

Vascular Plants of Williamson County

Solanum rostratum – BUFFALO BERRY, BUFFALO BUR, KANSAS THISTLE [Solanaceae]

Solanum rostratum Dunal, BUFFALO BERRY, BUFFALO BUR, KANSAS THISTLE. Annual, spinescent, taprooted, 1-stemmed at base, repeatedly forked, ascending, in range to 60 cm tall; shoots with only bright green cauline leaves, bearing radiating, straight, spinelike prickles on all parts, with stellate hairs \pm evenly spaced, the hairs short-stalked to sessile, colorless, having 3–8 arms (rays) radiating above the stalk with the central ray erect, not ill-smelling or sticky. **Stems:** cylindric at base or ridged, to 10 mm diameter, with 2 conspicuous ridges descending from each leaf, moderately to densely covered with rigid, pale pink to yellowish prickles 2–9 mm long, old stems often spotted where prickles age purple at their bases; solid, pith colorless. **Leaves:** helically alternate, deeply 1–2-pinnately lobed with principal lobes 2–4 per side paired or not, when paired equal or not, petiolate, without stipules; petiole with several low ridges, 15–110 mm long, densely short-stalked glandular and with widely scattered prickles; blade narrowly ovate to oblong or broadly elliptic in outline, 30–160 \times 20–90 mm, lobes \pm obovate to roundish with rounded sublobes and sinuses and rounded at tips, pinnately veined with principal veins raised on lower surface, lower surface with occasional prickles along principal veins. **Inflorescence:** racemelike cyme, typically 7–12-flowered, coiled as forming, arising near midpoint of internodes opposite the bases of descending ridges, flowers spreading, lacking bracts; axes spinescent with prickles, stellate hairs, and short-stalked glandular hairs; pedicel at anthesis ascending and 8–10 mm long becoming spreading and to 13 mm long in fruit. **Flower:** bisexual, radial, 20–30 mm across; **calyx** 5-lobed, 4–5 mm long, green, stellate-pubescent, with capitate-glandular heads even on developing prickles; tube hemispheric, 1.5–2.5 mm long, covered with numerous straw-colored prickles 0.5–3 mm long, enlarging and enveloping immature fruit; lobes unequal, lanceolate, in range 3–7.5 mm long aging broader and spreading; **corolla** 5-lobed, when spreading 10–15 mm across, cymbal-shaped (rotate) and star-shaped, bright yellow; throat broadly flaring, commonly glossy green on inside at base, reinforced with 5 midveins (spokes), the midveins greenish yellow and broad at base changing to yellow and tapered to tip, glabrous in upper surface, lower (outer) surface stellate and short-glandular hairy; lobes spreading, wide-triangular, with \pm tail-like point at rounded tip, shallowly notched between lobes; **stamens** 5, fused to base of corolla, alternate with corolla lobes, unequal by having 1 long stamen; filaments erect, 2.5–3.5 mm long and ca. 0.5 mm wide at top (short stamens) and 3–4 mm long and ca. 1 mm wide at top (long stamen), yellow or glossy green, glabrous; anthers dorsifixed, dithecal, each sac narrowly lanceoloid, rounded at base, of short stamens anthers straight to slightly arched or very slightly S-shaped, 6–9 \times 1.2–1.5 mm, yellow to dull yellow, of the long stamen anther \pm S-shaped with 2 prominent bends, 9–14 \times 2.3–3 mm, yellow at base to reddish purple or purplish approaching tip, dehiscing by a terminal pore; pollen pale yellow; **pistil** 1, with stigma at level of the long anther; ovary superior, initially conic or \pm hemispheric, 1–1.5 mm long, green, glabrous, 1-chambered (at least in fruit) with many ovules attached to center; style bent sharply at base and hooked at tip, 12–15 mm long, light green to light greenish yellow, with colorless glandular hairs scattered along length; stigma exerted, small, green. **Fruit:** berry, fleshy, spinescent because enclosed by expanded calyx tube covered with prickles, ca. 25 mm across; fruit body to 40-seeded,

spheric, 7–12 mm; pulp watery yellow; calyx tube with stellate hairs and descending ridges from prickles, the prickles to 11 mm long, straw-colored. **Seed:** D-shaped (side view) and wedge-shaped (edge view), 2.5–3.5 × 2–2.5 × 1.3–1.5 mm, finely netlike and multi-faceted with well-defined depressions on each face, brown at tip and grading to lighter brown toward hilum and base; hilum along the thinnest edge.

A. C. Gibson & B. A. Prigge