

Vascular Plants of Williamson County

Fuirena simplex var. *aristulata* – ANNUAL PORCUPINE SEDGE [Cyperaceae]

Fuirena simplex Vahl var. *aristulata* (Torrey) Kral, ANNUAL PORCUPINE SEDGE. Annual, lacking rhizomes, fibrous-rooted, several-stemmed at base, not branched above base, principal shoots ascending, in range to 35 cm tall; shoot with a basal leaf and typically < 5 cauline leaves, the basal leaf with vestigial blade linear and < 1 mm long, blades of cauline leaves decreasing upward. **Stems:** low-ridged, to 1.5 mm diameter, with about 15 ridges descending from each sheath, easily detached at each node but internodes tough, glabrous. **Leaves:** helically alternate, simple with sheath; sheath closed, low-ridged, mostly glabrous but sometimes with some hispid hairs at top of sheath, of basal leaf aging papery; ligule + contraligule united as ring below blade, membranous and short-ciliate, ca. 0.7 mm long, aging brownish; blade of cauline leaves acuminate-triangular to 5 × 1 mm (first cauline leaf), long-acuminate linear ca. 30 × 3 mm (second cauline leaf), upper cauline leaves linear, to 100 × 3.5 mm and parallel-veined with 5 veins sunken on upper surface and raised on lower surface, often short-ciliate on margins, upper surface ± glabrous, lower surface sparsely short-hairy. **Inflorescence:** spikelets, in terminal panicle of 1–3 spikes, spike condensed at top of peduncle composed of 2–5 helically alternate spikelets, spike 10–15 mm across, each spikelet conelike of 20–35+ helically alternate flowers with anthesis from base upward, ellipsoid-ovoid + projecting bristles, bracteate, short-hirsute with some longer hispidlike hairs; bract subtending inflorescence leaflike with sheath and ringlike ligule, sheath closed to 9 mm long, low-ridged, puberulent; usually axes unequally 2-forked from node, the more slender and shorter to spike, the longer axis channeled to a large spike or forked at another node, axes low-ridged, the larger axis conspicuously channeled with a raised ridge on lower side and having 3 veins associated with channel, short-hirsute; bract subtending second node leaflike but shorter and sheath scarcely closed, blades puberulent; prophyll on minor axis distichous, obovate, 3 mm long, membranous-scarious; **glumes** subtending spikelet 2, dimorphic, lower glume with lower portion broad, appressed, and cupped and ascending upper portion long-acuminate linear and > spikelet, of the lowest spikelet of a spike to 14 mm long decreasing upward to 6 mm long, with some hispid hairs especially on lower portion; upper glume obovate to heart-shaped shallowly notched at top, 2 × 1.2 mm, papery, lacking long hairs. **Spikelet:** in outline at anthesis < 4 mm long; bractlet subtending flower (flower scale), lower portion scarious, cupped-obovate, ca. 2.5 × 1.5 mm, red-brown (purplish red cell walls) approaching tip, 5–6 veined at base, central 3 veins raised and greenish, upper portion bristle widely spreading aging recurved, flattened top-to-bottom, 2–3 mm long, green and 3-veined, minutely barbed with upward-pointing teeth. **Flower:** bisexual, radial, ca. 1.5 mm across; **sepals** 3 in whorl, ascending, bristlelike, 1 mm long, colorless aging orange, minutely barbed above midpoint; **petals** 3 in whorl, ascending, clawed, initially colorless after pollination aging orange and in fruit reddish, claw cylindrical, 0.5 mm long, limb broadly oblong, ca. 1 × 0.7 mm, lower half thin with 3 veins diverging at base, upper half fleshy and bulbous; **stamens** (1–)3, free; filaments ascending, ca. 2 mm long, flattened and wider above midpoint; anthers exerted from top of bractlet, basifixed, dithecal, 0.5–0.6 mm long, pale yellow with colorless short point at top, longitudinally dehiscent; pollen yellowish; **nectary** absent; **pistil** 1; ovary superior, 3-sided and 3-angled, at anthesis 0.5 mm long, glossy translucent, glabrous, 1-chambered with 1 ovule; style mostly exerted from bractlet,

1.6–1.8 mm long. 3-forked below midpoint, colorless at base and exerted portion aging orange, the branches minutely papillate. **Fruit:** achene, stalked, conspicuously 3-sided and 3-angled (trigonous) rhomboid, ca. 0.6– × 0.6– mm, glossy tan to , at top with a short beak = a persistent portion of the lower style; stalk to 0.8 mm long.
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