

Tillandsia usneoides (L.) L., SPANISH MOSS, OLD MAN'S BEARD. Epiphytic perennial herb, clonal, pendent, threadlike, rootless (root only on seedling), lax, unequally forked at each node commonly with 1 ± unexpanded, several-leaved shoot (≈ short shoot) and the other shoot growing to continue a long axis, long axes loose stringlike and tortuous with partial loops; shoots gray, photosynthetic, densely and uniformly covered with scales, the scales unevenly peltate with 1 ascending, radiating, scarious lobe, the scale center aging brown, the scale lobe acute, to 0.4 mm long, colorless, minutely toothed and aging irregularly cut. **Stems:** cylindric, 1 mm diameter, ± wiry; in ×-section stems with 1 or 2 cores of vascular tissue, the cores elliptic-oblong, ± 0.25 mm diameter, reddish. **Leaves:** alternate distichous, simple with sheath; sheaths closed, = internode; blade cylindric or hemicylindric to threadlike and channeled above, linear, 15–70 × 0.6–1 mm (excluding scale lobes), flexible, entire, acute at tip, parallel-veined (venation obscure) with 3 veins. **Inflorescence:** solitary, terminal on short lateral shoot with 2 spreading leaflike bracts, densely covered with scales; peduncle 16–25 mm long; bracts alternate distichous, spreading, overlapping, leaflike with closed sheaths, lower bract with a blade 15–32 mm + sheath 4–5 mm long, upper bract with a blade 9–17 mm + sheath 3–3.5 mm long, persistent; bractlet ca. 1 mm below flower, = an open sheath, appressed to flower and in fruit, membranous, broadly obovate, 5 × 3.5 mm + a slender, scale-covered tip, greenish or exposed surfaces purplish, tip 0.8–1.4 mm long, 5-veined, persistent. **Flower:** bisexual, radial, ± 6 mm across; **sepals** 3, appressed, subequal, narrowly lanceolate to oblong-elliptic, 6–7.2 × 1.5–2.2 mm, greenish below changing to membranous pinkish purple at tip with tiny purple flecks, acute at tip, 3–5-veined with the 3 central veins continuous to tip, having several scattered scales on exposed surface, elongating with fruit becoming papery and persistent (= fruit length); **petals** 3, 9–10.5 mm long, to midpoint pale green, above midpoint spreading, oblanceolate, 1.3–2.1 mm wide, green; **stamens** 6 in 2 whorls, free, included; filaments slender and flattened front-to-back, 4.7–6 × 0.15 mm, white, 1-veined; anthers basifixed, dithecal, 0.9–1.1 mm long, orange-yellow, longitudinally dehiscent; pollen orange-yellow; **pistil** 1, 3–3.5 mm long; ovary superior, 3-lobed obovate, 1.5–1.8 × 1.2 mm, green, 3-chambered, each chamber with 5–7 elongate ovules; style = ovary, light green, asymmetrically 2-branched or 3-branched from midpoint, the branches erect; stigmas pale green, papillate. **Fruit:** capsule, septicidal, dehiscent by twisting of 3 valves, many-seeded, cylindric, 22–28 mm long, the valves dull on outer surface and glossy dark brown with golden edges on inner surface. **Seed:** not observed in range, on stalk; narrowly lanceoloid to fusiform, 2–3 × 0.4–0.5 mm, light golden brown; stalk slender, 7–10 × < 0.1 mm, white, bearing numerous capillary hairs from a thicker, golden brown base, the hairs white, 10–12.5 mm long. Summer.

Waif. A distinctive, pendent epiphyte native to humid southeastern states, recently discovered by Dan Cooper temporarily growing in numerous tree species in Franklin Canyon (SMM). *Tillandsia usneoides* is used in the motion picture industry for sets, and when not totally removed can persist, and then the shoots would be collected by birds to be used as nesting material. Spanish moss dries out exceedingly slowly and clones easily from pieces of shoots, so that once introduced to an aerial habitat, e.g., a tree branch or telephone wire, it can survive, and also can be spread via strong winds. This is one of only a few vascular plant species that lack roots; water is taken up directly through the leaf

blades and sheaths beneath the scales, and Spanish moss can also take up water vapor from the atmosphere, and so is known as an air plant. The flower of this bromeliad is green but small, produced on side shoots. A fully developed, dehiscent capsule was collected in range, but it is not known whether that fruit was already present on the introduced specimens or resulted from in range reproduction.

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