

Vascular Plants of Williamson County

Steinchisma hians – GAPING PANICGRASS, GAPING GRASS [Poaceae]

Steinchisma hians (Elliot) Nash, GAPING PANICGRASS, GAPING GRASS. Perennial herb, bunchgrass, rhizomatous, fibrous-rooted, many-stemmed at base, densely caespitose, in range mostly decumbent with flowering shoots to 75 cm long; shoots with several basal leaves and at least 2 cauline leaves, the lowest basal leaves = sheaths lacking blades, axis often bent at successive nodes (geniculate), shoot nearly glabrous with leaves having the only hairs on and adjacent to the collar (upper sheath and the lowermost blade); rhizomes shallow, creeping, to 3 mm diameter, whitish, congested with most internodes < 1 mm long, scales along rhizome triangular and < 3 mm long (< basal leaves); adventitious roots at nodes. **Stems (culms):** compressed side-to-side, to 2 mm diameter, internodes to 120 mm long, green, smooth or scarcely ridged; internodes hollow. **Leaves:** alternate distichous, simple with sheath; prophyll with 2 winglike keels and not folded, membranous, closed ca. 1 mm, keel to 0.5 mm wide, at plant base < 6 mm long and obtuse at tip, of aboveground shoots to 20 mm long and acuminate, glabrous; sheath folded and ridged, << internode, ciliate on margins closely approaching blade, lacking lobes (auricles) at top; ligule truncate, membranous and jagged (minutely ciliate), 0.2–0.5 mm; collar often with several stiff hairs on margins; blade long-tapered linear, in range to 225 × 2–5.5 mm, the widest above base, initially flat senescing folded upward from midrib. **Inflorescence:** spikelets, in terminal and axillary paniclelike arrays, array in range to 150 mm long, with ascending to spreading branches to 60 mm long having slender axes, branches < 15 spaced along principal axis mostly alternate and 1 branch per node, spikelets paired from node with short versus longer stalk (“pedicel”), spikelet with 2 florets, the lower floret sterile and upper floret bisexual (rarely pistillate and infertile), spikelet initially ellipsoid 1.7–1.9 mm long, later spreading (“gaping”) by expansion of lower palea, bracteate, glabrous; principal axis low-ridged, smooth; branch axes with pulvinus axillary at base, branch and branchlet axes 3–4-angled and undulating (never straight), minutely scabrous along edges; short stalk of spikelet mostly 0.5 mm long, of other spikelet mostly snakelike and 1–2 mm long, scabrous. **Spikelet** not breaking above or below glumes, fruit-bearing upper floret often loosely retained within spikelet; **glumes** 2, unequal; lower glume membranous and blunt-acute, 0.8–1 mm long, 3-veined mostly not converging at tip, veins green, especially midvein raised and scabrous approaching tip; upper glume membranous, ovate, ca. 1.5 mm long, with 5 raised green veins; **lower floret lemma** cupped and somewhat hooded, to 1.6 mm long, smooth and rounded on back with 5 green veins, often aging purple-red at top; **palea** initially membranous and flattened ovate in outline, 1 × 0.4 mm, with 2 green veins folded outside and minutely ciliate along folds (keels), after flowering becoming “inflated” and stiffened, with keels 1 mm long and expanded margins 0.6 mm wide strongly cupped toward lower lemma forcing spikelet to gape; upper floret lemma tough aging harder, 1.3–1.4 mm long, opaque and minutely textured (convex cell lineages), lacking veins; palea ca. 1.1 mm long, exposed surface textured like lemma and lacking veins, hidden, overlapping margins membranous. **Flower (upper floret):** essentially cleistogamous; **perianth (lodicules)** not observed; **stamens** 2, free, included; filaments threadlike, < 1 mm long, colorless; anthers dorsifixed, dithecal, included, 0.5 mm long, purple-red, longitudinally dehiscent; pollen nearly colorless; **pistil** 1, ca. 1.5 mm long; ovary superior, ellipsoid-ovoid, ca. 0.3 mm long, light green, 1-chambered with 1 ovule; styles 2, the tip

scarcely exerted from floret tip, lower portion colorless, stigmatic upper portion bottlebrushlike and purple-red. **Fruit:** achene (caryopsis) tightly enclosed in hardened (indurate) upper floret, floret ellipsoid flattened on palea side, ca. 1.4×0.6 mm, tannish, minutely textured (convex cell lineages).

A. C. Gibson