

## Vascular Plants of Williamson County

*Ipomoea cordatotriloba* var. *cordatotriloba* – PURPLE MORNINGGLORY, COMMON MORNINGGLORY, PURPLE BINDWEED [Convolvulaceae]

*Ipomoea cordatotriloba* Dennstaedt var. *cordatotriloba* (syn. *Ipomoea trichocarpa*), PURPLE MORNINGGLORY, COMMON MORNINGGLORY, PURPLE BINDWEED. Perennial vine, twining, lacking tendrils, taprooted and with long horizontal lateral roots and sometimes 1–several long adventitious roots from basal stem, not rosetted, 1–several-stemmed at base, lower stems often with many lateral branches, climbing on neighboring plants and along ground; shoots with only widely spaced cauline leaves, foliage easily wilted, young shoots pubescent having hairs with enlarged base and deciduous, fine upper portion; latex cloudy; taproot crooked and flexible. **Stems:** ± angled and 5-ridged, to 2.5 mm diameter, with 2 narrow ridges descending from each leaf, tough, often reddish, internodes mostly 20–60 mm long, shorter internodes often twisted 2+ times with ridges becoming helical and longer ones not twisted with straighter ridges, appearing warty due to persistent enlarged bases of hairs. **Leaves:** helically alternate, palmately 3-lobed (unlobed), long-petiolate, without stipules; petiole channeled, 12–90+ mm long, often red-purple on edges, pubescent and warty on lower side to glabrate; blade ± inversely heart-shaped with or without 2 basal lobes, < 15–90 × < 20–71 mm, < petiole, cordate at base, central lobes symmetrically ovate, to 45 × 28 mm, basal lobes roundish to asymmetrically broadly ovate, to 35 × 30 mm, subentire and often short-wavy and short-ciliate on lobe margins (red-purple), mostly acute at tip, pinnately veined (appearing palmately veined) with 2–3 pairs of closely spaced lateral veins at base and principal veins or even some minor veins raised on both surfaces, principal veins with domed cells, short-hairy with enlarged bases especially along veins. **Inflorescence:** cyme, axillary, to 9-flowered, spreading to ascending, with only 1 flower of cyme open per day, bracteate, pubescent having hairs with enlarged bases and deciduous, fine upper portion so axes appearing warty; peduncle ± 4-sided, angled, and ridged, 20–70 mm long, mostly green (reddish), warty, with a pair of bracts (1 bract and 1 bractlet) at top; bract subtending cyme with persistent, warty base to 2 mm long, upper portion deciduous, acute-lanceolate or oblong and cupped, 6–7.5 mm long, with raised midvein, green or with red-purple on margins, midvein, and tip, outer (lower) surface with scattered short hairs; bractlet subtending the first flower acuminate-lanceolate, 5–5.5 × 1.5 mm decreasing upward to 3–4 mm long, light yellow-green with colorless narrow margins or with red-purple pigment and lacking hairs and hair bases; cyme axes and pedicels warty, appearing 4-sided and ridged or not, pedicel at anthesis to 6 mm long. **Flower:** bisexual, radial, 30–40 mm across (= length of corolla); receptacle at anthesis hemispheroid, 2.5 mm diameter increasing somewhat in fruit, conspicuously warty; **sepals** 5, helically alternate, overlapping, at anthesis ascending-suberect but appressed in bud and in fruit, subequal, outer sepals narrowly ovate, ca. 9 × 3.5 mm, pubescent with long hairs on outer (lower) surface, inner sepals ovate, ca. 8.5 × 5 mm, mostly glabrous above midpoint, sepals somewhat colorless with green veins, 3-veined at base but only midvein conspicuous, ciliate on margins, sepals increasing 11–12 mm long and somewhat wider in fruit (the innermost sepal almost winglike); **corolla** broadly and shallowly 5-lobed (sinuses obscure), trumpet-shaped, 30–45 mm long, strongly twisted in bud, with many fine parallel veins, glabrous, lacking glandular hairs; tube short-cylindric, 1.5–3.5 mm

long, ± white and including decurrent bases of filaments, throat lower portion funnel-shaped and upper portion widely flaring, in bud pleated, outer (lower) surface pale light pink-rose, inner surface lower portion glossy dark red-purple, upper portion light pink-purple with a darker vein to each lobe; lobes short, with a white point < 0.5 mm long at tip (extension of a principal vein), margins wavy; **stamens** 5, fused to top of corolla tube; filaments unequal, 8.5–12 mm long within each flower, white at base to pink-rose on tapered segment approaching anther, lower portion (below midpoint) white short-hairy and upper portion glabrous or with < 5 short hairs; anthers appearing basifixed, dithecal, 2.4–3 mm long, light pink-purple and white, with short point at top of connective, longitudinally and outwardly dehiscent; pollen white; **nectary disc** surrounding base of ovary, 5-lobed, ca. 0.7 mm long, orangish, nectar-producing; **pistil** 1; ovary superior, ovoid, ca. 1.5 × 1 mm, light green hidden by erect, straight white hairs 0.8–2 mm long above midpoint (glabrous beneath nectary disc), 2-chambered, each chamber with 2 ovules; style to 21 mm long and > the longest stamens, white, glabrous; stigma of 2 spheroid lobes together 1.7 mm across, lobes 0.8–1 mm, white, with conspicuous papillae. **Fruit:** capsule, loculicidal, dehiscent by 4 valves, 4-seeded, broadly ovoid (slightly bulging from seeds), ca. 7 × 7.5 mm + a narrowly conic beak (persistent style base) 3–6 mm long abscising before fruit dehisces, light brown, valves thin each with a whitish, deltate callus at tip; nectary disc persistent at base of fruit, with pilose hairs to 2 mm long above midpoint. **Seed:** ovate in outline and 3-sided, rounded on back and with flat lateral faces, 4.5–6 × 2.5–4 mm, dull dark brown, back and tip with some fine, branched hairs, hilum a circular depression 1 mm on inner side near base.

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