

Vascular Plants of Williamson County

Nolina texana – SACAHUISTA, TEXAS BEARGRASS, BUNCHGRASS
[Asparagaceae/Ruscaceae; not Agavaceae]

Nolina texana S. Watson, SACAHUISTA, TEXAS BEARGRASS, BUNCHGRASS. Perennial herb, evergreen, sclerophyllous, with large caudex, fibrous-rooted, acaulous, rosetted many basal rosettes on caudex repeatedly branched at ground level, new rosettes, plant leaves forming dense, hemispheroid canopy in range to 100 cm tall, having inflorescences mostly partially concealed within rosette at least initially hidden by leaves; dioecious; large plant with hundreds of long, extremely tough fibrous, flexuous, and somewhat twisted basal leaves, foliage glabrous, not glaucous, and mostly not scabrous. **Stems (peduncles):** many-ridged, of lateral axes 5+ mm diameter, whitish (hidden by leaves), fibrous. **Leaves:** helically alternate, simple without sheath but with expanded base; blade of rosette leaves ascending, linear above triangular base, in range 550–1400 mm long, leaf bases 20+ mm wide, triangular and 1/2-sheathing stem, to 70 mm long, mostly white, ± thick, lower surface smooth; photosynthetic blade lower portion hemi-cylindric, from 6 × 3 mm, above midblade with to 6 low ridges on upper surface transitioning to 3-sided and above that flat approaching tip, essentially smooth or with teeth along edges minute and remote, widely spaced, and scarcely noticed, the tip soon dead, gray, and easily broken but not sharp, drying from tip backward, parallel-veined and throughout mesophyll (scattered bundles). **Inflorescence:** panicle, axillary at 1–3 nodes on lower half of canopy, at flowering nested within leaves, each panicle with 1000+ flowers, primary lateral branches many and alternate, of pistillate inflorescence often with 30+ nodes at anthesis and having internodes < 20 mm long and primary branches with flowers in dense clusters near axil, of staminate inflorescence mostly having < 15 nodes at anthesis and internodes 20–35 mm long and not as thick, of primary lateral branches initially condensed (pistillate) or ascending and elongated to 90 mm long (staminate), bracteate, glabrous; bract subtending each lateral branch conspicuous, fibrous, leaflike (pistillate) from 350 mm long and green at base of panicle (glaucous on upper surface) decreasing upward and mostly scarlet to crimson at top of panicle, linear and whiskerlike (staminate) mostly straw-colored; flowers formed in dense, subspheroid glomerules having smaller clusters of flowers forming the ball, short pedicels, and cymelike buds on ultimate branchlets; bracts of glomerule decreasing to clusters, mostly colorless aging scarious, the largest acuminate-ovate and sheathing at base, the upper ones = bud and fringed with several slender teeth to 1 mm long on margins (lacerate) and cupped to bud; bud before anthesis often lopsided and showing red pigments; pedicel initially to 1.5 mm long, jointed below midpoint (= future abscission zone). **Functionally staminate flower:** appearing bisexual but pistil sterile, radial, ca. 5 mm across, more lightly scented than pistillate inflorescence; **tepals** 6 in 2 whorls, corolla dish-shaped, tepals ± free, ± monomorphic, somewhat cupped broadly elliptic to slightly obovate, 3.2–3.5 mm long and 2 mm wide, white with raised midvein on lower side or aging keeled and yellow-green along center line at anthesis often blushed purplish, upper portion somewhat rolled over anther and acute and glandular-papillate at tip (tips coherent in bud); **stamens** 6, opposite tepals and fused at each tepal base, fertile; filaments ascending, tapered base-to-tip, 1.4–1.8 mm long, white, flattened front-to-back; anthers ± versatile, dithecal, monomorphic, (1–)1.4–1.6 mm long, pale yellow to cream-colored, longitudinally dehiscent; pollen light yellow; **nectary** nectar-producing along septa at base,

producing copious nectar; **pistil** 1, sterile; ovary superior, 3-lobed (6-angled) low-ovoid, 0.7–0.8 mm across, greenish, 3-chambered but with vestigial ovules; stigmas 3, fingerlike, 0.25–0.4 mm long, whitish, lacking papillate. **Functionally pistillate flower:** appearing bisexual but having sterile, reduced anthers, radial, 4–5 mm across, strongly scented (*Castanea*-like); **tepals** 6 in 2 whorls, corolla dish-shaped, tepals \pm free, monomorphic, broadly elliptic to slightly obovate, 2.5–3 mm long and 2 mm wide (outer tepals) and 1.3–1.4 mm wide (inner sepals), white with raised midvein on lower side at anthesis often speckled red to rose-red, mostly acute and glandular-papillate at tip; **stamens** 6, opposite tepals and fused to tepals near bases, with sterile anthers; filaments erect, free portion $<$ 1 mm long, whitish; anthers dorsifixed, dithecal, 0.7–0.9 mm long, initially sacs of anther whitish or yellowish at anthesis translucent to faintly pigmented; pollen absent; **pistil** 1, ca. 1 mm long; ovary superior, conspicuously 3-lobed, \pm 0.7 \times 1 mm, pale green, depressed in center, 3-chambered, each chamber with 2 ovules attached to center; **nectary** nectar-producing along septa at base, producing copious nectar; styles 3, arising and ascending in central depression short club-shaped, ca. 0.4 mm long, white, conspicuously papillate and positioned at level of anthers. **Fruit:** utriclelike (“capsule”), strongly 3-lobed, papery rupturing irregularly or also along midline due to seed enlargement, (1–)2–4(–5)-seeded and at maturity naked seeds conspicuous, ca. 4 \times 5–7 mm across, before rupturing papery walls often blotched purple-red; perianth of 6 tepals appressed to underside of fruit, 2.5–3 mm long, initially keeled and green with scarious margins; pedicel ca. 6 mm long, swollen (jointed) with abscission zone ca. 2 mm from base, lower pedicel cylindrical, upper pedicel 3-ridged. **Seed:** spheric to spheroid, 2.4–3.7 mm diameter, initially green aging dark brown, lacking surface texture or ridges.

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