

Vascular Plants of Williamson County

Coryphantha sulcata – PINEAPPLE CACTUS, FINGER CACTUS, NIPPLE CACTUS [Cactaceae]

Coryphantha sulcata (Engelm.) Britt. & Rose (if recognized, var. *sulcata*), PINEAPPLE CACTUS, FINGER CACTUS, NIPPLE CACTUS. Stem succulent perennial, spinescent, taprooted, 1–several-stemmed at base, mostly cespitose with several shoots of different sizes tightly clustered and partially buried, in range each flowering shoots 40–90 mm long and wide; shoot = stem + leaf tissues having sharp-tipped, hard spines (modified leaves, leaf spines), in outline plant body spheroid to broadly ellipsoid, bearing clusters of radiating leaf spines (areoles) on succulent, raised leaf bases (tubercles), photosynthetic leaves absent and vestigial structure obscure, tubercles helically alternate and tightly crowded (no visible internodes), the tubercle conic, 9–20 × 10–11 mm, dark bluish green, with fine groove on upper side from edge of spine-bearing areole to axil, in axil an apical meristem hidden under a dense tuft of long white hairs; areole with 10–18, helically alternate, permanent, hard spines, spines mostly 9–12 mm long, central spines 1–3, generally projecting and gently curved (porrect), the radial spines straight, < central spines, mostly spreading to widely spreading; areole with hairs and lacking glochids (short, barbed easily abscised leaf spines). **Inflorescence:** flower, 1–several on top of plant appearing terminal, each flower arising from a fertile meristem at a tubercle base, fertile meristem covered with dense mat of white hairs ca. 5 mm long, ovary hidden beneath spines of neighboring tubercles. **Flower:** bisexual, radial, 65–70 mm across (fully spreading), ca. 55 mm long; **perianth** of ca. 40 segments; segments free, helically alternate, overlapping, unequal in a graded series, the outermost segment triangular and ca. 3 × 1.5 mm, fleshy and green, mucilaginous, increasing in series to triangular and ca. 11 × 3.5 mm with narrow membranous margins, to lanceolate or oblong with thick green axis and thinner yellowish margins, series of inner segments 25–30, spreading, oblanceolate, 32–38 × 6.8–8 mm, translucent yellow without sharp midstripe, in range not reddish at base, somewhat jagged approaching acuminate tip; **stamens** 200+, helically alternate, free, formed on a steeply sloped axis ca. 9 mm long, axis persistent and green on mature fruit; filaments surrounding style and curved forming a dense, truncate mass of anthers in center of flower, linear, 9.5–10 mm long (the outermost stamens) to 16 mm long (the innermost stamens), but not in obvious graded series, of the outermost stamens rose-red above midpoint strongly curved inward and paler below midpoint, of the innermost stamens white; anthers dorsifixed, dithecal, 0.8–1 mm long, pale light yellow, longitudinally dehiscent; pollen pale yellow; **pistil** 1; ovary inferior and embedded in receptacle (stem tissue), concealed beneath spines of neighboring tubercles, obovoid, at anthesis ca. 10 × 7 mm, white at base to green above midpoint, lacking tubercles, areoles, and spines on surface, with domed cells on outer surface, 1-chambered with many ovules arranged in many vertical files, wall ca. 2 mm thick, green, and mucilaginous (narrowly white next to ovules); style 1, erect, ca. 27 mm long, with 7(–10) stigmatic lobes at top, lower portion ca. 22 mm long, white at base to yellowish above, glabrous; **nectary chamber** on top of ovary, = decurrent bases of filaments, with copious nectar, ca. 1 mm deep; stigmatic lobes elevated 10 mm above anthers, pseudowhorled, ascending-spreading, fingerlike, 4.3–5.4 mm long, pale greenish light yellow, densely papillate. **Fruit:** berry, indehiscent, 400+-seeded, consisting of the seed-bearing chamber above that the axis bearing stamens and nectar chamber and above that the collapsed, dried,

tightly persistent perianth; seed-bearing chamber ovoid, mostly 15–19 × 11–14 mm, green, often with an inconspicuous bract near top; axis containing nectar chamber barrel-shaped, 8–9 × 10 × 8 mm; pulp mucilaginous, sticky, and viscous, yellowish. **Seed:** somewhat ellipsoid with indented lateral hilum near end, 1.8–2.1 × 11–14 mm, glossy brown-red, surfaces smooth or essentially so; tissue on hilum (strophiole) slightly protruding.

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