

Vascular Plants of Williamson County
Yucca rupicola – TWISTED-LEAF YUCCA [Agavaceae]

Yucca rupicola Scheele, TWISTED-LEAF YUCCA. Perennial herb, evergreen, clonal, rhizomatous, fibrous-rooted, ± hemispheric-rosetted, each clump with 2–15+ rosettes and during flowering and fruiting having 1–9+ inflorescences, inflorescence stalks mostly 130–300 cm tall; shoots with stem (peduncle) to 1500 mm long to the lowest lateral branch of inflorescence; shoots with fibrous, swordlike, flexible, spine-tipped leaves, initially with only many basal leaves but upper internodes eventually elongating to become the lower portion of an inflorescence with to 15 cauline leaves, only some of rosettes flowering per spring in each clone, those shoots dying after fruits dehisce, glabrous; rhizomes between plantlets horizontal 25+ mm from soil surface. **Stems (peduncles):** 1 per rosette, initially hidden beneath leaf bases with no visible internodes, ± cylindrical, tough, internodes between cauline leaves to 240 mm long, typically > 15 mm diameter at the lowest internodes. **Leaves:** helically alternate, simple, sessile and leaf base > 360° encircling stem (basal leaves) but of cauline leaves base not fully encircling, without stipules; blade linear, of basal leaves 300–700 × 17–35 mm, of cauline leaves acuminate-lanceolate and to 300 × 34 mm decreasing upward, at leaf base 25+ mm white to whitish, not watery succulent, the widest at midblade and tapering very gradually to tip with sharp point, leaf base densely fibrous in ×-section and persistent, midblade crescent-shaped in ×-section, minutely toothed on margins, often orange to reddish brown (especially above midblade), parallel-veined, green, not glaucous, minutely scabrous. **Inflorescence:** panicle terminal, with 10–25 helically alternate, spreading to ascending lateral branches (terminal axis erect), lanceoloid in outline, to 1500 mm long, many-flowered, branches mostly = racemes, the longest branches sometimes with a secondary branch having several flowers, lateral branches with axis to 270 mm long and to 10 flowers, flowers drooping to pendent on arched pedicels, bracteate, glabrous; rachis with low, broad ridges; bract subtending lateral branch ascending, like the uppermost cauline leaf decreasing upward; bractlets at base of pedicel 2, ascending, lower one oblong, 14–16 × 7 mm, parallel-veined, papery, bractlet subtending pedicel acuminate-lanceolate, ca. 8 × 4 mm, early-deciduous; pedicel cylindrical, at anthesis to 16 × 2 mm increasing in fruit, tough and persistent, not pulvinuslike beneath flower, with circular constriction at top of pedicel. **Flower:** bisexual, radial, at anthesis 35 mm across eventually spreading and 50–60 mm across; **tepals** 6 in 2 whorls, free to base and firmly attached, initially broadly ellipsoid but later bell-shaped aging cup-shaped; tepals ± monomorphic, glabrous, elliptic or broadly elliptic to obovate, 40–52 × 20–33 mm (outer tepals) and 37–61 × 20–35 mm (inner tepals), somewhat fleshy, white to greenish (parallel veins), tips of outer tepals solid 1–2 mm, inner tepals somewhat cupped, corolla persistent beneath developing fruit; **stamens** 6, free, < pistil; filaments ascending, ca. 26 mm long but about 20 mm from base bent sharply outward and spreading and later deflexed (bent filament club-shaped), thick and fleshy, compressed front-to-back, white, conspicuously papillate; anthers versatile, dithecal, 3.5–4 mm long, white, lacking a tuft of wavy white hairs at tip, longitudinally dehiscent before tepals spread; pollen white; **nectary** tissue producing nectar at base of ovary; **pistil** 1, 35–40 mm long; ovary superior, erect, pillarlike and 6-lobed, to 20 × 5–7 mm, green, 3-chambered, each chamber with ± 50 ovules in 2 rows attached to center; styles 3 fused to tip and gradually tapered, cream-

colored aging pale green, glabrous and not papillate; stigma lobes 6, whitish and papillate, having erect papillae < 1 mm long. **Fruit:** capsule, loculicidal, 6-lobed, splitting from tip 2/3 to base when still green thereby spreading slightly to reveal 6 stacks of seeds in 3 chambers; when still green ellipsoid to oblong with pyramidal beak (fused styles), 45–70 × 18–25 mm, hard, with 6 conspicuous grooves and tip with 3 grooves; when dehiscent spreading to upright, dark brown or charcoal brown aging dark gray on dead stalks and valves with torn margins. **Seed:** obovate in outline and flat, ca. 7 × 5.5–6 × 0.8 mm, satiny black, broad faces parallel with short rim around edge, short-truncate at hilum.

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