

Vascular Plants of Williamson County

Yucca arkansana – ARKANSAS YUCCA, SOAPWEED [Agavaceae]

Yucca arkansana Trelease, ARKANSAS YUCCA, SOAPWEED. Perennial herb, clonal (limited), evergreen, usually not spinescent, with caudex, rhizomatous, fibrous-rooted, \pm hemispheric-rosetted, usually 1-stemmed at base, in range with inflorescence to 110 cm tall; shoot with flexible 30+ basal leaves and cauline leaves (during spring growth upper internodes between basal leaves eventually elongating to become the lower portion of an inflorescence), glabrate; rhizome \pm upright and lobed, ca. 7 mm diameter, white later forming peridermlike cover; fibrous roots along upright portion of rhizome. **Stem (peduncle):** hidden by rosette of basal leaves, 6–12 mm diameter, lower portion with no visible internodes. **Leaves:** helically alternate, simple and sessile, without stipules; blade ascending, strap-shaped, in range $< 230\text{--}500 \times (6\text{--})9\text{--}13$ mm, the widest near midblade and gradually tapered to tip, tough, dull green, flaring at base, entire and initially with short hairs, aging with margin separating as slender fibers < 50 mm long (filiferous) grayish and peeling, prow-shaped at tip, parallel-veined converging at tip but veins not conspicuously raised, upper surface shallowly concave, lower surface convex and sparsely short-hairy. **Inflorescence:** in range raceme, to 50-flowered, flowers pendent, bracteate, glabrous; peduncle (stem) \pm cylindric, in range to 11 mm diameter above basal leaves, solid and fibrous aging woodlike; bracts along peduncle (cauline leaves) to midpoint, leaflike, to 97 mm long decreasing upward, sheathing at base, entire, long-tapered to fine tip, each with axillary bud; rachis ridged, each ridge descending from bract; bract and bractlet subtending pedicel triangular, the outer $11\text{--}13\text{--}(38) \times 6$ mm, $>$ pedicel, with many parallel veins, with persistent thickened base and aging scarious, the bractlet acuminate-triangular, mostly $8\text{--}9 \times 3$ mm, at anthesis $>$ pedicel, $<$ bract and oriented 90° from bract, scarious; pedicel cylindric, to 7 mm long, yellow-green, with constriction for abscission at top. **Flower:** bisexual, radial, ca. 30 mm across; **tepals** 6 in 2 whorls, \pm monomorphic, white with parallel green veins, of outer whorl obovate, in range $34\text{--}35 \times 16\text{--}18$ mm, midrib approaching tip forming crest of vesicular cells, somewhat prow-shaped at tip having colorless, club-shaped hairs; of inner whorl ovate, $34\text{--}37 \times 18\text{--}22$ mm, slightly wider than outer tepals; **stamens** 6 in 1 whorl, free; filaments appressed to ovary, narrowly club-shaped, at anthesis $14\text{--}17 \times 3\text{--}3.7$ mm ($1.5\text{--}1.8$ mm wide at base), white at base to greenish white approaching slender top, conspicuously papillate; anthers dorsifixed-versatile, dithecal, arrow-shaped, 3.6–4 mm long, ivory-colored, longitudinally dehiscent; pollen white; **pistil** 1, \pm same height as stamens; ovary superior, low 6-lobed, $\pm 15 \times 6$ mm, cream-colored, glabrous, 3-chambered, each chamber with 2 stacks of many ovules; style 3-lobed, 4 mm long, with constriction below lobes, the stigmatic portion 3-sided, with fleshy lobes $2 \times 2.6\text{--}2.8$ mm and channeled but not to tip. **Fruit:** capsule, septicidal, 3-valved, splitting from tip downward < 20 mm thereby spreading to reveal 6 stacks of seeds (sometimes most aborted or damaged by predator), erect, when still green 36–58 mm long, length \pm = width with short point (style), hard, plump, dark gray or charcoal brown aging dark gray, valves conspicuously veined with cross, parallel fibers; pedicel in fruit < 30 mm long. **Seed:** \pm D-shaped in outline and strongly flattened, $9\text{--}11 \times 8\text{--}10$ mm, black.

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