

*Eleocharis macrostachya* Britt., PALE SPIKE-RUSH. Perennial herb, emergent aquatic, clonal, rhizomatous, fibrous-rooted, overall appearing densely cespitose, 1–several erect to ascending shoots for each rhizome node, in range 20–80 cm tall; shoots with prophyll and 2 basal leaves, glabrous, not glaucous; rhizomes horizontal, 1.5–3 mm diameter, ensheathed by a firmly attached scale at each node = closed sheath, the scale brownish to reddish brown; adventitious roots several from base of each aerial shoot. **Stems (culms):** ± circular to elliptic in ×-section, 1.4–1.5 mm diameter, green; in ×-section having large air spaces (aerenchyma). **Leaves:** alternate, = bladeless sheath; prophyll nearly open and sheathing, ovate to triangular, mostly (5–)9–14 × 4–4.5 mm, translucent purplish red, with 3 visible veins converging toward tip, persistent; sheath closed, truncate to slightly oblique, the lowest sheath (7–)11–28 mm long, broadly convex, 8–13-veined with vein bridges between them, tannish and purplish red, second sheath 60–100 mm long, with 11–18 longitudinal veins and with vein bridges between them, greenish becoming tannish, commonly reddish at base, with purplish red dots concentrated on margins near tip or within 5 mm of margin, sometimes extending to 10+ mm below distal margin between some veins, truncate to very broadly obtuse at tip. **Inflorescence:** spikelet, solitary and terminal, linear-lanceolate, 10–35 × 2–4 mm, 32–100-flowered, bracteate, bractlets (floral scales) helically alternate and shinglelike, each bractlet subtending a sessile flower, glabrous; peduncle = shoot length; bract subtending spikelet (involucral bract), continuous with stem and not attached to rachis, nearly or completely sheathing, 2.2–3.2 mm long, thickly herbaceous and green aging tannish, having to 25 fine veins on basal portion, membranous to 1.2 mm wide on margins, dark purplish or brownish between membranous margin and herbaceous base, obtuse at tip; first bractlet subtending aborted flower (lacking flower), to 3 mm long, mostly 1–3-veined; bractlet of fertile flower at least 1/2-encircling rachis, appressed, ovate and cupping flower, 3.5–4.5 mm, light green on vein, reddish brown between membranous margins and green midvein, vein sometimes slightly raised, obtuse to broadly acute at tip, drying brown and abscising. **Flower:** bisexual, ± radial, sessile, mostly concealed by bractlet; **perianth** of 4 bristles, unequal, 0.7–2 mm long increasing to 2.8 mm long and generally > fruit, translucent-white, ascending and wavy, with backward-pointing short barbs, persistent during fruit development; **stamens** 3, free, exserted; filaments slender, 2–4 mm long, white; anthers basifixed, dithecal, linear, 1.6–2.5 mm long, in range light yellow, with narrow appendage 0.2 mm long at tip, longitudinally dehiscent; pollen light yellow; **pistil** 1, 3–3.7(–4.6) mm long; ovary superior, narrowly fusiform to ellipsoid, ± 0.6 mm long, green, 1-chambered with 1 ovule; style 3–5 mm long, narrowly conic at base and barely distinct from ovary aging as a tubercle, above tubercle 2-branched, with short papillate hairs slightly below fork, the branches stigmatic, ascending with tips exserted from bractlet, slender, 1.2–2 mm long, translucent, with ascending to spreading papillate hairs along entire length. **Fruit:** achene having persistent tubercle (stylar) at top, 1-seeded, fruit body obovoid and biconvex, 1.3–1.6 × 1–1.3 mm, shiny grayish orange-brown to brown, minutely pebbly on surface; tubercle ± conic but when dry compressed front-to-back, 0.4–0.5 × 0.4–0.5 mm, ± wrinkled, sometimes vertically 3-ribbed. Late May–summer (in wet substrate).

Native. Aquatic perennial growing in shallow water or on wet border of standing water. *Eleocharis macrostachya* is the common species of spike-rush in range, and can form

extremely dense, monospecific stands, cloning via rhizomes, as in the ephemeral pond in Day Canyon (SH). This species has two styles, and the achene is two-sided.  
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