

Vascular Plants of Williamson County

Triodanis coloradoensis (Buckl.) McVaugh – COLORADO VENUS' LOOKING-GLASS, TEXAS
VENUS' LOOKING-GLASS [Campanulaceae]

Triodanis coloradoensis (Buckl.) McVaugh, COLORADO VENUS' LOOKING-GLASS, TEXAS
VENUS' LOOKING-GLASS. Annual, taprooted, initially rosetted later elongating at nodes,
typically 1-stemmed at base, ± erect, 15–75 cm tall; shoots initially with basal leaves later
becoming cauline leaves; latex cloudy. **Stems:** 3(–4)-ridged, to 2 mm diameter, with 2
colorless to pinkish to red-purple ridges descending from each leaf, tough, with hirsute
hairs to 0.8 mm long especially along ridges, above basal leaves with recurved teeth along
ridges. **Leaves:** helically alternate, simple, appearing petiolate, without stipules; petiole
channeled to flat on upper side, to 20 mm long, veins strongly raised on lower surface, with
colorless vein and green sides aging orangish, somewhat wider approaching blade; blade
ovate to broadly lanceolate and lanceolate-linear or elliptic, to 50 × 15 mm, tapered to
long-tapered (petiolelike) at base, ± low-crenate with several broad, blunt, low teeth on
margins (whitish callous) next to sinuses, obtuse to acute with hard point at tip, pinnately
veined with 3 or 5 veins at base with only midrib raised on lower surface, both surfaces
with scattered hairs mostly along veins, with minute teeth and hairs on edges and veins on
lower surface, upper surface dull and short-hairy. **Inflorescence:** spikelike, leafy,
terminal, at lower nodes forming axillary, solitary, sessile to subsessile cleistogamous
flowers and above midpoint forming axillary 1–3-flowered cyme of short-stalked
chasmogamous flowers, bracteate; bractlet subtending cleistogamous flower leaflike,
narrowly lanceolate, > flower, bract subtending peduncle of cyme narrowly lanceolate to
linear-lanceolate, to 15 × 3 mm, cupped around lower side of peduncle; peduncle several-
ridged, < 1–3 mm long, green to red-purple, at top having a subopposite pair of bractlets
(bracteoles), the upper subtending the second flower and the lower subtending the third
flower if produced, entire or with several minute purplish teeth on margins and point at tip.
Cleistogamous flower: bisexual, radial, in bud ca. 5 mm across (calyx); **calyx** 4–5-lobed
fused only at base forming rim around base of ovary, green; tube flared, < 0.5 mm long,
ridged; lobes widely spreading but at anthesis erect, acuminate-linear, unequal, 8–11+ × 1
mm, 1-veined raised on lower surface, minutely toothed and scabrous on margins, surfaces
lacking hairs, with 2–3 minute conic at each sinus (of also on adjacent margins); **corolla**
diminutive, ± club-shaped as a sack, ca. 1 mm long, whitish; **stamens** 4–5, free; filaments
to 0.4 mm long, colorless; anthers adherent to style, ± basifixed, dithecal, 0.8 mm long,
whitish, longitudinally dehiscent; pollen white; nectary absent; **pistil** 1; ovary inferior, ±
obovate with 3 deeply sunken faces (future valves) alternating with raised ridge, 4–6
× to 2.5 mm, with minute hairs, 3-chambered, each chamber with 10+ ovules; style ca. 1
mm long, papillate at tip. **Chasmogamous flower:** bisexual, radial, 20–24 mm across
(spreading calyx or corolla); **calyx** 5(–6)-lobed fused only at base, green; tube flared, < 0.5
mm long, ridged; lobes widely spreading, long-acuminate, 9–13 × 1–1.3 mm, 1-veined
with raised midvein, entire or with several minute, ovoid teeth on margins at sinuses;
corolla 5-lobed, ± = calyx, star-shaped, blue-violet to light violet, to 13 mm long,
conspicuously pleated in bud; tube-throat ± bell-shaped, 2.5–4 mm long and mostly white,
ca. 5 mm wide and pale violet at orifice, 15-veined with 5 ridged to lobes; lobes narrowly
ovate to obtuse-obovate, 7–10 × 3–5 mm, blue-violet to light violet on upper surface and

paler and midvein raised on lower surface; **stamens** 5, free; filaments cylindric at base to flattened front-to-back on upper portion, 1–2 mm long, white, tapered to top, lower portion wide and arched to center concealing base of ovary and nectary chamber, papillate-hairy; anthers basifixed, dithecal, 3–4.3 mm long including short translucent projection at end of connective, white aging cream-colored to pale yellow, longitudinally and inwardly dehiscent; pollen white; **nectary chamber** at top of ovary, arcs of nectary on outer side of filament bases, ca. 0.2 mm long, light green, with copious nectar; **pistil** 1; ovary inferior, ± 3-sided and angular with 3(–4) deep furrows and lengthwise ridges, to 11 × 2 mm, at top furrow = grooves, 3(–4)-chambered, each chamber with many ovules attached to center; style 3-branched, erect, narrowly club-shaped, 6.5–8 mm long, white, glabrous at base, at midpoint expanded as style brush, stigmatic lobes fingerlike 1 mm long, white, and papillate rounded at tip. **Fruit:** capsule, with calyx lobes persistent and widely spreading, dehiscent via shaking from 1 pore per chamber having membranous panel curling downward from near tops of chambers, angular tapered approaching base, (9–)13–22 × 2.2–2.7 mm, light brown with sunken, paler membranous panels, edges each conspicuously 3-ribbed, tissues with minute bumps (vesicular hairs), the pores ± elliptic, 2.5–5 mm long, 1.5–2.5 mm and not equally distant from top of ovary. **Seed:** compressed-oval and lens-shaped, 0.8–1 × 0.5 mm, tan.

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