

Vascular Plants of Williamson County

Triodanis perfoliata – CLASPING VENUS' LOOKING-GLASS [Campanulaceae]

Triodanis perfoliata (L.) Nieuwl. (= *T. perfoliata* var. *perfoliata*), CLASPING VENUS' LOOKING-GLASS. Annual, taprooted, rosetted, 1–many-stemmed at base, principal branches spreading to ascending or decumbent, to 40 cm tall; shoots with several basal leaves and many cauline leaves, cauline leaves and bracts structurally equal and clasping stem; latex cloudy. **Stems:** strongly 5-ridged to 8-ridged, angled, to 4.5 mm diameter, with 2 ridges descending from each leaf, green, with some toothlike hairs along ridges, with stiff short-hairs along ridges, with the longest hairs on lower stem. **Leaves:** helically alternate, simple, ± clasping, and sessile with the lowest leaves weakly petiolate, without stipules; petiole flat, 3-veined, and indistinct from blade; blade inversely heart-shaped or broadly ovate to obovate or spatulate, 6.5–31 × 5–29 mm, length ± = width, cordate to truncate or tapered at base, low-crenate to low-serrate or serrate and short-ciliate on margins flattened on older axes, sometimes with minute teeth on principal teeth and a whitish gland a point on a serrate tooth, acute to obtuse or roundish at tip, palmately veined at base and pinnately veined above, with 3, 5, or 7 principal veins radiating from base slightly sunken on upper surface and slightly raised on lower surface, upper surface glabrous, lower surface short-hairy or also with some longer hirsute hairs along veins, veins not ending in sinuses and teeth. **Inflorescence:** condensed axillary cymes, leafy, each cyme 1–6-flowered, the first and most flowers of a cyme cleistogamous but with chasmogamous flowers especially above midplant, bracteate; bract subtending cyme leaflike, of the first flower, lanceolate to elliptic, to 7.5 mm × 2.7 mm, at successive nodes mostly inversely heart-shaped, mostly 17–31 × 12–25 mm, low-serrate, acute at tip, with 1 principal vein, with future flowers positioned between bract and fruit, each also with unexpanded bractlet; bractlet subtending flower narrowly triangular to awl-shaped, to 2 mm long, with or without minute tooth and with a pair of glands on margins near sinuses. **Chasmogamous flower:** bisexual, radial, 12–24 mm across, star-shaped; **calyx** (4–)5(–6)-lobed, fused to top rim of inferior ovary, yellow-green; tube narrowly funnel-shaped 5-ridged and furrowed, ca. 3.5 × 1.5 mm; lobes triangular to acute broadly lanceolate or acuminate-ovate with fine point at tip, in range 5–10 × 1.7–4 mm, occasionally with 1–2 teeth at base, with stiff midrib raised on outer (lower) surface, having a pair of glands on margins next to sinuses, short-ciliate on margins; **corolla** 5-lobed, conspicuously 5-pleated in bud; tube 2–4 mm long, white at base and light violet to blue-violet above, outer surface glandular short-pilose; lobes acuminate-triangular (small flowers) to obovate (large flowers), 7.5–9 × 4–5.5 mm, 3(5)-veined with veins slightly sunken on upper surface and raised on lower surface, broadly acute at tip, pink-purple, keeled and ± crested approaching tip; **stamens** 5, free; filaments sigmoidal, 2–2.5 mm long, lower portion flared and thickened at base leaning toward center and short-hairy on hidden surface, upper portion suberect; anthers dorsifixed near the base, dithecal, 2.6–3.2 mm long, light pink to beige, longitudinally and inwardly dehiscent; pollen copious, beige to pale pink or pale violet to colorless; **pistil** 1; ovary inferior, 3-lobed with furrows = future valves, 1-chambered with many ovules attached to wall; style club-shaped, 6–7 × 1.2–1.3 mm, white at base and pale to light violet above midpoint, lower style glabrous, with radiating short hairs and papillae from below midpoint. **Cleistogamous flower:** bisexual, radial, ca. 2 mm across; **sepals** 3, erect, deltate, 1 mm

long, green, with rounded sinuses and glands near sinuses **corolla** domelike within calyx, pinkish; **stamens** 3; filaments erect, \pm 1 mm long, white, thickened at base; anthers basifixed, dithecal, ca. 2.5 mm long, dark pink, longitudinally dehiscent; pollen pale pink; **pistil** 1; ovary inferior, bell-shaped, to 4×1.8 mm, green, 1-chambered with many ovules attached to wall; style club-shaped, ca. 3×0.7 mm, light green above midpoint, papillate-hairy. **Fruit:** capsule, somewhat pleated, many-seeded (to 150-seeded), with a pore on each side exposing both chamber, 2–3 pores at and somewhat above midpoint, elliptic, to 1.5×0.5 –1 mm (sometimes nearly base to top), capsule 3-sided narrowly bell-shaped, 5 – 9.5×2 – 2.5 mm, light yellowish brown drying papery, valves coiling upward toward the style; persistent calyx lobes 3–5(–6), widely spreading to spreading, acuminate to ovate, 3 – 10×1.4 – 2.2 mm, sparsely short-ciliate on margins. **Seed:** ellipsoid somewhat compressed side-to-side, 0.55 – 0.6×0.35 – 0.4 mm, pale brown with darker (initially red), evenly spaced minute points.

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