

Vascular Plants of Williamson County
Juncus diffusissimus – SLIMPOD RUSH [Juncaceae]

Juncus diffusissimus A. Gray, SLIMPOD RUSH. Perennial herb, rhizomatous, fibrous-rooted, cespitose, several–many-stemmed at base, rarely 1-branched from cauline bud (canopy injured), ± erect, in range 25–55 cm tall; shoots with to 3 basal leaves (only 1 having a blade) and (1–)2–5 cauline leaves, blades ascending and increasing upward, the upper cauline leaf < top of the inflorescence, glabrous; rhizome shallow, horizontal and condensed, knobby, ca. 2 mm diameter enlarged at base of each emergent shoot, axillary buds of rhizome developing, internodes difficult to observe, cataphyll sheathing, ca. 3 mm long, purple-red, splitting by emergent axillary bud of new shoot; adventitious roots nodal from lower side of rhizome, covered with dense, fine, villouslike root hairs. **Stems (culms):** cylindric, 1–2 mm diameter, tough, whitish where concealed by leaf sheaths and dark green above the uppermost leaf sheath; internodes solid. **Leaves:** helically alternate, simple with sheath; sheath open, with membranous margins overlapping, of the first leaf < 12 mm long, acute at tip, tightly appressed and usually split by emergent axillary bud, of second leaf to 25 × 6 mm, some veins purple-red, of leaves with blades 40+ mm long, green and smooth, of cauline leaves < internode, rounded on back, at top each membranous margin extended as a rounded membranous lobe (auricles), in range 1–3 mm long; blade appearing cylindric long-tapered to tip (“terete”) but of cauline leaves lower portion below midpoint channeled, (5–)90–190 × 1.5–2 mm, the channel concave, bluish, and lacking stomates, channel ending below midblade, parallel-veined with veins obscure on surface but conspicuous when blade cut lengthwise, the inflated blade essentially hollow and mostly air-filled with thin, whitish, ⊥ partitions spaced mostly 5–7 mm apart (septate; also inconspicuous but visible through channel), between septa having fine, cobweblike strands of cells crossing the air chamber. **Inflorescence:** panicle of headlike clusters, terminal, open, to 130 × 160 mm, in range of 20–60+ clusters, in a cymelike array with primary rays all arising from top of culm, the ascending oldest branch in range to 135 mm long and younger ones decreasing in length and numbers of branchlets, not flat-topped, primary ray to about midpoint of branch, at the lowest node with head in range 3-flowered < 4 mm across and having several ascending to spreading unequal secondary branches, at successive nodes head of flowers with or without a continuing axis, to 5 orders of branching with a terminal head at ends of branchlets, flowers bisexual, bracteate, (all persistent in fruit), lacking hairs; bract subtending panicle (inflorescence bract subtending the longest primary ray), ascending, leaflike, < the longest cauline leaf, sheath open, to 12 mm long with auricle < 1 mm long, blade terete but channeled in lower portion, to 70 mm long; bracts subtending subsequent primary rays decreasing in length of blade and mostly lacking sheath, green; prophyll at base of each primary ray mostly concealed by bract = sheath to 15 mm long decreasing upward, the longest finely 3-lobed 1 mm long at tip, prophylls decreasing upward shorter and reduced to having only 1 tip; axes cylindric, green, finer on branchlets, heads spaced by visible internodes; head of 2–3 alternate flowers short-stalked, stalk < 0.5 mm long, bractlet subtending flower appressed to flower, ovate rounded cupping flower bud and mostly with slender point at tip, 1–2.2 × 1 mm (flattened), decreasing in head from outer to inner flower, narrow tip not sharp, tissue scarious with green midvein; lacking bracteoles. **Flower:** radial (conspicuously 3-angled), ca. 2 mm long; **perianth** of 6 segments (tepals) in 2 whorls, ± monomorphic, persistent and

firmly attached in fruit, in range acuminate-lanceolate, $1.8\text{--}2.5 \times 0.5\text{--}0.6$ mm, 1-veined, green with membranous margins aging scarious; **sepals (outer tepals)** 3, symmetrically folded along edge of ovary; **petals (inner tepals)** 3, flat on face of ovary; **stamens** 3 in whorls opposite outer tepals, free; filaments ascending, flattened front-to-back, 0.4–0.5 mm long, translucent; anthers basifixed, dithecal, in range 0.5 mm long and \geq filament, yellowish, longitudinally dehiscent; pollen yellowish; **pistil** 1, 1 mm long; ovary superior, ovoid rounded at top, $\pm 0.7 \times 0.5$ mm, green, 1-chambered with many colorless ovules; style short 3-branched, lower portion short, translucent, the stigmatic branches ascending, ca. 0.35 mm long, pinkish, papillate. **Fruit:** capsule, loculicidal, 3-valved, 1-chambered, many-seeded, conspicuously 3-angled lanceolate in outline lacking a persistent lower style (beak), in range $3.7\text{--}4.2 \times 0.7$ mm almost 2 \times tepals (clearly visible), glossy light brown with thin, flat valves obtuse and minutely papillate at top; perianth appressed to lower half of fruit with sepals folded along and appressed to angles of fruit. **Seed:** fusiform, 0.3–0.4 mm long, yellowish brown, lacking tails or wings.

A. C. Gibson