **Flower:** bisexual, bilateral but appearing radial, ± 2.2 mm across; **perianth** absent; **stamens** 2 (appearing like 4 with widely separated anther sacs), free, sessile; anthers plump, dithecal with halves of each anther separated by a broad connective and arched around peduncle-rachis axis, each half kidney-shaped, 1.2–1.5 × 1–1.2 mm, initially green aging yellowish with reddish marking along aperture and sides, 1-chambered, longitudinally dehiscent, anther connective appressed to rachis ± deltate, bearing a minute, fingerlike projection from below tip; pollen pale to light yellow; **pistils** (3–)4–6, free, between anthers and maturing after them; ovary superior, subsessile, asymmetrically inversely conic to bottle-shaped or barrel-shaped, 0.6–0.7 mm long, green, each pistil 1-chambered with 1 ovule; stalk beneath pistil (gynophore) very short at anthesis; style absent; stigma terminal, umbrellalike (peltate), flat. **Fruits:** drupelets, to 6 per flower, 1-seeded, stalked (gynophore, appearing like a pedicel), submersed; fruitlet asymmetrically ovoid, 1.5–2.2 × 1.1–1.8 mm (excluding beak), glossy brown-black; beak erect, 0.5–0.7 mm long, with brown stigma; gynophores ascending but below water surface, straight, (10–)15–35 mm long; peduncle coiling after pollination, in range with 5–15+ coils, 30–300 mm long (to 200 mm when not stretched), whitish. Late July–October.

Native. Submersed aquatic herb occurring in dense populations in coastal saline and brackish shallow water, e.g., at Malibu Lagoon. *Ruppia maritima* initially has rhizomes rooted at nodes in the bottom muck, but plants become free and form submersed mats entangled with green algae. Authors universally treat the coastal, marine form as *R. maritima*. What has been observed at Malibu Lagoon (recorded with images and herbarium voucher) is that living material there had five to greater than fifteen coils, which would traditionally be identified instead as *R. cirrhosa* (Petagna) Grande, the form found in inland bodies of water, including freshwater and saline ones. Flowers in Malibu Lagoon open at the water surface to release the yellowish, floating pollen, to thereby enable

pollination of the pistils (usually four). In our materials, at anthesis the peduncle and gynophore beneath each pistil were very short but elongated following pollination; later coiling of the peduncle caused the fruitlets to develop submersed. In the form described, the gynophores increased typically to more than twenty millimeters in length, and the beak on the developing drupelet appeared lateral and erect. The problem is that the marine form, *R. maritima*, should have peduncle with fewer than five coils, so clearly the species definitions of ditch-grass need to be carefully re-examined.

In August 2003, Gibson collected ditch-grass from a freshwater duck pond in Oak Park (SH). There was insufficient materials for a complete description, but plants obtained tended to match *R. cirrhosa*. Subsequently, *Ruppia* has not been found again at the same inland locality, to confirm its occurrence in range.
B. A. Prigge & A. C. Gibson