

Vascular Plants of Williamson County

Opuntia humifusa var. *humifusa* – EASTERN PRICKLYPEAR [Cactaceae]

Opuntia humifusa (Raf.) Raf. var. *humifusa*, EASTERN PRICKLYPEAR. Stem succulent subshrub (clonal, not observed in range), taprooted and fibrous-rooted, not rosetted, several-stemmed at base, green-stemmed (photosynthetic), with procumbent principal branches from near base, in range to 35 cm tall; shoot = a series of flattened stem segments (cladodes, also called pads or joints), narrowly constricted between segments, cladodes mostly ascending, not breaking apart and most branches persistent, in range lacking clusters of radiating leaf spines at nodes on the stem surface (areoles), areoles dense tuft of hairs, on surface 25–30 mm apart and in diagonal rows of 4–6, tomentum to 2 mm tall, the hairs whitish aging beige before drying. **Stems (cladodes):** obovate to rhombate in outline, < 150–210 × 100–160 mm, initially bright green aging duller and not glaucous, typically ca. 6 mm thick at midpoint, with helically arranged tubercles (= modified leaf bases) and associated areoles with short and extremely fine, irritating spines; flesh (cortex and pith) watery and mucilaginous; areoles circular aging elliptic (if many glochids produced), 3–3.5 mm across. **Leaves:** helically alternate, simple, sessile, without stipules, dimorphic; photosynthetic cauline leaves short-lived on newly emerging shoots, spreading to ascending and slightly arched toward cladode, lanceoloid, (5–)7.5–10 × ± 1.8 mm, fleshy, green, glabrous, with minute point at tip abscising during shoot expansion; leaf spines on areoles (= modified leaves) mostly of 1 type, deciduous glochids, not photosynthetic, barbed at tip, irritating in skin, formed in a dense, erect, crescent-shaped cluster on upper areole (adaxial), in range 1.5–4.5 mm long, yellowish, permanent spines absent or inconspicuous, when present on areole 1–3 produced on lower side (abaxial) separate from adaxial cluster of yellowish glochids, typically to 5 mm long, white. **Inflorescence:** flowers solitary (areole dies after flowering), sessile, on areoles along edge of cladode above midpoint, ovary covered with stem tissue = having tubercles and glochids initially with the short-lived lanceoloid leaf. **Flower:** bisexual, radial, with perianth widely spreading, 60–70 mm across; **perianth** of ca. 25 segments, segments free, helically arranged, overlapping, unequal in a graded series, the outermost 3 series short and green (sepal-like), succulent, hemi-ovoid grading to flatter and ovate, 5–20 × 2.5–8 mm, intermediate segments obovate 25–29 mm long with greenish central portion and yellowish margins, showy inner 8–9 segments in 2 series obovate to ± fan-shaped and light yellow (petal-like), 30–34 × 20–26 mm, tips sometimes red, limbs without red pigment, outer margin of inner segments somewhat jagged, perianth abscising as a unit with stamens from developing fruit top; **stamens** ca. 200, free, formed on a shallowly sloped axis ca. 4.5 mm long; filaments unequal, erect and the shortest at center to widely spreading and the longest at top, 6–17 mm long, white at center to mostly greenish; anthers dorsifixed, dithecal, 2–2.3 mm long, whitish; pollen ± cream-colored; **pistil** 1; ovary inferior and embedded in receptacle (stem tissue), inversely narrowly pyramidal, at anthesis ca. 25 × 12.5 mm, green and somewhat glaucous, with ca. 13 low, helically alternate tubercles and 2 series around rim, initially bearing ephemeral lanceoloid leaves like stems, areoles ± round and raised, with beige hairs and less than 10 glochids lacking permanent spines, 1-chambered with < 70 ovules attached to ovary wall, the chamber below midpoint, oblanceolate, ca. 7 × 2.5 mm, ovary wall 2 mm thick with outer green portion mucilaginous; style inversely club-

shaped, ca. 25×4.5 mm, white, glabrous; **nectary chamber** on top of ovary, = decurrent bases of filaments, to 3 mm long, green, producing nectar; stigmas 5, together ovoid, 5×3.5 mm, pale green, exserted above anthers, papillate. **Fruit:** berry, many-seeded, narrowly top-shaped to carrot-shaped shallowly depressed at top, in range $40\text{--}43 \times 12\text{--}16$ mm, with ca. 13 areoles + 5+ around rim, areole with glochids but no spines; wall 2 mm thick, mucilaginous; chamber ca. 23 mm long. **Seed:** \pm roundish in outline, ca. 4 mm across, bony, tan, encircling girdle protruding ca. 1 mm.

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