

Vascular Plants of Williamson County
Sorghastrum nutans – INDIANGRASS [Poaceae]

Sorghastrum nutans (L.) Nash, INDIANGRASS. Perennial herb, tall bunchgrass, rhizomatous, fibrous-rooted, many-stemmed at base, in range 90–150 cm tall; shoots with ca. 2 basal leaves and to 5 cauline leaves, stems mostly unbranched, tough, hirsute at nodes, foliage glabrous; rhizomes with short internodes, to 3 mm diameter, with overlapping scales, the scales \pm deltate, ca. 2 mm long and glossy tannish. **Stems:** cylindrical, to 4 mm diameter, internodes smooth, at least on lower plant ash-gray glaucous on nodes and also some internodes, internodes to 250+ mm long, hairs around nodes straight and ascending, to 2.5 mm long; internodes hollow. **Leaves:** alternate distichous, simple with sheath; sheath open overlapping at base, $>$ internode, tough, smooth, with narrow membranous margin, at top having a tough extension (auricles) at top fused with ligule, 2–5 mm long, sometimes splitting lengthwise and reddish; ligule portion membranous and roundish jagged at top; collar not visible; blade long-tapered linear, in range mostly 120–360 \times 4–8 mm, tough, minutely scabrous on margins, parallel-veined with veins raised on both surfaces, sometimes glaucous or with ash-gray surface wax on upper surface next to ligule. **Inflorescence:** spikelets, 100+ in terminal panicle, lower portion (the lowest node) of panicle often concealed by sheath of flag leaf, at each node having several lateral branchlets and stalked spikelets, 150–300+ mm long with appressed branches, the longest ascending branches to 100 mm long, ultimate branchlets (rames) composed of a sessile fertile spikelets and on the side of upper glume a pair of ascending stalks (“pedicels”) 3.5–4 mm long but lacking spikelet at top, fertile spikelet with 2 florets with the upper floret bisexual, bracteate, conspicuously hairy, awned; axis of panicle cylindrical, $<$ 1 mm diameter, light green, internodes to 70 mm long, smooth, glabrous; axes of lateral branches and long “pedicels” often glabrous, not scabrous, with a tuft of stiff hairs at the top beneath fertile spikelet; fertile spikelet appressed to branch axis, internodes between branchlets (4–6 mm long) and “pedicels” on branchlets with dense, ascending, straight hairs to 3 mm long. **Fertile spikelet:** lanceoloid, in range 6–7 mm long, breaking below glumes; **glumes** 2, subequal, spreading to expose anthers, lower glume flattish on back, with stiff, ascending hairs to 2.5 mm long, 7-veined or 9-veined but veins not converging at truncate tip, upper glume rounded and glabrous on back, 5-veined but veins not converging at obtuse to rounded tip, tip short-ciliate with hairs tinged purple; **lemma** of lower floret membranous, mostly obovate, ca. 1 mm long, lacking veins, short-ciliate on margins, **palea** of lower floret absent; **lemma** of upper floret awned, membranous body with parallel margins and 2-lobed at top, ca. 5 mm long including narrow-triangular lobes ca. 1 mm long, body 3-veined at base but veins soon converging into midvein emerging as awn from sinus, margins short-ciliate, midvein pigmented above midpoint, the awn 10–22 mm long, orangish red becoming twisted and 1-bent at midpoint, **palea** membranous, \pm elliptic somewhat 2-folded, 2-veined, 5–5.5 \times 1.5–1.8 mm, ciliate on margins + on outer surface above midpoint and along veins. **Flower: perianth (lodicules)** fan-shaped, ca. 0.5 mm long, length $<$ width, translucent, somewhat 3-toothed on top; **stamens** 3, free; filaments threadlike, $<$ 1 mm long, colorless; anthers dorsifixed, dithecal, in range ca. 3.5 mm long, light yellow, longitudinally dehiscent; pollen light yellow; **pistil** 1, 3–3.5 mm long; ovary superior, ovoid, 0.5 \times 0.3 mm, light green, glabrous, 1-chambered with 1 ovule; styles 2, ca. 2.5 mm long, lower portion ca. 0.7 mm long, colorless, upper portion

exserted from below midpoint of spikelet, narrowly pyramidal somewhat flattened. **Fruit:** achene (caryopsis) hidden within floret within tough bracts, narrowly ovoid, 2–3 mm long, brown; dispersal unit having hairy fertile spikelet and a pair of hairy “pedicels” appressed to fertile spikelet.

A. C. Gibson