

*Distichlis spicata* (L.) Greene, SALT GRASS. Perennial herb, halophytic and freshwater aquatic, clonal, rhizomatous and stolon-bearing, fibrous-rooted, several-stemmed at base, typically with lateral branches produced on upper side at most nodes, decumbent to erect, 10–50 cm tall; ± dioecious; shoots with ascending to spreading cauline leaves, surfaces often with salt crystals excreted from salt glands, essentially glabrous; stolons covered with ± glossy, ivory, scalelike leaves; rhizomes stout; adventitious roots nodal on stolons and rhizomes. **Stems (culms):** cylindrical, slender, 1–1.5 mm basal diameter, lower stem wiry and tough, glossy, nodes swollen; internodes hollow. **Leaves:** alternate distichous, simple with sheath or lower leaves reduced to only sheath, dimorphic with a distinctive first leaf on each new shoot (prophyll); prophyll = a membranous open sheath, narrowly triangular in outline, 3.8–5 mm long, asymmetrically and strongly 1-keeled, often tinged rose, densely short-ciliate along keel; sheath open, > 1 internode and overlapping another sheath, lighter green than blade and striped, narrowly membranous and often pinkish on margins, glabrous, without lobes (auricles) at top; ligule fringed short-membranous, < 0.4 mm long; blade linear to narrowly acuminate, 15–100 × 1–4.5 mm, the widest at base, tough, green to bluish green, weakly to strongly inrolled, collar on margin and upper surface at base with colorless pilose hairs 1–2 mm long, minutely toothed on margins from midpoint, long-tapered at tip, parallel-veined, upper surface short-scabrous with minute teeth along veins and grooved between veins. **Inflorescences:** spikelets, staminate, pistillate, or bisexual on different plants, in terminal panicles, panicle 25–70 mm long, with several–25 spikelets, spikelet with (4–)7–12(–20) florets, stalked on ascending branchlet, bracteate, glabrous, without awns; axes slender, strongly several-angled, edges minutely toothed. **Spikelet:** oblong-elliptic to oblanceolate or lanceolate in outline, 5–15(–25) × 2.8–4.5 mm long, strongly compressed but all spikelets not oriented in same plane, breaking above glumes and between florets (pistillate and bisexual inflorescence), on bisexual inflorescence terminal floret with sterile stamens and pistil, on pistillate inflorescence terminal floret with only a diminutive lemma; **glumes** 2, unequal, ovate and keeled, lower glume 2–3 mm long, upper glume 3–4 mm long, ± membranous with green veins; rachilla zigzagged; **lemma** 3.5–5 mm long, membranous (staminate flowers) or whitish with wide-membranous margins (pistillate and bisexual flowers), with ± 11 green veins, often tinged rose or purplish; **palea** surrounding flower, canoe-shaped, 2-keeled, with deeply depressed center, ca. 3 mm long, membranous with 2 green veins each on outer keel, minutely short-ciliate along keels and on margins. **Staminate flower: perianth (lodicules)** 2, fan-shaped to shallowly lobed, < 0.5 mm long, translucent; **stamens** 3, free; filaments threadlike, 3–4 mm long, whitish; anthers dorsifixed, conspicuously dithecal, 2.1–3 mm long, pale yellow blushed purplish, longitudinally dehiscent; pollen pale yellow; **pistil** 1, vestigial, white. **Bisexual and pistillate flowers: perianth (lodicules)** 2, fan-shaped to shallowly lobed, < 0.5 mm long, translucent; **stamens** 3, free, pistillate flower having vestigial filaments; filaments threadlike, 3–4 mm long, whitish; anthers dorsifixed, conspicuously dithecal, 2.1–3 mm long, pale yellow blushed purplish, longitudinally dehiscent; pollen pale yellow; **pistil** 1, 3.5–4.5 mm long; ovary superior, depressed-obovate, ca. 0.7 × 0.35 mm, yellow-green, 1-chambered with 1 ovule; styles 2, exerted from tip of lemma (pistillate flower) or ± included (bisexual flower), colorless at base, stigmatic with shaggy hairs 1.5–2 mm long, pinkish aging brownish. **Fruit:** achene (caryopsis), ovoid, 2–2.2 × 1.3 mm + 2 short

beaks (persistent style bases), the beaks  $\pm$  0.3 mm long, brown, glabrous; separating from lemma and initially dispersed with palea fused at base. Late May–late June.

Native. A clonal perennial grass of coastal salt marsh, especially well-established along channels, but in range also occurring in water-saturated soil beside inland standing bodies of fresh water. *Distichlis spicata* is typically described as dioecious with only unisexual flowers, and it vegetatively reproduces via rhizomes and stolons, so that large monospecific patches often are only one sex. Fruit development is relatively low. In range clones of inland populations have been observed with bisexual flowers, and every bisexual flower appear to form a viable fruit.

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