

Distichlis littoralis (Engelm.) H. L. Bell & Columbus, SHORE GRASS. Perennial herb, evergreen, halophytic, clonal, stolon-bearing, fibrous-rooted at nodes buried in mud, sometimes loose matlike, procumbent to decumbent, the longest axes sprawling 150+ cm long, upright axes 5–25 cm tall; dioecious; shoots with erect to ascending branches arising on upper side of stolons, > 35 mm apart; principal upright branches when first formed tufted, later appearing interrupted with ascending short lateral shoots clustered at widely spaced nodes, the lateral shoots often paired and subopposite, mostly < 30 mm long, with closely spaced, overlapping leaves (\pm 1 mm apart) and branchlets; green blades often with salt crystals excreted by surface salt glands; stolons wiry, with long internodes alternating with intervals of short internodes; adventitious roots nodal (not formed on aerial shoots).

Stems (culms): cylindric, to 1.3 mm diameter, commonly having inconspicuous low ridges, wiry, glabrous; internodes hollow. **Leaves:** alternate distichous (especially obvious on branchlets), simple with sheath; prophyll with membranous sheath and exposed paired bladelike extensions, \pm 7 mm long, the sheath open, overlapping, strongly 2-keeled with keeled side axillary (touching main stem), the paired extensions narrowly lanceolate in outline, 2–2.5 mm long, keeled and halves folded flat, whitish with yellowish veins to green, sheath keels and keels of extensions short-ciliate; sheath open, especially on lateral shoots greatly overlapping, 5–11 mm long, translucent-white (blushed red-purple) with or without several red-purple veins, membranous but where exposed firm and low-ridged, without lobes (auricles) at top, glabrous; ligule membranous, truncate and stiff short-ciliate, to 0.4 mm long; blade of primary cauline leaves triangular, 3.5–7 mm long and flattish to weakly keeled, of lateral shoots linear-lanceolate in outline, 3–9 mm long and strongly keeled with halves nearly touching, tough and stiff, striped green with whitish margins, in range entire (short-toothed on margins at base), whitish and hard at tip, parallel-veined with veins raised on upper (inner) surface and less so on lower surface, midrib sometimes evident on cauline leaves, surfaces somewhat glaucous, upper surface with minute hairs along veins, lower surface glabrous. **Inflorescences:** unisexual spikelets, solitary and terminal on several-leaved branchlets, spikelet with 3–5 florets but only 1 or 2 florets fertile, bracteate, glabrous, lacking awns. **Spikelet:** fusiform slightly compressed side-to-side, 8–11 mm long, at anthesis < 2 mm wide, pistillate spikelets slightly wider than staminate spikelets, fertile florets subterminal or terminal, straw-colored, rachilla internodes 1 mm long, breaking tardily below the lowest floret and between florets; **glumes** absent; **lemma** never spreading, stiff-membranous, ovate, 5.5–6 mm long, translucent with three stripes (= 3 sets of 3 veins), acute but often damaged or split at tip; **palea** stiff-membranous and strongly 2-keeled with overlapping wings, palea slightly > lemma, 2-veined, keels short-ciliate. **Staminate flower: perianth (lodicules)** absent; **stamens** 3, free, exserted from tip of palea; filaments threadlike, 8–9 mm long, whitish; anthers dorsifixed, dithecal, \pm 4 mm long, yellowish and blushed reddish to purple-red (especially at tip), longitudinally dehiscent; pollen light yellow; **pistil** absent. **Pistillate flower: perianth (lodicules)** 2, vestigial, at base of ovary; **stamens** absent; **pistil** 1, fully enclosed by wings of palea; ovary superior, narrowly ellipsoid, green; styles 2, exserted several mm from palea, whitish, 2-branched, the branches short papillate. **Fruit:** achene (caryopsis), in range not observed, ellipsoid, ca. 4 \times 0.8 mm. Late June–September.

Native. An evergreen, halophytic perennial grass growing exclusively in the high mudflat habitat of salt marsh, with the only large population currently thriving at Point Mugu. *Distichlis littoralis* is more commonly treated as *Monanthochloë littoralis*; this species occurs in tropical and subtropical water of coastal mudflats in the Americas. It is a slow-growing plant that resists high salinity by excreting salt crystals from glands on the leaf surfaces. Shore grass produces wiry stolons that scramble over and through neighboring plants, forming upright shoots at certain nodes and thereby producing a string of widely spaced axes. If the stolon is trapped in mud, adventitious roots are produced at nodes beneath the principal axes. Photosynthetic leaves are basically limited to lateral shoots formed in tufts on the upright shoots. During summer months the plant may produce inconspicuous spikelets, with just one spikelet terminating a vegetative branchlet. Because dioecious shore grass typically clones vegetatively via stolons, large patches are exclusively either staminate or pistillate; staminate clones are fairly easy to identify because anthers are visibly exerted, whereas the exerted style branches are more inconspicuous and difficult to spot.

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