

**Vascular Plants of Williamson County**  
*Tillandsia recurvata* – BALLMOSS [Bromeliaceae]

*Tillandsia recurvata* (L.) L., BALLMOSS. Epiphytic perennial herb, common on branches of trees (esp. *Quercus*) and sometimes utility wires, clonal, formed as a gray, flexible, ball-like tangle of several–many plantlets, with principal branches becoming detached as new plantlets fibrous-rooted or not, cluster typically < 150 mm across + projecting (to 250 mm across), radiating inflorescences; shoots individually lax with to 2 basal leaves and several cauline leaves (max. 10 leaves), having CAM (“succulent”), stem to 12 mm long, foliage widely spreading and blades often recurved producing a 2-dimensional display, with an axillary branch forming potentially from any node; exposed surfaces densely covered with overlapping, reflective, scaly hairs, having a short central stalk, a skirt of colorless, scarious tissue (peltate) and 1 or more longer scarious lobes to 1 mm long, the lobes triangular to wedge-shaped (hairs involved in water absorption when scales lift permitting water to enter surface directly through the cells of the surface, therefore water absorption not exclusively via roots); adventitious roots (if present) weakly developed at base of plantlet stem, < 4 mm long. **Stems:** hidden beneath leaf sheaths, cylindric, 1 mm diameter, exposed surface peltate-scaly and unexposed surface smooth and glabrous. **Leaves:** conspicuously alternate distichous (primary shoot), simple with sheath, without stipules; sheath open, to 4.5 mm long, membranous, unexposed tissue glabrous and glossy; blade flexible, long-tapered appearing cylindric, < 1–6 × 1–1.4 mm, entire, long-acuminate at tip, venation parallel but obscure, upper surface folded together closely appressed but gapped at base when axillary shoot immerses, all surfaces (including appressed upper surface) densely peltate-scaly with overlapping lobes but having some green tissue visible around leaf sheath. **Inflorescence:** spike, terminal on long peduncle (not a scape), 1–2(–3)-flowered, at start of flowering season 1-flowered and cleistogamous later inflorescences mostly 2-flowered and chasmogamous, bracteate; bract subtending peduncle leaflike but blade generally straight and ascending-spreading (sometimes recurved), sheath to 10 mm long, blade to 35 mm long, sheath and blade covered peltate-scaly; peduncle radiating from ball-like tangle of detached shoots, slender, cylindric, to 125 × 0.6 mm, tough, green and glabrous (lacking peltate scales); bracts subtending spike 2, alternate distichous, long-overlapping and open-sheathing, before anthesis together narrowly fusiform, 13–16 × 2 mm, bracts subequal, the inner bract < outer bract, mostly 11-veined, narrowly gapped at tips, surface peltate-scaly but hairs somewhat spaced exposing green surface, the scarious skirts of hairs mostly without longer lobes; rachis short; bractlet subtending pedicel linear, 6.5–7 × 0.6–0.7 mm, thickened at base (hemi-cylindric), peltate-scaly on outer (lower) surface and on inner surface above midpoint; pedicel trapezoidal, ca. 2.5 × 1 mm wider at receptacle, green, glabrous. **Flower:** bisexual, radial, 2 mm across (cleistogamous flower) and to 3 mm across (chasmogamous flower); **sepals** 3, hidden within bracts, acute-ovate (flattened) but inrolled and appearing lanceolate, 6–8 × 2.5–3 mm, 7-veined at base, greenish with wide membranous margins below midpoint, above midpoint mostly colorless with minute rose-red to purple-red specks; **petals** 3, elliptic-oblongate, ca. 7.5–9.5 × 2 mm, faintly 5-veined at base, lower portion rectangular, ca. 1 mm wide, clear to yellowish with opaque crystal aggregates in some cells, middle portion narrow and pinkish, the 3 petals pressed together (cleistogamous flower) or exerted portion widely spreading, ovate, light violet (chasmogamous flower) or pink and each petal

with to 5 circular, rose spots (cleistogamous flower); **stamens** 6, included, essentially free arising from a narrow ring around base of ovary; filaments erect, opposite the furrows of the ovary, equal, to 5 mm long, lower portion 1 mm narrowly triangular and upper portion threadlike, colorless to midpoint and somewhat orange above midpoint; anthers dorsifixed near base, dithecal, 1–1.2 mm long (chasmogamous flower) and pale orange and 0.7–0.8 mm long and somewhat yellow-orange (cleistogamous flower), longitudinally dehiscent; pollen orange; **nectary** absent; **pistil** 1; ovary superior, broadly oblanceoloid, 1.2 mm wide, green, glabrous, 3-chambered, each chamber with to 12 ovules attached at base, the ovules ca. 1.5 mm long, white, the lower portion oblanceolate (future seed) with a shorter upper portion (appendage); style stout, ca. 0.4 mm long with erect 3-lobed, 3-sided stigma 0.6 mm long. **Fruit:** capsule, loculicidal, 3-valved, naby-seeded, before dehiscent  $\pm$  cylindrical somewhat 3-sided, straight to slightly curved, 16–30  $\times$  1.7–2 mm, light golden brown, with white stalk at base. **Seed:** with terminal hairs, mostly fusiform, 2–2.5  $\times$  0.3–0.5 mm, light brown; terminal hairs 20+, ca. 12 mm long, white.

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