

Vascular Plants of Williamson County

Physalis longifolia – COMMON GROUND-CHERRY [Solanaceae]

Physalis longifolia Nutt. [if recognized, var. *subglabrata* (Mack. & Bush) Cronq.], COMMON GROUND-CHERRY. Perennial herb, with horizontal root, not rosetted, several-stemmed at base, decumbent with branches spreading to ascending or with several procumbent lower shoots, in range to 25 cm tall; shoots leafy, with unequal axes at forks, sparsely puberulent with upward-pointing, short, nonglandular hairs and inconspicuous sessile glandular hairs [other authors do not mention glandular hairs], and not sticky; faintly odorous when crushed. **Stems:** conspicuously 3–4-ridged, to 4 mm diameter, with 2 ridges descending from each leaf and usually with 3 conspicuous ridges descending from each fork, green (not violet), with short hairs along ridges and inconspicuous short-stalked to sessile glandular hairs, at nodes often also with several green, volcanolike multicellular glands having a red cell at top (extrafloral nectaries). **Leaves:** helically alternate, simple, petiolate, without stipules; petiole winged-channeled with green erect margins, to 25 mm long, upper side sparsely short-strigose with upward-pointing hairs along whitish midvein, lower side with nonglandular and inconspicuous glandular hairs; blade ovate, < 30–75 × 15–38 mm, blade > petiole, tapered to broadly tapered at base, somewhat dentate with obtuse teeth and wavelike on margins, obtuse to blunt-acute at tip, pinnately veined with principal veins conspicuously raised on lower surface, veins not ending in teeth, sparsely short-hairy along veins and margins and with inconspicuous glandular hairs.

Inflorescence: leafy cyme with solitary flower appearing axillary at each fork (alternatively interpreted as solitary axillary flowers), flower nodding, lacking bracts; axes stemlike; pedicel ascending but hooked approaching flower, cylindrical, at anthesis to 10 mm long increasing and pendent in fruit, pale green or red-purple approaching top, short-strigose with upward-pointing hairs and inconspicuous, sessile glandular hairs. **Flower:** bisexual, radial, 20–25 mm across, cymbal-shaped (nearly rotate) but corolla may be recurved before anthers dehisce; **calyx** 5-lobed, at anthesis ca. 11 mm long; tube ± bell-shaped but depressed (invaginated) at pedicel, ca. 6 × 8 mm, 10-veined with a principal vein from base to each lobe tip and partially toward each sinus, green becoming expanded and conspicuously 10-ribbed in fruit, sparsely short-strigose with upward-pointing hairs mostly along ribs, inner surface glabrous and opposite nectary disc glossy green; lobes appressed to corolla, deltate to ovate-deltate, ca. 5 mm, green, upper (inward-facing) surface glabrescent with minute hairs approaching tip; **corolla** shallowly 5-lobed, pleated in bud, in range ca. 13–15 mm long, opening broadly funnel-shaped becoming spreading, cymbal-shaped (rotate), having a large, conspicuous spot below each lobe, limb not wavy; tube ca. 2 mm long but indistinct from lower throat, basal aperture 2 mm wide, outer surface whitish and inner surface pale yellow and 5-veined, tube-throat defined by a wide and dense, zigzagged band of hairs concealing bases of stamens, the hairs dendritic at tips, 0.6–1.5 mm long and mostly colorless (some red-purple); throat broadly flaring, with five patches ca. 5 mm and dark appearing purplish brown (red pigment added to light yellow background; paler on lower surface), glabrous except next to band of hairs, with a purplish midvein leading toward each lobe; upper throat and lobes (also between dark patches) pale light yellow, upper surface mostly without hairs, yellow lower surface uniformly papillate with short hairs along midvein and sparse, widely scattered short-stalked glandular hairs, lobes broad and rounded to 2 mm long with blunt point at tip, minutely ciliate on margins

with nonglandular and short glandular hairs; **stamens** 5, fused \pm 1.5 mm above base of corolla, 6.5–7 mm long, alternate with corolla lobes; filaments erect, fleshy, \pm club-shaped, \pm 3.5 \times 1 mm, in range whitish at base to light violet (bluish) above and somewhat glossy, glabrous; anthers suberect, basifixed, dithecal, triangular in outline with thicker, rounded sac bases touching filament, in range 2.7–3 mm long, green or somewhat cream-colored (not yellow), longitudinally dehiscent from the tip downward; pollen white; **nectary disc** a cylindric band below ovary base, ca. 2 mm long and 3 mm across, pale green at base and whitish above midpoint, producing nectar even during fruit development; **pistil** 1, ca. 10 mm long; ovary superior, \pm conic, ca. 2 \times 2.3 mm, white at base and light green above, glabrous with several inconspicuous sessile glandular hairs at top, 2-chambered with many ovules attached to center; style erect and straight, exerted beyond ring of anthers, cylindric gradually tapered to base, 0.4–0.7 mm diameter, lower portion purplish at base changing to greenish at top; stigma capitate, dome slightly wider than style, darker green, and somewhat oblique, positioned above level of anthers. **Fruit:** berry, fleshy, pendent and enveloped by expanded calyx tube, fruit completely hidden by loosely fitting calyx with tiny opening at top; berry 50+-seeded, spheroid slightly oblate, in range 9–10 \times 11–12 mm, light green, appearing smooth but minutely textured; wall (exocarp) firm; pulp light green, juicy, chambers not conspicuous; calyx appearing truncate-ovoid but invaginated at base, ca. 25 \times 20 mm, light green drying papery, 10-ribbed lacking raised, netlike veins between ribs, the ribs sparsely short-strigose with upward-pointing hairs, the panel with minute (nearly obscure) sessile glandular hairs, lobes converged, deltate ca. 5 \times 6 mm, scarcely parted, puberulent-ciliate on margins; at base of calyx tube (surrounding base of fruit) nectary disc yellowish. **Seed:** biconvex compressed side-to-side lens-shaped discuslike to elliptic or broadly ovate in outline, ca. 1.7–2 mm long, 0.7–0.8 mm thick, white aging yellowish tan to tan, minutely bumpy, with linear hilum.

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